Base Realignment and Closure
Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

FINAL

VEGETATION CLEARANCE PLAN

August 11, 2006

RADIOLOGICAL SURVEY AT
IR SITE 32 AND THE SHORELINES OF IR SITES 1 AND 2
ALAMEDA POINT
ALAMEDA, CALIFORNIA

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CONTRACT NO. N62473-06-D-2201
CTO NO. 0008

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ALAMEDA POINT
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DCN: ECSD-RACIV-06-0405

TETRA TECH EC, INC.
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TETRA TECH EC, INC

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ABBREVIATIONS AND ACRONYMS

BRAC	Base Realignment and Closure
CIH	Certified Industrial Hygienist
CQC	Contractor Quality Control
CSO	Caretaker Site Office
dBA	decibels, A-scale
DON	Department of the Navy
EMS	Emergency Medical Services
EPA	U.S. Environmental Protection Agency
IR	Installation Restoration
N/A	not applicable
NAVFAC SW	Naval Facilities Engineering Command, Southwest
PESM	Project Environmental and Safety Manager
PHP	Project Health Physicist
PjM	Project Manager
PPE	personal protective equipment
PQCM	Project Quality Control Manager
QC	quality control
RAC	Remedial Action Contract
RASO	Radiological Affairs Support Office
RCRA	Resource Conservation and Recovery Act
ROICC	Resident Officer in Charge of Construction
RPM	Remedial Project Manager
SHSP	Site-specific Health and Safety Plan
SHSS	Site Health and Safety Specialist
SOP	Standard Operating Procedure
TtEC	Tetra Tech EC, Inc.

1.0 INTRODUCTION

This Vegetation Clearance Plan describes the specific activities pertaining to the clearing of surface vegetation prior to conducting a radiological survey at Installation Restoration (IR) Site 32, the shorelines of IR Sites 1 and 2, and the former Radiological Shack, Alameda Point, Alameda, California. The Naval Facilities Engineering Command, Southwest (NAVFAC SW) has authorized Tetra Tech EC, Inc. (TtEC) to perform the subject radiological survey under Contract Task Order No. 0008 through the contracting mechanism of NAVFAC SW Remedial Action Contract (RAC) N62473-06-D-2201.

Prior to conducting the radiological survey, IR Site 32 and the Radiological Shack within IR Site 2 will require vegetation clearance. TtEC has prepared a Radiological Survey Work Plan that describes the scope of the various survey activities. TtEC will perform the vegetation clearance work in accordance with this plan, the Radiological Survey Work Plan (TtEC, 2006), which includes a Site-specific Health and Safety Plan (SHSP) (Appendix A) and Project Contractor Quality Control (CQC) Plan (Appendix C).

1.1 OBJECTIVE

The objective of this work element is to cut existing vegetation to within a minimum of 2 inches in the IR Site 1, 2 and 32 areas, as necessary, in preparation for a radiological survey. The cut vegetation will remain in place or spread to areas within the site limits.

2.0 PLANNED ACTIVITIES

This section will briefly describe the specific field activities involved in the planned vegetation clearance.

2.1 VEGETATION CLEARANCE ACTIVITIES

Prior to the start of field activities, all on-site personnel will be briefed on the protection of natural resources. The TtEC Biologist will perform the worker education briefing, emphasizing the need for minimizing the disturbance of sensitive biological resources, as well as methods for avoiding and minimizing the disturbance of species and communities of concern.

Prior to initiation of vegetation mowing, the TtEC Biologist will examine all areas proposed for mowing. No active nests will be directly affected during mowing activities. If potentially active nests are discovered, then these specimens will be temporarily avoided until nesting status can be determined. For the potentially active nests, two survey events (separated by a 24-hour interval) will be initiated to determine nesting status that will document animal behavior (nest building, eggs or young present, and so forth). If active nesting status is determined during vegetation removal activities, TtEC will not conduct any vegetation removal activity within 10 meters of nests and will immediately notify the Department of the Navy (DON) Resource Technical Manager. Inactive nests are those nests discovered from last season that are unoccupied and show no physical signs of recent activity (no whitewash, feathers, and so forth). Inactive nests are void of fresh signs of activity and typically contain cobwebs. These nests will be included as part of the vegetation clearance.

While the TtEC Biologist or biological monitor will look for nesting birds, sensitive and special-status species, or their habitats prior to vegetation clearance activities, special biological expertise is not required to identify an active nest/burrow in most instances. It will be required that all personnel on the project site be alert to the possibility of finding a nesting bird or other locally sensitive biological resource on or near the project area. All personnel will be trained in the procedures to follow if a locally sensitive or special-status species is observed. Biological monitor qualifications and biological survey protocols are discussed in Sections 2.1.1 and 2.1.2, respectively.

TtEC will clear the vegetation in the work area, as defined by the scope of work presented by the DON. For the purpose of this plan "clearing and grubbing" is defined as the cutting of grasses and brush to a height of 2 inches above the existing ground surface. Field crews will use a variety of equipment in a manner needed to meet the work objectives. Open field areas may be cut with power mowers. All cut vegetation will remain in place or spread to areas within the site limits. Mature trees (dominant and codominant crown class), as identified by the TtEC Biologist, will not be removed and some hand-clearing may be required around them. Large brush/woody

multi-stemmed shrubs (stems 2 inches to 10 inches in diameter at breast height) will be evaluated by the TtEC Biologist prior to removal. Large material (if required) will be mulched and cuttings broadcasted across the site. No off-site disposal of vegetation is planned.

2.1.1 Qualifications of Monitors

All biological monitors will be required to have sufficient education and field experience in northern California ecology and biology and complete site-specific field training to identify likely local species and to understand northern California wildlife behavior. Where natural resource specialists with specific qualifications, permits, or approvals are required, only biological monitors with the appropriate qualifications (Least Tern Specialist, Certified Arborist, and so forth) will be used.

2.1.2 Biological Survey Protocols and Avoidance Measures

Biological clearance surveys will be conducted prior to vegetation clearance and radiological survey activities to ascertain the presence or absence of nesting birds and special-status species, including their habitats. Survey techniques will include the following:

1. Biologists will examine ground cover proposed for pruning, mowing, and inclusion in the radiological survey, prior to the onset of any radiological survey activities.
2. Potential habitat areas that need to be included in the radiological survey-related activities will be field identified and verified.
3. Immediately before the radiological survey begins or mowing/pruning activities are permitted, a biological monitor will verify that no sensitive/special-status species, nesting birds, and so forth are present.
4. If occupied nests, special-status species, or their unique habitats are identified during biological surveys, they will be temporarily avoided until nesting status/complete species identification can be determined.
5. The DON will not take or destroy nests (or eggs) of birds that are designated under Federal and California State laws, Migratory Bird Treaty Act, and Fish and Game Code Section 3503, or 3503.5.
6. Two biological survey events (separated by a 24-hour interval) will be initiated to determine nesting status, document animal behavior (nest building, eggs or young present, and so forth), and make a positive species identification for special-status wildlife if the occupied nest(s) or protected species are found in an area scheduled for radiological survey activities.
7. If an active nest/special-status species presence is verified during biological surveys, radiological survey activities will not be conducted within 10 meters of nests or 1,000 feet from Endangered Species Act-protected species and the DON Remedial Project manager (RPM) will be immediately notified.
8. If the active nest/special-status species cannot otherwise be avoided by using manual radiological survey equipment or modifications to survey timing, and so forth, the DON

will be consulted to ensure that radiological survey activities do not cause harassment or harm of the wildlife in question. Where biological monitoring determines that nests have been vacated after young were fledged, the DON RPM will direct the biological monitor to either remove or relocate the inactive nest to allow work within the 10-meter buffer to allow characterization of this area.

2.2 EQUIPMENT

The following equipment may be mobilized to the site for the vegetation clearance:

- Kubota skip loader with mower (1)
- Brush chipper (1)
- 500-gallon vehicle trailer-mounted water tank (1)
- Portable toilets and sinks (2)
- Brush trimmers (3)

Equipment mobilized to the site will be inspected by TtEC field personnel for work suitability in accordance with established health and safety procedures.

2.3 RADIOLOGICAL PROTOCOL DURING VEGETATION CLEARANCE

The areas around the IR Site 2 Radiological Shack and IR Site 32 are expected to require some form of vegetation clearance prior to performing radiological surveys. Vehicles and machinery that are used for vegetation clearance will be appropriately monitored for radiation before being released from the site. Loose soil and debris will be removed from machinery before demobilization and swipe samples are to be taken from the seats, control surfaces, tires (or tracks), and blades from each piece of equipment. The Radiological Survey Work Plan, Appendix D-5, Standard Operating Procedure (SOP) 5, Release of Materials and Equipment from Radiologically Controlled Areas (TtEC, 2006) will be followed for the unconditional release of equipment.

Personnel exiting the controlled area of IR Sites 1, 2 and 32 will undergo a personnel survey prior to exiting the controlled area, if, during the field activities, elevated radiological readings were observed.

2.4 QUALITY CONTROL REQUIREMENTS

TtEC will use the CQC Plan, Appendix C of the Radiological Survey Work Plan (TtEC, 2006), as the basis for the quality control (QC) of this work. Table C.5-1 of the CQC Plan includes the vegetation clearance definable feature of work activity and provides QC forms to document work.

2.5 HEALTH AND SAFETY REQUIREMENTS

As stated earlier, the proposed work will be performed in accordance with the SHSP, Appendix A of the Radiological Survey Work Plan (TtEC, 2006). An Activity Hazard Analysis has been prepared for the vegetation clearance activity and is provided in Attachment 4 of the SHSP. Emergency information is provided in Table 2-1.

The TtEC Project Health Physicist (PHP) will provide a radiological training briefing to the crew members prior to starting vegetation clearance work activities. The briefing will include:

- Sources of radiation
- Non-ionizing/ionizing radiation
- Risks in perspective
- Radiological controls
- Monitoring/dosimetry
- Emergency procedures
- As low as reasonably achievable results
- Exposure reports

The personal protective equipment (PPE) required for this task is identified in Table 2-2. This table is prepared based on data provided prior to the start of the project. As additional testing, monitoring, and background information become available, the Site Health and Safety Specialist (SHSS) may adjust the action levels and PPE accordingly. Any changes to PPE require approval by the Project Environmental and Safety Manager (PESM). PPE levels were selected based on the presumption that there are low-level radiological contaminants at the site.

The required Level D PPE will include shoe covers (rubber totes) over steel-toed boots. Additional protective clothing may be required based on field conditions. Likewise, at a minimum, a whole-body survey will be performed on each individual exiting the landfill using a portable pancake Geiger-Muller detector attached to a survey meter. Additional radiological personnel surveys may be required based on field conditions. The procedure for performing personnel surveys is provided in the Radiological Survey Work Plan (TtEC, 2006), Appendix D-7, SOP 7, Radiological Protective Clothing Selection, Monitoring, and Decontamination.

A project management summary and points of contact for use during the work activity is provided in Section 3.0.

2.6 WASTE MANAGEMENT REQUIREMENTS

The proposed work will generate only PPE waste for off-site disposal. Off-site vegetation disposal is not required.

As crew members egress from the work areas on a daily basis, they will remove their rubber totes and secure them in a 55-gallon drum for either reuse or disposal. A survey of the totes and the crewmembers will be conducted using a pancake Geiger-Muller detector. At the completion of the work activities, the non-contaminated totes will be disposed as non-hazardous waste at a TtEC-approved Class II landfill. In the event that radiological contamination is found on the totes, TtEC will contact the DON's Radiological Affairs Support Office (RASO) representative, TtEC PHP, and TtEC Project Manager (PjM) for the purpose of determining the disposition of contaminated material.

3.0 PROJECT MANAGEMENT

The project management team will be responsible for all technical and administrative aspects of the vegetation clearance. Included among the team's responsibilities are the project schedule, staffing, document control, project meetings, and reporting.

3.1 PROJECT RESPONSIBILITIES

The DON RPM for this project is Mr. Andrew Baughman. Mr. Baughman is responsible for project management, budget control, schedule maintenance, and contacting regulatory agencies. Mr. Baughman is also responsible for community relations and ensuring that the radiological survey activities are in compliance with the applicable rules and regulations. Mr. Doug Delong of the Caretaker Site Office (CSO) is responsible for coordination of survey activities with different DON and City of Alameda departments and personnel. Mr. Gregory Grace is the Resident Officer in Charge of Construction (ROICC), responsible for the technical oversight and QC. Mr. Matthew Slack is the technical representative for the RASO and is responsible for the technical oversight and review of the project documents and all issues related to radiological activities.

TtEC's PjM, Mr. Abram Eloskof, will be responsible for general project administration. Mr. Eloskof oversees budget, schedule, and document preparation, and will ensure the quality of all project activities and deliverables. Ms. Jennifer Dessort will act as the Project Quality Control Manager (PQCM) and is responsible for managing the field activities, providing oversight to the subcontractors, and coordinating with the CSO, ROICC, and the PjM. As the PQCM, Ms. Dessort will also coordinate with the QC Program Manager (Ms. Mary Schneider) to ensure that all field activities are in compliance with the project specifications. Ms. Dessort will be the SHSS on site and will be responsible for ensuring that field activities are conducted in compliance with the SHSP (Appendix A of the Radiological Survey Work Plan [TtEC, 2006]). As the SHSS, she will coordinate with the PESM, Mr. Roger Margotto, Certified Industrial Hygienist. Additional support will be provided by other engineering and technical resources.

The following is a list of the key contacts:

Agency	Contact	Project Title
NAVFAC SW 1455 Frazee Road, Suite 900 San Diego, CA 92108-4310	Mr. Andrew Baughman (619) 532-0903 andrew.baughman@navy.mil	RPM
NAVFAC SW Attn: Code 06CA.TM 1455 Frazee Road, Suite 900 San Diego, CA 92108-4310	Mr. Thomas Macchiarella (619) 532-0940 thomas.macchiarella@navy.mil	Base Realignment and Closure (BRAC) Environmental Coordinator

Agency	Contact	Project Title
NAVFAC SW 1455 Frazee Road, Suite 900 San Diego, CA 92108-4310	Ms. Shannon Bryant (619) 532-0948 shannon.bryant@navy.mil	DON Resource Technical Manager
NAVFAC SW Caretaker Site Office – San Francisco Bay Area 410 Palm Ave., Building 1, Suite 161 San Francisco, CA 94130-1806	Mr. Doug DeLong (415) 743-4713 (510) 772-8832 (cellular) douglas.delong@navy.mil	BRAC Environmental Compliance Manager
NAVFAC SW 1455 Frazee Road, Suite 900 San Diego, CA 92108-4310	Ms. Joyce Howell-Payne (619) 532-0923 joyce.howell-payne@navy.mil	Contract Specialist
NAVFAC SW 1220 Pacific Coast Highway San Diego, CA 92132	Mr. Narciso Ancog (619) 532-3046 narciso.ancog@navy.mil	Quality Assurance Officer
NAVFAC SW 2450 Saratoga Street, Building 110, Suite 200 Alameda Point, Alameda, CA 94501-7545	Mr. Gregory Grace (510) 749-5940 gregory.grace@navy.mil	ROICC
NAVFAC SW 2450 Saratoga Street, Building 110, Suite 200 Alameda Point, Alameda, CA 94501-7545	Mr. Robert Perricone (510) 749-5942 robert.perricone@navy.mil	ROICC/Construction Management Technician
RASO Building 1971 NWS P.O. Box Drawer 260 Yorktown, VA 23691-0260	Mr. Matthew Slack (757) 887-4692 matthew.slack@navy.mil	RASO
U.S. Environmental Protection Agency (EPA) 75 Hawthorne Street (SFD-8-2) San Francisco, CA 94105-3901	Ms. Anna-Marie Cook (415) 972-3029 cook.anna-marie@epa.gov	EPA-RPM
U.S. Fish and Wildlife Service P.O. Box 159 Alameda, CA 94501-0559	Ms. Rachel Hurt (510) 377-8375 rachel_hurt@fws.gov	U.S. Fish and Wildlife Service
TtEC 1940 E. Deere Ave., Suite 200 Santa Ana, CA 92705-5718	Mr. Abram Eloskof (949) 756-7521 (714) 620-5530 (cellular) abram.eloskof@tteci.com	PjM
TtEC 1940 E. Deere Ave., Suite 200 Santa Ana, CA 92705-5718	Ms. Mary Schneider (949) 756-7586 mary.schneider@tteci.com	QC Program Manager
TtEC. 1230 Columbia St., Suite 750 San Diego, CA 92101-8536	Mr. Lance Humphrey (619) 471-3519 (619) 988-5974 (cellular) lance.humprey@tteci.com	UXO Specialist

Agency	Contact	Project Title
TtEC 1230 Columbia St., Suite 750 San Diego, CA 92101-8536	Mr. Roger Margotto (619) 471-3503 (714) 810-3742 (pager) roger.margotto@tteci.com	PESM
TtEC 3200 George Washington Way, Suite G Richland, WA 99352-3429	Mr. Cliff Stephan (509) 371-0140 (509) 430-4655 (cellular) cliff.stephan@tteci.com	PHP
TtEC 1940 E. Deere Ave, Suite 200 Santa Ana, CA 92705-5718	Mr. Nathan Mudry (949) 756-7509 (949) 230-7847 (cellular) nathan.mudry@tteci.com	Project Biologist
TtEC. 1940 E. Deere Ave, Suite 200 Santa Ana, CA 92705-5718	Ms. Jennifer Dessort (949) 756-7541 (949) 466-7573 (cellular) jennifer.dessort@tteci.com	PQCM/SHSS
TtEC 1940 E. Deere Ave., Suite 200 Santa Ana, CA 92705-5718	Ms. Lynn Jefferson (949) 756-7558 lynn.jefferson@tteci.com	Project Chemist

4.0 REFERENCES

Tetra Tech EC, Inc. (TtEC). 2006. *Final Radiological Survey Work Plan*. Radiological Survey at IR Site 32 and the Shorelines of IR Sites 1 and 2. Alameda Point, Alameda, California. August.

TABLES

TABLE 2-1

EMERGENCY INFORMATION

REPORT ALL FIRES, SERIOUS INJURY, OR UNCONTROLLED SPILLS IMMEDIATELY: 911

Hospital	Alameda Hospital 2070 Clinton Avenue Alameda, CA	(510) 522-3700	
Directions	Exit east out of site onto Main Street, heading south. Turn left onto Atlantic Avenue, heading east. Turn left onto Webster Street, heading south to Central Avenue. Turn left onto Central Avenue, heading east to Encinal Avenue. Turn right on Encinal Avenue, heading southwest to Grand Street. Turn right on Grand Street, heading southeast to Clinton Avenue. Turn left onto Clinton Avenue, heading south to Alameda Hospital (2070 Clinton Avenue).		
Clinic	Concentra Medical Center 384 Embarcadero West Oakland, CA	(510) 465-9565	
Directions	Exit east out of site onto Main Street, heading south. Turn left onto Atlantic Avenue, heading east. Turn left onto SR-61 (Webster Street) for 0.6 miles, bear right onto Posey Tube for 0.6 miles, and continue north on Harrison Street for about 150 yards. Turn left onto 6th Street for about 100 yards. Turn left onto Webster Street for 0.3 miles. Turn right onto Embarcadero West for 80 yards to Concentra Medical Clinic (384 Embarcadero West).		
Fire/Police/EMS	911. This number will connect you to emergency dispatch. ***911 calls from a cellular telephone go directly to the California Highway Patrol.***		
TtEC Contacts	PjM Abram Eloskof (949) 756-7521 cell: (714) 620-5530	Project PESM (CIH) Roger Margotto (619) 471-3503 pager: (714) 810-3742	PQCM Jennifer Dessort cell: (949) 466-7573
RPM	Andrew Baughman (619) 532-0903		
Environmental Liaison	Doug DeLong (510) 772-8832		
BRAC Environmental Coordinator	Tom Macchiarella (619) 532-0940		
Poison Control Center	Emergency Phone (800) 876-4766 (All of CA)		
CHEMTREC	(800) 424-9300		
National Response Center	(800) 424-8802		
RCRA Hotline	(800) 424-9346		

Notes:

BRAC – Base Realignment and Closure
CIH – Certified Industrial Hygienist
EMS – Emergency Medical Services
PESM – Project Environmental and Safety Manager
PQCM – Project Quality Control Manager
RCRA – Resource Conservation and Recovery Act
RPM – Remedial Project Manager
TtEC – Tetra Tech EC, Inc.

TABLE 2-2

PERSONAL PROTECTIVE EQUIPMENT

Task	EPA Level	Respiratory Protection	Head	Hand	Clothing	Boots	Face	Eye	Hearing	Additional
Clearing and grubbing	D	None required, unless dust exceeds action levels	Hard hat	Leather work gloves or puncture/cut-resistant gloves	Long pants and sleeved shirts to keep clean; reflective safety vest	Steel-toe, leather, with rubber booty (tote)	N/A	Safety glasses	Protection when noise levels exceed 84 dBA	

Notes:
dBA – decibels, A-scale
EPA – U.S. Environmental Protection Agency
N/A – not applicable