Base Realignment and Closure
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CONTRACT NO. N62473-06-D-2201
CTO NO. 0015

FINAL

ADDENDUM TO THE FINAL TIME-CRITICAL REMOVAL ACTION WORK PLAN

August 30, 2007

INSTALLATION RESTORATION SITES 1, 2, AND 32
FORMER NAVAL AIR STATION ALAMEDA
ALAMEDA POINT, ALAMEDA, CALIFORNIA

DCN: ECSD-2201-0015-0003

Prepared by:

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FINAL
TIME-CRITICAL REMOVAL ACTION WORK PLAN
INSTALLATION RESTORATION SITES 1, 2, AND 32

DATED 02 MARCH 2007

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ABBREVIATIONS AND ACRONYMS

BEI	Bechtel Environmental, Inc.
bgs	below ground surface
CQC	Contractor Quality Control
CSO	Caretaker Site Office
DON	Department of the Navy
HAZCAT	Hazardous Characterization
IR	Installation Restoration
MPPEH	material potentially presenting an explosive hazard
NAD27	North American Datum of 1927
NAS	Naval Air Station
NGVD29	National Geodetic Vertical Datum of 1929
PQCM	Project Quality Control Manager
PVC	polyvinyl chloride
RASO	Radiological Affairs Support Office
RCT	Radiological Control Technician
ROICC	Resident Officer in Charge of Construction
RPM	Remedial Project Manager
TCRA	time-critical removal action
TtEC	Tetra Tech EC, Inc.
UXO	unexploded ordnance

1.0 SITE HISTORY

Installation Restoration (IR) Site 1 was operated between 1943 and 1956 as the principal site for waste disposal at the former Naval Air Station (NAS) Alameda. The disposal area reportedly received all waste generated at the former NAS Alameda except wastewater, which was discharged directly into Seaplane Lagoon via the storm drain system. Accurate estimates of the amounts and types of waste disposed at IR Site 1 are not available. The estimated quantity of solid waste ranges from 15,000 to 200,000 tons. Waste materials have included old aircraft engines, cables, scrap metal, waste oil, paint waste, solvents, cleaning compounds, construction debris, ashes from the incinerator located in former Building 68 (demolished in 1961), and low-level radioactive material from the Naval Air Rework Facility.

Depth to groundwater at IR Site 1 ranges from the ground surface to approximately 8 feet below ground surface (bgs) and averages 3 to 5 feet bgs (Bechtel Environmental, Inc. [BEI], 2005).

2.0 EXPLORATORY TRENCHES

Seven former disposal cells (see Figure 1-1) have been inferred to lie within the IR Site 1 landfill (BEI, 2005). Eleven exploratory trenches will be excavated within the former disposal cells; the purpose of this work is to increase the accuracy of the waste volume estimate in the Site 1 disposal area and to characterize any waste material that is encountered. The trenches will be excavated one bucket width (approximately 3 feet) to a minimum length of 25 feet. Material will be removed from each trench until groundwater is encountered. The material removed from the trenches will be placed on plastic sheeting and documented with selected video scenes and photographs.

When waste material is visually evident in the trenches once groundwater is encountered, the trenches will be extended deeper (where it is safe to do so) into the saturated material to evaluate the depth of waste material at the given location. Saturated waste from within the trench may be redistributed within the open trench, but no material from the saturated zone will be removed from the trench. The excavation may continue as long as the additional material can be contained within the trench. That material will be placed back into the excavation bottom before a trench is backfilled.

There is a possibility that radioactive material and material potentially presenting an explosive hazard (MPPEH) may be encountered during trenching. Therefore, this work will be supported by on-site radiological and unexploded ordnance (UXO) specialists.

The primary activities and procedures related to the trenching activities within IR Site 1 are listed below and discussed in the following sections:

- Permitting and notifications
- Preparatory activities and meetings
- Staking the trench endpoints
- Trench excavation and documentation
- Backfilling with waste, then covering with soil and compacting
- Free-release survey and decontamination of equipment and tools

2.1 NOTIFICATIONS AND PERMITS

Tetra Tech EC, Inc. (TtEC) will obtain all necessary authorizations from the Department of the Navy (DON) for completing the exploratory trenching at IR Site 1. Prior to field activities, TtEC will notify the Remedial Project Manager (RPM), the Resident Officer in Charge of Construction (ROICC), the Radiological Affairs Support Office (RASO), and the Caretaker Site Office (CSO) about the schedule of the anticipated work.

TtEC maintains a current annual excavation permit from the California Occupational Safety and Health Administration (No. 2004-573713). The site has an existing underground dig alert number that is renewed monthly. All excavations will be conducted in accordance with Title 8, California Code of Regulations Sections 1539 through 1543, and 29 Code of Federal Regulations, Parts 1910 and 1926 requirements. Daily inspections of excavations will be performed by a competent person to assess the stability of slopes and excavated areas.

Additional permits and/or notifications, which may be required by regulatory agencies for specific activities conducted under this Addendum, have been addressed in the corresponding subsections or appendices of the Final Time-Critical Removal Action (TCRA) Work Plan (TtEC, 2007).

2.2 PREPARATORY ACTIVITIES AND MEETINGS

At least 1 week prior to the start of field activities, a kick-off meeting will be held between the DON and TtEC. The meeting is expected to be concurrent with the weekly Contractor Quality Control (CQC) meetings. The purpose of the kick-off meeting is to develop a mutual understanding of the removal activities. TtEC will prepare minutes of the meeting for submittal to the DON. The following people will be requested to attend the kickoff meeting: the RPM, the ROICC, and CSO and RASO representatives. TtEC representatives will include the TtEC Project Manager, Site Superintendent, Project Quality Control Manager (PQCM), Project Radiation Safety Officer, and the Site Health and Safety Specialist.

The PQCM will conduct preparatory and initial inspections of this definable feature of work in accordance with the CQC section of the Final TCRA Work Plan.

2.3 STAKING THE TRENCH ENDPOINTS

The endpoints of each of the trenches will be placed by a professional land surveyor before excavation commences. The endpoints will be surveyed in California Zone III state plane coordinates using NAD27 as the horizontal datum and NGVD29 as the vertical datum.

2.4 TRENCH EXCAVATION

Eleven exploratory trenches will be excavated within the former landfill disposal cells; the purpose of this work is to increase the accuracy of the waste volume estimate in the Site 1 disposal area and to characterize any waste material that is encountered. The trenches will be excavated one bucket width (approximately 2 to 3 feet) to a minimum length of 25 feet.

Seven disposal cells have been inferred to lie within IR Site 1 landfill (BEI, 2005). One of the cells lies beneath the runway and runway apron; three other cells lie partially beneath the runway and/or apron. Seasonal wetlands intersect parts of three other cells. Trenches will not be

excavated over the runway, on established roads, or within the wetlands areas (Figure 1-1). No more than two trenches are planned in any one disposal cell.

Prior to commencing trenching excavations, a plastic liner will be placed on the ground to contain the cap material (approximately 1 to 2 feet thick) and another plastic liner to contain the waste. To the extent possible, the soil overlying the waste will be segregated from the underlying waste material. The excavated materials will have to be placed far enough away from the edge of the trench to permit safe access to the trench to allow completion of photographic/video documentation. At a minimum, all excavated material shall be located 3 feet away from the excavation edge. A photograph/video log will be maintained by the PQCM.

The soil cover material will be removed first and segregated from the underlying waste. Excavated material may be removed from the trench until groundwater is encountered. To test for the bottom of the waste, the excavation will extend below groundwater within localized areas within the trench when it is safe to do so. If practical, deeper trenching to the bottom of the waste will be conducted near each end of each trench. Additional localized trenching below the water table will be conducted, if safe, whenever the field crew suspects the waste depths observed near the ends are not representative of the entire trench. Saturated excavated material will have to be contained within the open trench to prevent potentially contaminated water from flowing onto the ground surface. Prior to backfill, the saturated material will be redistributed along the bottom of the trench.

The description of the excavated soil cover as well as the waste material will be detailed on a trench log form (Figure 1-2). Digital photographic images and video scenes will be taken of the stockpiled material and the trench walls.

The excavated material and the trench itself will be monitored for the presence of MPPEH as trenching proceeds. UXO specialists will be on site during trenching operations and assigned to inspect the excavated material and the trench itself for the presence of MPPEH. In the event that MPPEH is encountered, the UXO specialist will inspect the item(s) and provide direction to the rest of the crew on site as to how to proceed.

The site workers' activities associated with the trench excavation will be performed in accordance with Subsections 5.1 through 5.10 of Section 5.0, Radiological Controls, of the Final TCRA Work Plan (TtEC, 2007), as applicable. The section titles are 5.1, ALARA Considerations; 5.2, Training; 5.3, Whole-Body Dose Monitoring; 5.4, Radiation Work Permits; 5.5, Investigation Levels; 5.6, Radiation Detection Instrumentation; 5.7, Survey Implementation; 5.8, Sampling Protocol; 5.9, Post-Work Surveillance; and 5.10, Decontamination Procedures.

A scan survey using a sodium iodide detector will be performed on the excavated material (including soil cover and waste material) placed on the plastic liner. Static measurements will be performed when scan measurements identify an area greater than the investigation level. The

static measurement will be used to confirm the scan measurement. The excavated material will be spread out so the depth will not exceed 12 inches. Material found to exhibit radioactivity greater than the investigation level will be removed and placed into a drum or disposal container. The surrounding 12 inches of soil/material will also be collected and placed into the drum or disposal container. Soil/material that exhibits radioactivity greater than the investigation level will not be placed by into the trench. In situ scan surveys of the excavated trench side walls and bottom will not be performed prior to backfilling the trench.

Once the cap material has been removed, the excavator will remove approximately five buckets full of material and spread the material out on the plastic liner (approximately 11 to 12 inches) for the UXO technician and Radiological Control Technician (RCT) to survey the material. Once the material is inspected, the backhoe will proceed removing an additional five buckets full of material, placing the material over the pre-excavated material and performing the UXO and radiation surveys as before. This process will continue until the 25-foot length of the trench has been excavated to groundwater. When waste material is visually evident in the trenches once groundwater is encountered, the trenches will be extended deeper (where it is safe to do so) into the saturated material below groundwater to evaluate the depth of waste material at the given location. Saturated waste from within the trench may be redistributed within the open trench, but no material from the saturated zone will be removed from the trench. The final depth of the trench will depend on field conditions at the time of work activities.

Radiological scans of the excavator bucket will be performed periodically during the excavation process. At a minimum, the RCT will scan the excavator bucket after every fifth bucket of material is removed from the trench. Prior to the excavator relocating to another trench excavation location or leaving the controlled area, the RCT will perform a conditional release survey on the excavator.

The entire length and depth of the trench will be excavated before the material is placed back into the trench. Once the material has been placed back into the trench, the plastic liner will be radiologically surveyed. If the survey does not identify radioactivity above the investigation level, the plastic liner may be reused at another trench excavation location. If the liner exhibits radioactivity above the investigation level or is not going to be reused, it will be placed into a disposal bin for eventual disposal as radiologically impacted material.

In the event that intact drums or other potentially unsafe closed containers are encountered during the excavation, the excavation activities will be stopped and the work activities re-evaluated.

TtEC has contracted the services of a Hazardous Characterization (HAZCAT) contractor in the event of discovering intact or partially intact steel drums. If a drum is exposed, the field engineer will identify the location and instruct the field crew operator to cover the drum with soil while

preparations are made to remove it. Once the HAZCAT team has mobilized to the site, the drum will be handled in accordance with the Waste Management Plan, Section 7.4.3 of the Final TCRA Work Plan (TtEC, 2007). The RCT will provide continuous job coverage during these activities to ensure no loss of contamination control in the event the drum contains radiologically impacted material. The RCT will perform a dose rate survey and contamination survey of the exterior of the drum prior to the HAZCAT team characterizing the drum contents, handling the containers in accordance with the protocol described next.

Any containers and contents extracted during excavation activities will be presumed to be hazardous and will be managed as such until determined otherwise. Containers that are uncovered and appear to be in suitable condition for extraction (i.e., intact and not leaking) will be placed in over-pack containers capable of holding the entire contents of the original container. The contents will then be sampled and characterized for compatibility and proper storage. Containers that are uncovered and appear to be in poor condition or are leaking will be characterized and the contents will be removed into appropriate containers. The original container will then be extracted and placed into an over-pack container. Following initial compatibility testing, containers and contents will be stored in a pre-designed container storage area, which has secondary containment for container storage areas. Incompatible materials will be segregated from each other to prevent commingling in the event of a spill or release.

2.5 BACKFILL PLACEMENT AND COMPACTION

When the documentation of a trench has been completed, the trench will first be backfilled with waste and then the soil cover material will be placed in the excavation and compacted.

The dry material from the excavator bucket will be carefully placed on a heavy duty 20-mil PVC plastic liner minimizing any potential for damage. At the conclusion of the excavation, the excavator will be positioned across the trench from the stockpile. From this position, it will reach across and pull material back into the trench. A spotter located at the stockpile will direct the smoothed edge excavator bucket to ensure that the bucket does not contact the liner. As the material is depleted and the liner surface is approached, the excavator will drag the remaining skim of soil and debris on the liner and the liner itself into the trench excavation. The waste material will then be covered with the material that had been segregated at the beginning of the excavation.

The excavator bucket will be used to place and tamp the excavated material in place while backfilling. When the material reaches near surface elevations, where possible, the backfill material will be compacted by wheel or track rolling to a firm, unyielding condition and verified by the PQCM. No compaction testing shall be conducted as part of this characterization effort. The area above the trench will be backfilled slightly above grade to account for any future settlement and to ensure that a ponding situation does not occur.

A surface scan survey will be performed over the trench excavation area (i.e., the area where the plastic liner was located and the backfill area of the trench) if radiologically impacted material was received while excavating the trench. If radiologically impacted materials are found in the surrounding area, they will be removed and disposed of in accordance with the Final TCRA Work Plan (TtEC, 2007).

2.6 DECONTAMINATION OF EQUIPMENT AND FREE-RELEASE SURVEYING

At the completion of the trenching activities, surveys will be conducted according to Appendix D-1, Radiation and Contamination Surveys, and Appendix D-9, Decontamination of Equipment and Tools, of the Final TCRA Work Plan (TtEC, 2007) on all equipment, tools, and storage areas.

3.0 REFERENCES

Bechtel Environmental, Inc. (BEI). 2005. *Revised Draft Feasibility Study Report, IR Site 1, 1943–1956 Disposal Area, Alameda Point, Alameda, California.* May.

Tetra Tech EC, Inc. (TtEC). 2007. *Final Time-Critical Removal Action Work Plan, Installation Restoration Sites 1, 2, and 32, Former Naval Air Station Alameda, Alameda Point, Alameda, California.* DCN: ECSD-RAC-IV-07-0232. March 2.

FIGURES

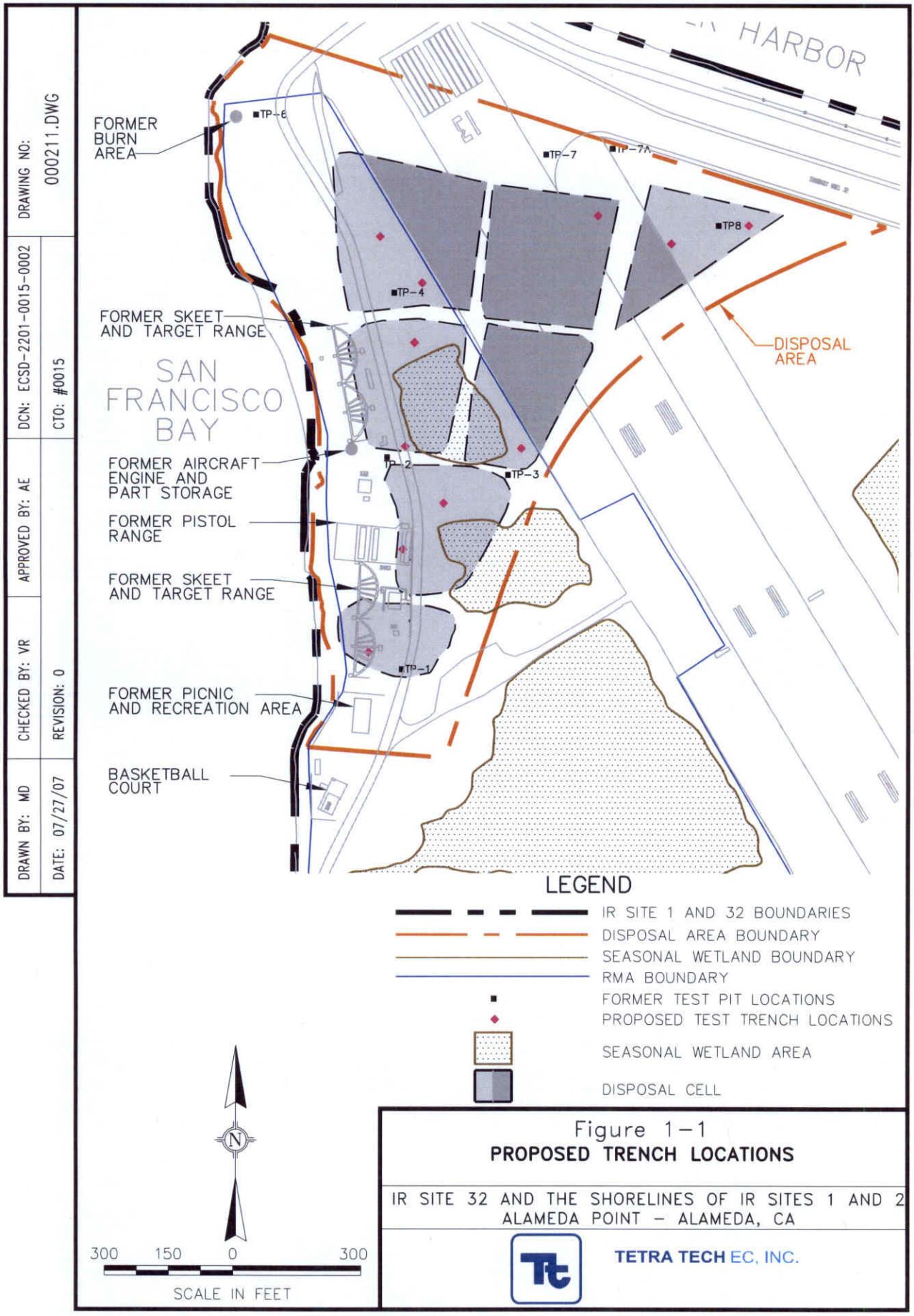

Figure 1-1
PROPOSED TRENCH LOCATIONS

IR SITE 32 AND THE SHORELINES OF IR SITES 1 AND 2
ALAMEDA POINT – ALAMEDA, CA

TETRA TECH EC, INC.

P:\3210-RAC IV\CTO-0015\DWG\0002\000211.DWG
PLOT/UPDATE: AUG 10 2007 12:24:56

TETRA TECH EC, INC.

FIGURE 1-2

TRENCH LOG

Project: RAC IV, CTO 15, Alameda

TRENCH: _____	LENGTH: _____ WIDTH: _____ DEPTH: _____ (Avg)	EQUIPMENT: _____ BUCKET SIZE: _____ OPERATOR: _____	LOCATION: _____ DATE: _____ LOGGED BY: _____
DESCRIPTION & REMARKS:			PLAN VIEW SKETCH OF TRENCH:

PROFILE OF TRENCH

HORIZONTAL SCALE: _____ VERTICAL EXAGGERATION: _____ ORIENTATION: _____

APPENDIX A

RESPONSE TO COMMENTS

RESPONSE TO COMMENTS
DRAFT ADDENDUM TO THE FINAL TIME-CRITICAL REMOVAL ACTION WORK PLAN
FOR
INSTALLATION RESTORATION SITES 1, 2, AND 32
FORMER NAVAL AIR STATION ALAMEDA
ALAMEDA POINT, ALAMEDA, CALIFORNIA (Dated August 20, 2007)

DCN: ECSD-2201-0015-0003

Reviewed by DTSC, Dot Lofstrom **August 2007**	Yellow highlighting denotes where changes will be made to the Addendum.
Comment 1. As you know, I am keenly interested in waste that is present in the saturated zone. As such, I concur with comments submitted previously by Peter Russell of ARRA. Every attempt should be made to excavate below the water table, providing safety of the crew and the environment is not compromised.	**Response 1.** It is TtEC's intent to excavate into the saturated zone to a depth where we can evaluate the extent of waste material buried in that particular location. The statement "where it is safe to do so" was inserted into the text at the request of our safety manager to simply reinforce and raise awareness of the field crew that safety is our top priority. Safety is a key concern with any excavation, and although all means will be taken to ensure safe operations around the excavation, we wanted to stress further awareness.
Comment 2. Please explain why in situ scan surveys of the excavated trench walls and bottom will not be performed prior to backfilling the trench. The Addendum currently states in the last sentence on page 2-3, that these surveys will not be performed. Is it a safety issue? DTSC recommends that the trench walls and bottom be surveyed, if possible.	**Response 2.** The principal objective of the exploratory trenching is to look for buried containers and to increase the accuracy of the waste volume estimate through visual means. Performing in situ scan surveys was not identified as a tool to significantly contribute to this objective. However, excavated material will undergo scanning for radiological content which will aid in the understanding of the nature of material that is distributed at the site. In situ scan surveys would increase the complexity and cost of the trenching activity, primarily because of safety factors. Trenches would need to be adequately protected (sloping, cut-back etc.) for personnel performing in situ surveys near the edge of the trench. The objective can be achieved satisfactorily through visual inspection and ex situ scanning of excavated materials. In situ scans would not significantly add to that evaluation. Therefore, the additional complexity and cost of performing the in situ scan surveys, and the increased risk and safety considerations, do not appear to be warranted.

RESPONSE TO COMMENTS DRAFT ADDENDUM TO THE FINAL TIME-CRITICAL REMOVAL ACTION WORK PLAN FOR INSTALLATION RESTORATION SITES 1, 2, AND 32 FORMER NAVAL AIR STATION ALAMEDA ALAMEDA POINT, ALAMEDA, CALIFORNIA (Dated August 20, 2007) DCN: ECSD-2201-0015-0003	
Comment 3. How will excavated materials be picked up from the plastic sheeting? By the same mechanical piece of equipment used for excavation? If so, additional language should be added describing inspection procedures to document tears in the plastic sheeting and to prevent excavated materials assumed to be hazardous waste from contacting the ground surface.	**Response 3.** Comment noted. The dry material from the excavator bucket will be carefully placed on the heavy duty 20-mil PVC plastic liner minimizing any potential for damage. At the conclusion of the excavation, the excavator will be positioned across the trench from the stockpile. From this position, it will reach across and pull material back into the trench. A spotter located at the stockpile will direct the smoothed edge excavator bucket to ensure that the bucket does not contact the liner. As the material is depleted and the liner surface is approached, the excavator will drag the remaining skim of soil and debris on the liner and the liner itself into the trench excavation. The waste material will then be covered with the material that had been segregated at the beginning of the excavation. We will add this description in Section 2.5 of the addendum.
Comment 4. The addendum states that much of the work will be photographed or videotaped. I encourage you to videotape as much as possible, as that footage will likely prove to be quite useful in the months to come.	**Response 4.** We will be videotaping and have made provisions for digital recording so that the videos can be shared electronically.

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DCN: ECSD-2201-0015-0003

Reviewed by Russell Resources, Peter Russell **August 2007**	
Specific Comments	
Comment 1. The draft provides for trenching below the water table "where it is safe to do so" (page 2-1, paragraph 2 and page 2-4, paragraph 1). "Safe" is a relative term. It is unclear what would be safe versus unsafe, especially when referring to the work of professionals who are trained and equipped to complete their task. Is this qualification referring only to risk of collapse of the trench walls? If not, what are examples of other unsafe conditions that might prevent trenching below the water table?	**Response 1.** It is the intent to excavate into the saturated zone to a depth where we can evaluate the extent of waste material buried in that particular location. The statement "where it is safe to do so" was inserted into the text at the request of our safety manager to simply reinforce and raise awareness of the field crew that safety is our top priority. Safety is a key concern with any excavation, and while all means will be taken to ensure safe operations around the excavation, we wanted to stress further awareness. Again, the excavation will proceed into the saturated zone and to the depth of visually noted waste unless safety concerns are identified (by the onsite Safety Manager and excavation competent person) and these safety concerns will be documented upon their occurrence. Limitations as to the ability of the excavator to reach certain depths and the ability of personnel to safely inspect the excavation at depth will be key factors in this consideration. There are always unknown possibilities when excavating that would cause one to stop excavating and re-evaluate the situation (for instance, unknown obstructions, materials, sidewall conditions, and stability). It is important for the field crew to maintain awareness of all potential conditions during excavation. However, it is fully our intent to achieve the complete extent of the required excavation in a safe and compliant manner.

RESPONSE TO COMMENTS DRAFT ADDENDUM TO THE FINAL TIME-CRITICAL REMOVAL ACTION WORK PLAN FOR INSTALLATION RESTORATION SITES 1, 2, AND 32 FORMER NAVAL AIR STATION ALAMEDA ALAMEDA POINT, ALAMEDA, CALIFORNIA (Dated August 20, 2007) DCN: ECSD-2201-0015-0003	
Comment 2. Consider specifying the localized trenching below the water table so as to give greater direction to the field crew. For example, consider replacing the third sentence in the second full paragraph of page 2-3 with: "To test for the bottom of the waste, the excavation will extend below groundwater within localized areas within the trench when it is safe to do so. If practical, deeper trenching to the bottom of the waste will be conducted near each end of each trench. Additional localized trenching below the water table will be conducted, if safe, whenever the field crew suspects the waste depths observed the ends are not representative of the entire trench."	**Response 2.** We will incorporate this wording on page 2-3 as suggested. The extent and depth of each exploratory trench will be fully documented as will instances where waste extends beneath the capacity of the equipment or safety concerns arise that impede progress to full depth.
Comment 3. If a drum is encountered, it is unlikely to lie entirely within the dimensions of the trench. Consider providing explicit direction in the work plan that whenever a drum is encountered during trenching, the trench width, depth, and/or length will be increased as needed to remove it.	**Response 3.** If a drum were to be encountered, the general work approach being conducted would need to be stopped because of the increased hazards posed by encountering a drum of unknown content. TtEC has a separate contractor specifically suited and capable of dealing with these situations who would be mobilized to deal with such a drum. Section 2.4 specifically details this approach and the requirements in this type of situation. Section 7.4.3 of the Final TCRA Work Plan (TtEC, 2007), to which this report is an addendum, provides further details about how the drum will be handled by the HAZCAT contractor.

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DCN: ECSD-2201-0015-0003

Reviewed by CDPH-DDWEM, Robert Wilson **August 2007**	
Comment 1. CDPH notes that "the site worker's activities associated with the trench excavation will be performed in accordance with Subsections 5.1 through 5.10, Radiological Controls, of the Final TCRA Work Plan (TtEC, 2007), as applicable." CDPH would like the Navy to note, in the work plan, which subsections are applicable to the activities associated with the trench excavation.	**Response 1.** As stated in the text, work associated with the trench excavation will be performed in accordance with Subsection 5.1 through 5.10 of the Final TCRA Work Plan (TtEC 2007). The text did not identify any exceptions to these sections. The section titles are: 5.1 ALARA Considerations, 5.2 Training, 5.3 Whole-body dose monitoring, 5.4 Radiation Work Permits, 5.5 Investigation Levels, 5.6 Radiation Detection Instrumentation, 5.7 Survey Implementation, 5.8 Sampling Protocol, 5.9 Post-Work Surveillance, 5.10 Decontamination Procedures. We will include the section titles in the Addendum.
Comment 2. The work plan makes a distinction between the "soil cap material" and the "excavated material" and that the excavated material will be subject to a scan survey followed by static measurements of areas determined by the prior scan survey. There is no mention of the soil cover material being subjected to a scan survey and follow-up static measurements if the scan survey identifies an area that exceeds investigation levels. Since the action of the soil cover removal would alter the original geometry of the soil cover matrix, CDPH is requesting that the survey activities of the excavated material are extended to the soil cover material, including the maximum thickness of 12 inches when placed on a protective plastic liner or equivalent. CDPH understands that past remedial investigation surface scans may not have detected any significant levels of surface radioactivity, but since the physical configuration of the site will change due to the excavation activities and the limitations/uncertainties of detecting subsurface radioactivity increase with soil depth, additional surface scan surveys will be required for the soil cover material.	**Response 2.** The distinction between the "soil cap" and the "underlying waste" is made to differential between the materials. Both the "soil cap" and "underlying waste" will be surveyed for MPPEH and elevated radiological readings. We will make sure this is properly clarified in the Addendum.

RESPONSE TO COMMENTS
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ALAMEDA POINT, ALAMEDA, CALIFORNIA (Dated August 20, 2007)

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Comment 3. It is understood, according to Section 2.4, "Trench Excavation", the purpose of the trenching is "to increase the accuracy of the waste volume estimate in the Site 1 disposal area and to characterize any waste material encountered." In addition, on page 2-3, fourth paragraph of the Draft Work Plan Addendum, UXO specialists will monitor the trench for MPPEH, but in situ scan surveys of the excavated trench side walls and bottom for radioactivity will not be performed. This omission of the aforementioned in situ scan surveys for radioactivity appears to contradict the Navy's stated purpose in Section 2.4 of this Work Plan. Therefore, CDPH is requesting that in situ scan surveys of the excavated trench side walls and bottom be performed, evaluated and documented for regulatory review.	**Response 3.** The principal objective of the exploratory trenching is to look for buried containers and to increase the accuracy of the waste volume estimate through visual means. Performing in situ scan surveys was not identified as a tool to significantly contribute to this objective. However, excavated material will undergo scanning for radiological content which will aid in the understanding of the nature of material that is distributed at the site. In situ scan surveys would increase the complexity and cost of the trenching activity, primarily because of safety factors. Trenches would need to be adequately protected (sloping, cut-back etc.) for personnel performing in situ surveys near the edge of the trench. The objective can be achieved satisfactorily through visual inspection and ex situ scanning of excavated materials. In situ scans would not significantly add to that evaluation. Therefore, the additional complexity and cost of performing the in situ scan surveys, and the increased risk and safety considerations, do not appear to be warranted. UXO technicians will be on hand to monitor the excavation and excavated materials but will not enter the trench to do so. Their monitoring will be "visual" in nature to ensure the safety of the excavation operation and handling of excavated materials.
Comment 4. Describe what actions will be performed when the excavator bucket has significant radioactivity detected on its surface while excavations are in progress.	**Response 4.** The excavator bucket will be decontaminated following Appendix D-9, Decontamination of Equipment and Tools, of the Final TCRA Work Plan (TtEC, 2007). We will reference this section of the Work Plan in the Addendum.

RESPONSE TO COMMENTS
DRAFT ADDENDUM TO THE FINAL TIME-CRITICAL REMOVAL ACTION WORK PLAN
FOR
INSTALLATION RESTORATION SITES 1, 2, AND 32
FORMER NAVAL AIR STATION ALAMEDA
ALAMEDA POINT, ALAMEDA, CALIFORNIA (Dated August 20, 2007)

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Comment 5. If removal of wastes or drums were to take place, there may be significant losses in soil volume that may not allow the trench to be backfilled slightly above grade. Where will the Navy obtain clean backfill material and how will the Navy prove that the newly acquired, and possibly offsite, backfill material is clean? If the Navy assumes that a four foot soil cover remedy may be instituted for this affected area in the near future, then the work plan should include the Navy's assumption and a contingency plan if the Navy's assumption of remedy is incorrect.	**Response 5.** Comment noted. As indicated in the Addendum, the excavation will be covered with soil at an elevation slightly above grade. This will prevent a ponding situation over the footprint of the trench. The backfill material that will be used, in the event the excavation soils are not sufficient, is a fine-grained silty sand/sandy silt referred to as "quarry fines." The material is a naturally occurring product produced at the Steven's Creek Quarry in Cupertino, California. The chemical data on this material were presented to the Navy, who in turn distributed the information to the regulatory agencies. The Navy has communicated to TtEC that this material was acceptable as a suitable backfill material for work at Alameda Point, California. The work detailed in this Addendum is for the purposes of identifying and characterizing the buried waste. This information will be used in finalizing the cover remedies; however, the task at hand has not been scoped to substantiate the Navy's cover assumptions or formulate contingency measures. The Navy will evaluate the field data and report back to the regulatory agencies as to the status of the remedies.
Comment 6. Section 2.6, page 2-5: Include references that will provide additional information as to how the surveys will be performed and any decontamination activities to meet free-release criteria.	**Response 6.** Appendix D-1, Radiation and Contamination Surveys, and Appendix D-9, Decontamination of Equipment and Tools, of the Final TCRA Work Plan (TtEC, 2007) provide the governing procedural steps for these activities. We will reference these sections in the Addendum.