



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND SOUTHWEST
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5090
Ser OPAE.TM/297
July 7, 2015

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California Environmental Protection Agency
California Regional Water Quality Control Board
Mitigation & Cleanup Unit
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Ms. Beatrice Griffey
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Mr. Tayseer Mahmoud
California Environmental Protection Agency
Department of Toxic Substances Control
Brownfields and Environmental Restoration Program
5796 Corporate Avenue
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Mr. Martin Hausladen
U. S. Environmental Protection Agency
Region IX, Code SFD-8-3
75 Hawthorne Street
San Francisco, CA 94105-3901

Subject: MEETING MINUTES FOR THE 115th FEDERAL FACILITIES
AGREEMENT (FFA) MEETING DATED MAY 14, 2015,
MARINE CORPS BASE CAMP PENDLETON

Dear Ms. DiCampalto, Ms. Griffey, Mr. Mahmoud, Mr. Hausladen:

Enclosed are the minutes to the Marine Corps Base, Camp Pendleton Federal Facilities Agreement (FFA) Meeting Number 115, held on May 14, 2015. The May meeting was held via teleconference. Should you have questions, please call me at (619) 532-1502.

5090
Ser OPAE.TM/
July 7, 2015

Sincerely,



THERESA MORLEY
By direction

Enclosures: (1) 115th FFA Meeting Minutes
(2) 115th FFA Meeting Agenda
(3) Sign in Sheet
(4) FFA Schedule
(5) Deliverables/Fieldwork Spreadsheets

Copy to: CG, MCB Camp Pendleton (Attn: ACOS, Environmental
Security - Mr. Luis Ledesma)

PARSONS

Contract No. N62473-09-D-1212, Delivery Order No. No. 37
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PROJECT NOTE NO. 65

SUBJECT: Marine Corps Base (MCB) Camp Pendleton Federal Facilities Agreement (FFA) Meeting (No. 115)

DATE HELD: May 14, 2015

Attendees on Conference Call:

Theresa Morley (Naval Facilities Engineering Command Southwest [NAVFAC SW]), Adam Hill (NAVFAC SW), Tracy Sahagun (MCB Camp Pendleton), Luis Ledesma (MCB Camp Pendleton), Martin Hausladen (USEPA), Tayseer Mahmoud (California [Cal] EPA/Department of Toxic Substances Control [DTSC]), Kimberly Gettmann (DTSC), Beatrice Griffey (San Diego Regional Water Quality Control Board [RWQCB or Water Board]), Sophie di Campalto (RWQCB), Steve Griswold (Parsons), Josh Sacker (Parsons), and Lauri Roché (Parsons).

FFA Schedule Update, Project Deliverables, and Field Work Status

A conference call was held to update the FFA Team (Team) on program status. The agenda, FFA Schedule, Deliverables Spreadsheet, Fieldwork Spreadsheet, and Response-to-Comments matrix are attached.

Following introductions, Ms. Morley discussed progress at the Installation Restoration (IR) Sites shown on the FFA Schedule (attached), which shows the dates for draft documents. The discussion focused on those sites that have changes since the last version of the FFA schedule, as discussed below.

- For Site 6, the Enhanced In Situ Bioremediation (EISB) Pilot Study Report for trichloroethene (TCE) treatment at the site was added to the schedule, with a draft due date of 6/29/15. With regard to the 22/23 Area Land Use Control Plan, there is an issue that needs to be resolved between the Navy and DTSC with regard to land use covenants. Ms. Morley will continue to communicate with legal counsel to urge resolution of the issue. Ms. Morley also noted that the installation of the new production well is still in progress.
- For Site 33, the Record of Decision and the Groundwater Monitoring and Soil Gas Report will be in the October 2015 timeframe, but a specific date has not been set yet.

- The Site 150 Remedial Investigation (RI) and Feasibility (FS) Reports are scheduled to be delivered on 5/29/15 [Note: After this FFA meeting and before publishing these notes, it was decided to delay these deliverables to allow for additional data gathering at the site, which was agreed to via email by the FFA Team].
- At Site 1115, the thermal conductive heating system may be turned on this week and will operate for several months. If any team members would like to visit the site to see the system, please let Mr. Ledesma know and he will set up a site visit.
- For Site 1117, the Draft RI Report is now scheduled to be delivered on 7/24/15.
- For Site 1119, the new date for the EISB Pilot Study Work Plan has been set at 8/3/15.
- The Site 1D Draft RI Report went out on 5/13/15.
- Further progress on the Site 1122 Shot Fall Zone is pending the Navy pursuing the City of San Clemente as a Potentially Responsible Party (PRP), so the Navy will only carry out placement of storm water best management practices (BMPs) at the site in the near future, and Navy attorneys will be discussing the path-forward with the City of San Clemente.

Ms. Morley then discussed the Deliverables Spreadsheet (attached). The following points were noted during the discussion:

- Item 5: The (No Further Action (NFA) Record of Decision for Site 62 is awaiting approval from the Branch Chief at USEPA, according to Mr. Hausladen.
- Items 9, 10, 12, and 13: Responses to agency comments are currently in progress for several documents, including the Removal Action Work Plan Site 1118 - Subsite 21565, Removal Action Completion Report Site 33 (52 Area Armory), Record of Decision for Site 21 (14 Area Surface Impoundment), and Record of Decision for Site 1119 (26 Area Groundwater).
- Item 14: USEPA comments were recently received for the Zero Valent Zinc (ZVZ) Pilot Study Report for 22/23 Area Groundwater, which is not reflected on the deliverables spreadsheet.

For the fieldwork spreadsheet, the following points were raised during discussion:

- Item 4: For the Site 1114 performance monitoring (Item 4), Mr. Mahmoud asked when the report will be completed, and Ms. Morley said it would be March 2016.
- Item 7: The first round of injection was conducted at Site 1115
- Item 8: The new monitoring wells at the 22/23 Area were installed between the 1,4-dioxane detections and the production wells.
- Item 9: The second phase of field sampling is underway now at Site 1120, and will be completed next month.

- Item 10: The removal action near Site 1118, Building 21565 will begin before September 2015.
- Item 12: Characterization wells have been installed for the 1,4-dioxane plume pilot study, to be followed by injection of a remediation reagent.

The next item of discussion was the Response to Comments tracking sheet (attached, following the fieldwork spreadsheet). Mr. Hill noted that for Item 3, the removal action at Site 1118, Subsite 21565, the responses to agency comments will be sent out in the next few days. Mr. Hill also provided some history and status of the project at Subsite 21565. The Work Plan for the site noted that the road would not be removed due to the presence of multiple sensitive utility lines underlying the road. The nearby building occupants (in the Amphibious Assault School) feel that the impact to the parking and surrounding area will be significant, and requested that large stockpiles not be placed on the site, which would block parking and access. Also, it was noted that there will be a large gathering in the area for the Fourth of July and do not want the construction work to pose a hazard to the expected crowds. Therefore, the field work for the removal action will need to start after 4 July.

In addition, to streamline the removal action and minimize disturbance to nearby operations, the Navy plans to conduct in-place characterization of the soils that will be removed, prior to excavation. This will include a 20-foot by 20-foot sampling grid within an area of approximately 160 feet by 160 feet. The sampling will extend south of SG-2 and SG-5, and north of SG-2. A sketch of the planned sampling will be provided in the responses to comments. The sampling will involve the use a direct-push rig at 64 locations, with and expected three samples at each location.

This approach will not require changes to the Sampling and Analysis Plan (SAP) since the chemicals of concern (COCs) remain the same. The plan for the field work is to not stockpile soils, but to send soils offsite as the work proceeds, since it will be pre-characterized. Mr. Mahmoud asked if the volume will be different than what was outlined in the Engineering Evaluation/Cost Analysis (EE/CA) and Action Memo, and when the field work will occur. Mr. Hill said that the volume could go up or down, but that the soil excavation is still planned as described in the EE/CA and Action Memo. The schedule is for the direct-push work to be carried out in June and the removal action in July 2015. Mr. Hausladen said that the Navy should make sure that the volume change is not significant enough to require a change to the EE/CA and Action Memo.

Mr. Mahmoud asked if the Navy wants to receive agency comments on the Site 150 RI and FS as separate documents, or combined into a single document, and Ms. Morley said one letter would be fine as long as the comments are separated between those for the RI and the FS.

Schedule for Next FFA Meeting

The next FFA Meeting is scheduled to be held in San Francisco on September 17, 2015. The conference call meeting was adjourned.

**MCB Camp Pendleton
115th FFA Meeting Agenda**

Call-In Number 1 888 598.1409 / Passcode: 8830241#

May 14th, 2015

- | | |
|--------------------|---|
| 0900 – 0915 | Welcome and Introductions (Navy) |
| 0915 – 1000 | Project Deliverables, FFA Schedule Update and Planned/In Progress Field Work Status (Navy) |
| 1000 – 1015 | Discussion on PreCharacterization Study for Site 1118 Subsite 21565 Removal Action (Navy) |
| 1015 – 1030 | Meeting Conclusion and Action Items (Navy) |

FFA Schedule for Draft Documents – May 14, 2015

Original schedule was agreed to by all FFA signatories at the May 17, 2011 FFA meeting. Updates are made every four months, prior to the FFA meetings. Dates marked with an asterisk are tentative, based on funding and subject to change. Once funding becomes available for a site, the date will be updated and the asterisk removed. Items in italics represent field work and are not enforceable.

Site 6 (Site number is for funding purposes only) – 22/23 Area Groundwater

This site consists of VOC plumes in the groundwater under the 22 and 23 Areas. Various industrial activities have historically taken place in the 22 and 23 Areas. An RI/FS was completed in January 2011. The Proposed Plan outlined the various alternatives from the FS and proposed the preferred alternative which is a combination of alternatives 2, 3 and 4. Alternative 2 includes Land Use Controls and Long-Term Monitoring, Alternative 3 involves an Alternate Water Supply and Alternative 4 is Source Area Treatment via In-Situ Technologies. A public comment period and public meeting for the Proposed Plan were held in July/August 2011. A Record of Decision has been completed. To evaluate the effectiveness of the remedies proposed for Alternative 4, two pilot studies are in progress and a third planned: a Zero Valent Zinc (ZVZ) Permeable Reactive Barrier for the TCP plume; Enhanced InSitu Bioremediation (EISB) for the TCE plume; and, characterization of the 1,4-dioxane plume. Field work is complete for two of the pilot studies, and underway for the production well installation.

- | | |
|--|--------------------|
| – Proposed Plan | complete |
| – Geotechnical and Design Information for ZVZ PRB Pilot Study | complete |
| – <i>Implementation of ZVZ PRB Pilot Study</i> | <i>in progress</i> |
| – Record of Decision | complete |
| – Well Siting Study Sampling and Analysis Plan | complete |
| – <i>Field Work for Well Siting Study</i> | <i>complete</i> |
| – Work Plan for Enhanced InSitu Bioremediation (EISB) | complete |
| – <i>Field Work for EISB Pilot Study</i> | <i>in progress</i> |
| – Work Plan to Install Wells and Conduct Groundwater Monitoring | complete |
| – <i>Installation of Alternative Water Supply Well</i> | <i>in progress</i> |
| Land Use Control Implementation Plan | 5/16/2014 |
| – Tech Memo to Implement Alternate Water Supply | complete |
| – Baseline LTM Groundwater Monitoring Tech Memo | complete |
| – ZVZ Pilot Study for TCP Report | 3/24/2015 |
| – EISB Pilot Study for TCE Report | 6/29/2015 |
| – Annual LTM Groundwater Monitoring Report | 2015* |
| Extension for Record of Decision requested to incorporate multiple Navy and Marine Corps comments and for Sampling and Analysis Plan to accommodate changes in Navy Quality Assurance Officer | |
| LUCIP delayed because the ROD was not signed until February 2014 | |

****POST ROD Site 7 – Box Canyon Landfill**

This site is a CAMU situated above an old municipal landfill. This site is post-ROD. The selected remedy was an EvapoTranspiration (ET) cap with land use controls. The site must be fenced and signed. Annual inspections are made in relation to the monitoring systems, cover maintenance, drainage/erosion control, cracks, settlement and movement and vegetation growth. Additionally, groundwater monitoring wells are sampled every year and gas probes are sampled according to the percent of methane in the probe. The groundwater monitoring results and the annual maintenance activities are summarized in annual reports. The methane results are emailed to the FFA team monthly. A Gas Collection and Control System (GCCS) was installed and has reduced methane concentrations to below compliance standards.

- Memo to File for Site 7 (pv panels) complete
- *Field Work for Non Methane Organic Compounds* complete
- Memo To File complete
- Report for Non Methane Organic Compounds complete
- Annual Post Closure Maintenance Report (for CY14) 2/22/2016
- Annual Groundwater Monitoring Report 7/3/2015
- Five Year Review complete

12 Area Site 13 – Former Building 1280 and 1283

This site is the site of a former UST and has some low level concentrations of VOCs in groundwater. An RI/FS has been completed. Due to an impending construction project through the site, contaminated soil and groundwater were removed from the area to be impacted by construction. A year of groundwater monitoring has been completed and a Project Completion Report is complete. The report recommends further action for the site. An interim action is underway to install a Soil Vapour Extraction system and monitor groundwater for a year.

- Groundwater Monitoring Report complete
- **Project Completion Report for Soil and Groundwater** complete
- *AS/SVE Pilot Study* in progress
- Post SVE Groundwater Monitoring Report 2015*
- Proposed Plan 2016*
- Record of Decision 2017*

Dates changed as a result of the May 10, 2012 FFA Meeting

Site 21 – 14 Area Surface Area Impoundment

This site was a former oxidation pond near a maintenance facility which has some low levels of VOCs in groundwater. A Remedial Investigation has been completed for the site. A pilot study to evaluate the effectiveness of in-situ bioremediation of chlorinated solvents at low concentrations in groundwater is complete. Technical Memorandums reporting on the effectiveness of both phases of the pilot study were finalized and the Feasibility Study is in agency review.

- Pilot Study Tech Memo complete
 - Site 21 Pilot Study Work Plan Addendum complete
 - *Second Phase of Pilot Study Field Work* complete
 - **Feasibility Study** complete
 - **Proposed Plan** complete
 - **Record of Decision** 3/9/2015
 - Remedial Design 2016*
 - Remedial Action 2016*
 - Land Use Control Implementation Plan (LUCIP) 2017*
- Dates were changed as a result of the September 15, 2011 FFA meeting**

Site 33 – 52 Area Armory

Gun cleaning in the armory contributed to a PCE plume downgradient of the armory. A Remedial Investigation and Feasibility Study have been completed for this site. An Engineering Evaluation/Cost Analysis and a Non-Time Critical Action Memorandum have also been completed. The selected remedy was excavation of the source material, and treatment of groundwater from the site. An interim Removal Action was completed, concentrating on the worst part of the plume. An additional Removal Action was recently completed for the source area. Groundwater monitoring, EISB injections and soil gas sampling are currently in progress.

- Removal Action Work Plan for plume complete
- *Plume Removal Action (geophysical work started 15 Nov 11)* complete
- Plume Removal Action Completion Report complete
- Removal Action Work Plan for source complete
- *Source Removal Action/EISB Injection* in progress
- Groundwater Monitoring Report complete
- SAP Addendum for Soil Gas Monitoring complete
- Source Removal Action Completion Report 1/16/2015
- Proposed Plan 4/2/2015
- Record of Decision Oct 2015*
- Groundwater Monitoring & Soil Gas Report Oct 2015*

Site 150 – 21 Area, Location 1

This site became an IR site after a discovery investigation conducted based on information gained from a former Marine stationed at Camp Pendleton. During the discovery investigation, one location had vinyl chloride in soil gas that exceeded risk screening criteria. Field work for the Site Inspection has located groundwater contamination. This site is in the Remedial Investigation phase.

- *Site Inspection Field Work* complete
- Site Inspection Report complete
- **Remedial Investigation Work Plan** complete

- *Field Work for Remedial Investigation* *in progress*
 - **Remedial Investigation Report** **5/29/2015***
 - **Feasibility Study** **5/29/2015**
 - Proposed Plan 2016*
 - Record of Decision 2017*
- Dates changed (RI added) as a result of the SI field work**

SITE CLOSED Site 1003 (Site number is for funding purposes only) – Site 1D Soil

This site was a former burn ash site and has undergone a Remedial Investigation and Feasibility Study for soil only. A ROD was signed documenting the selected remedy consisting of excavation and off-base disposal of contaminated soil. During the remedial action a cell with 90 drums and drum fragments containing liquid and solid chemicals was discovered. The drums were removed but the material in the drums had reached groundwater. A Remedial Action Closure Report (RACR) was completed to close out the soil portion of the site, but the groundwater contamination remains to be addressed. As an interim measure, until funding could be secured for further investigation, 650,000 gallons of the groundwater was pumped from the site, treated and disposed of in the base sanitary sewer system. This lowered the concentrations of contaminants in groundwater, however, additional work is planned under a new site, IR Site 1121 Site 1D Groundwater. This site is for soil only; and was closed through the ROD and the RACR.

- Data Gap Analysis for Groundwater Work Plan complete
- *Data Gap Analysis Field Work* *complete*
- Data Gap Analysis Report complete

SITE CLOSED Site 1111 – 26 Area Ash and Debris Disposal Area

This burn ash site was remediated and four quarters of groundwater monitoring have been completed. The site was revegetated and a report was written summarizing the actions that had been completed to date, and why the site qualified for unrestricted land use. A No Further Action Record of Decision (ROD) was signed on April 19, 2013.

- Proposed Plan for No Further Action complete
- Record of Decision for NFA complete

Site 1114 – 41 Area Arroyo

This site was created to investigate the PCE concentrations in one well that used to be associated with IR Site 9 (closed). A Site Inspection was carried out and described low-level concentrations of TPH and vinyl chlorides in soil gas and groundwater. A Remedial Investigation was conducted to validate the findings of the SI and to complete a risk assessment for the site. The EPA did not agree with the proposed NFA, so an interim Removal Action was completed to address elevated concentrations in groundwater. Performance monitoring to examine the effectiveness of the substrate injected during the removal action is underway.

- Remedial Investigation Report complete
- **Engineering Evaluation/Cost Analysis & Action Memorandum** complete
- **Removal Action Work Plan** complete
- ***Removal Action*** complete
- **Work Plan for Performance Monitoring** complete
- **Removal Action Completion Report** complete
- ***Performance Monitoring*** in progress
- Performance Monitoring Report 2015*
- Proposed Plan 2016*
- Record of Decision 2017*

Dates were changed as a result of EPA's disagreement with site closure

Dates were changed as a result of the Government shutdown

Site 1115 – 13 Area FSSG Lot

There are two plumes underneath the parking lot at this site, one shallow and one deep, containing chlorinated solvents and benzene. A pilot study to evaluate the effectiveness of in-situ bioremediation of chlorinated solvents in groundwater was completed. The technology was successful at reducing contaminant concentrations, but the site geology limited its effectiveness. A Technical Memorandum detailing the pilot study is complete. A work plan to collect more data is final and the results have been included in a Remedial Investigation/Feasibility Study. The Feasibility Study identified remedial alternatives for various Target Treatment Zones (TTZs) throughout the site. Pilot studies are currently underway to address the different plumes and contaminants at the site.

- Tech Memo complete
- **Work Plan to collect additional data for site** complete
- ***Field Work to collect additional data*** complete
- **Remedial Investigation/Feasibility Study Report** complete
- Pilot Study Work Plan for TTZ-2L and TTZ-2S complete
- Pilot Study Work Plan for TTZ-1S complete
- *Field Work for TTZ-2L and TTZ-2S Pilot Study* in progress*
- *Field Work for TTZ-1S Pilot Study* in progress*
- Pilot Study Report for TTZ-1S 2016*
- Pilot Study Report for TTZ-2L and TTZ-2S 2016*
- Proposed Plan 2017*
- Record of Decision 2018*

Dates were changed as a result of the September 15, 2011 FFA meeting

Site 1116 – 14 Area Groundwater

Nine USTs were transferred from the UST Program to the IR Program due to low-levels of chlorinated solvents. A Site Inspection was completed and six of the sites do not warrant further action under the IR Program. The

three other sites will be remediated. An Engineering Evaluation/Cost Analysis (EE/CA) and Action Memo has been completed for this site. A Removal Action Work Plan, with a report detailing the results of a limited investigation to close data gaps as an appendix, is complete. The removal action will address the mainly petroleum sources at the old USTs, along with Dual-Phase Extraction (DPE) at one site and an Enhanced Insitu Bioremediation (EISB) pilot study at another site. The limited investigation that was conducted in 2012 indicated that the TCE plumes at the site are not likely associated with the USTs. Therefore, an additional investigation is in progress to delineate the TCE plumes and to find a source, if possible.

- EE/CA and Action Memorandum (3 subsites – Moving Forward) complete
- Expanded Site Inspection WP (3 subsites – Moving Forward) complete
- *Field Work for Site Inspection* (3 subsites – Moving Forward) complete
- **Expanded Site Inspection Report** (3 subsites – Moving Forward) **appendix to RAWP**
- **Removal Action Work Plan (RAWP)** (3 subsites – Moving Forward) **complete**
- **Interim Removal Action** (3 subsites – Moving Forward) **in progress**
- Additional Investigation Work Plan complete
- Performance Monitoring SAP complete
- *Additional Investigation Field work* complete
- *Performance Monitoring Field Work* in progress
- Removal Action Completion Report (3 subsites – Moving Forward) complete
- Additional Investigation Report 2015*
- Proposed Plan 2016*
- Record of Decision 2017*

Dates were changed as a result of the September 17, 2012 FFA meeting.

Site 1117 – 15/16 Area Groundwater

Six USTs were transferred from the UST Program to the IR Program due to low-levels of chlorinated solvents. The agencies have concurred with the Site Inspection Report recommending the site move into the Remedial Investigation phase. A Remedial Investigation is currently in progress.

- *Field Work for Site Inspection* complete
- Site Inspection Report complete
- **Remedial Investigation Work Plan** **complete**
- **Remedial Investigation Field Work** **in progress**
- **Remedial Investigation Report** **7/1/2015**
- Proposed Plan 2016*
- Record of Decision 2017*

Remedial Investigation added based on agency comments on Site Inspection

Site 1118 – 21/26/52 Area Groundwater

Three USTs were transferred from the UST Program to the IR Program due to low-levels of chlorinated solvents. A Site Inspection and Extended Site Inspection have been completed for this site, resulting in No Further Action for one subsite, 2664. Additional investigation is needed at subsite 520400 and an interim removal action will begin at subsite 21565 soon.

- **Extended Site Inspection (ESI) Work Plan** **complete**
- *Field Work for Site Inspection* *complete*
- Extended Site Inspection Report complete
- EE/CA and Action Memo Subsite 21565 complete
- **Removal Action Work Plan Subsite 21565** **1/9/2015**
- *Field Work for Subsite 21565 Removal Action* *9/15/2015*
- Removal Action Completion Report Subsite 21565 2016*
- ESI Work Plan Addendum Subsite 520400 2016*
- *Field Work for Subsite 520400* *2016**
- Proposed Plan 2017*
- Record of Decision 2018*

Dates changed as a result of document quality issues

Dates changed due to delays with regulatory agencies on ESI

Site 1119 – 26 Area Groundwater

This site was created to investigate the source or sources of chlorinated solvents in the 26 Area production wells. Field work for the Remedial Investigation has been completed. TCE had been discovered at two of the wells and further investigation was needed to delineate the extent of contamination and to locate the source. The results of the additional investigation and proposed remedial alternatives were included in the Remedial Investigation/Feasibility Study Report. The preferred alternative has been documented in a Proposed Plan, and the Record of Decision is currently in agency review.

- *Field Work for Remedial Investigation* *complete*
- **Work Plan Addendum to Delineate Source** **complete**
- **Additional RI Field Work** **complete**
- **RI/FS Report** **complete**
- Proposed Plan complete
- Record of Decision 3/9/2015
- EISB Pilot Study Work Plan 8/3/2015
- *EISB Pilot Study* *2016**
- EISB Pilot Study Report 2016*

Dates changed as a result of the Jan 19, 2011 FFA meeting

Site 62 – Asphalt Batch Plant

This site was created when a transformer containing PCBs tipped over and spilled. A Site Inspection was performed, however data was missing and further investigation was needed. An Extended Site Inspection, including trenching, has been completed. The ESI Report recommended No Further Action at the site and a Proposed Plan has been completed. Currently a Record of Decision is in agency review.

- Extended Site Inspection Work Plan complete
 - **Field Work for Extended Site Inspection** **complete**
 - **Extended Site Inspection Report** **complete**
 - Proposed Plan complete
 - Record of Decision 9/10/2014
- Dates changed as a result of the September 17, 2012 meeting**

Site 1120 – Stuart Mesa Pesticide Maintenance Areas

This site was created in 2012 to address pesticide contamination due to releases from agricultural maintenance activities. A Phase II Environmental Assessment was completed for this site in support of real estate agreement closure. The Environmental Assessment is analogous to a Site Inspection, so this site entered the Installation Restoration Program at the Remedial Investigation stage. Currently the field work for the Remedial Investigation is in progress.

- Remedial Investigation Work Plan complete
- *Remedial Investigation Field Work* *in progress*
- Remedial Investigation Report 2015*
- Pilot Study 2016*
- Proposed Plan 2017*
- Record of Decision 2018*

Site 1121 – Site 1D Groundwater

This site was created in 2012 to differentiate Site 1D groundwater from Site 1D soil, which was closed with a previous remedial action and Record of Decision. There is a plume consisting of elevated concentrations of VOCs, metals, and pesticides. A Remedial Investigation is currently in progress.

- Remedial Investigation Work Plan complete
- **Remedial Investigation Field Work** **in progress**
- **Remedial Investigation Report** **5/13/2015**
- Feasibility Study 2016*
- Proposed Plan 2017*
- Record of Decision 2018*

Dates were changed as a result of the Government shutdown

Date was changed to space out FFA deliverables as agreed to by FFA team

Site 1122 – Shot Fall Zone

This site was created in 2013 to address lead and Polycyclic Aromatic Hydrocarbon contamination due to overshoot from skeet range activities off base. Limited soil samples were collected that indicated elevated levels of lead, so the site came into the Installation Restoration Program at the Site Inspection stage. The Site Inspection is complete; however, headquarters has determined that the DoN must go after the responsible parties before they will fund anymore work under this IR site.

- **Site Inspection Work Plan** **complete**
 - *Site Inspection Field Work* *complete*
 - **Site Inspection Report** **complete**
- Dates changed as a result of the Government shutdown**
Date changed as a result of delays caused by Navy QAO and natural resource issues

MCB Camp Pendleton Deliverables Spreadsheet

Date: 5/14/15

Item	Document	Contractor	Status	Date Due	Agency Comments	Response Received From:		
				to Agencies	Due By	EPA	DTSC	RWQCB
1	Land Use Control Implementation Plan - 22/23 Area Groundwater	Parsons	Discussing with DTSC attorney	5/16/14	7/15/14	9-Jun	14-Jul	21-Jul
2	EE/CA and Action Memo - Site 1118 (21/26/52 Area Groundwater)	SDVJV	FINAL	8/7/14	10/6/14	1-Oct	2-Oct	15-Oct
3	Quarterly Groundwater Monitoring Report Site 33 (52 Area Armory)	Trevet	FINAL	8/27/14	10/27/14	NC	15-Oct	27-Oct
4	SAP Addendum for Soil Gas Sampling Site 33 (52 Area Armory)	Trevet	FINAL	8/27/14	10/27/14	NC	23-Oct	27-Oct
5	NFA Record of Decision for Site 62 - Asphalt Batch Plant	TriEco	Making signature rounds	9/10/14	11/10/14	6-Nov	30-Oct	22-Oct
6	Proposed Plan for Site 1119 - 26 Area Groundwater	Tidewater	FINAL	9/12/14	11/11/14	14-Oct	9-Oct	1-Oct
7	Proposed Plan for Site 21 (14 Area Surface Impoundment)	SDVJV	FINAL	11/14/14	1/13/15	NC	15-Dec	23-Dec
8	Removal Action Completion Report Site 1116 (14 Area Groundwater)	ECM	FINAL	12/19/14	2/17/15	NC	NC	NC
9	Removal Action Work Plan Site 1118 - Subsite 21565	Trevet	Responding to agency comments	1/9/15	3/10/15	3-Mar	4-Mar	3-Mar
10	Removal Action Completion Report Site 33 (52 Area Armory)	ECM	Responding to agency comments	1/16/15	3/17/15	NC	10-Mar	16-Mar
11	Annual Post Closure Maintenance Report - Site 7 (Box Canyon)	Trevet	FINAL	2/22/15	4/24/15	NC	24-Mar	16-Mar
12	Record of Decision for Site 21 (14 Area Surface Impoundment)	SDVJV	Responding to agency comments	3/9/15	5/8/15	5-May	29-Apr	4-May
13	Record of Decision for Site 1119 (26 Area Groundwater)	Tidewater	Responding to agency comments	3/9/15	5/8/15	17-Apr	28-Apr	11-May
14	ZVZ Pilot Study Report - 22/23 Area Groundwater	Brady	With agencies	3/24/15	5/22/15			
15	Proposed Plan for Site 33 - 52 Area Armory	ECM/Parsons	With agencies	4/2/15	6/1/15	NC	22-Apr	22-Apr
16	Remedial Investigation Report - Site 1121 (Site 1D Groundwater)	SDVJV	With agencies	5/13/15	7/30/15			
17	Remedial Investigation Report - Site 150 (SEERMA Site)	Trevet	Navy Review	5/29/15				
18	Feasibility Study for Site 150 (SEERMA Site)	SDVJV	Navy review	5/29/15				
19	EISB Pilot Study Report - 22/23 Area Groundwater	Battelle	Preparing pre-draft	6/29/15				
20	Remedial Investigation Report - Site 1117 (15/16 Area Groundwater)	Trevet	Preparing pre-draft	7/1/15				
21	Pilot Study Work Plan - Site 1119 (26 Area Groundwater)	Tidewater	Preparing pre-draft	8/3/15				

Agencies have commented

MCB Camp Pendleton Fieldwork Spreadsheet

Date: 5/14/15

Item	Field Work	Planned Start Date	Planned Completion Date
1	Install Test Well - 22/23 Area GW	6-Jul-15	30-Sep-15
2	22/23 Area LTM Quarterly Sampling	Baseline complete	Jan (1st); Apr (2nd); Jul (3rd); Oct (4th)
3	Removal Action Site 1116	ongoing	2015
4	Site 1114 Performance Monitoring	wells installed/surveyed/developed/ sampled	2 years performance monitoring 2015/2016 (Feb/May/Aug/Nov)
5	Site 1116 Groundwater Investigation	wells installed/surveyed/developed/ sampled	2nd phase from 13 Apr through 5 May
6	Pilot Study Site 1115 TTZ-1S and 1L	injections (4/6) and (6/1) 1st quarter groundwater monitoring (7/13)	sampling 5/1
7	Pilot Study Site 1115 TTZ-2S and 2L	well installation complete, system installation in progress	start up week of 5/11
8	Install New Wells - 22/23 Area GW	12-Jan-15	complete
9	Soil gas & data gap samples Site 1120 RI	late May	June
10	Removal Action Site 1118-Bldg 21565	Sep	Nov
11	Groundwater Monitoring - 12 Area Site 13	3rd quarter 3/2	4th quarter early June
12	Dioxane Plume Pilot Study - 22 Area	Install wells 13 April	complete

SIOH Bearing

Date: 5/14/15

Item	Document	Contractor	RTCs to agencies	RTC Approved		
				EPA	DTSC	RWQCB
1	Land Use Control Implementation Plan - 22/23 Area Groundwater	Parsons	10/21/2014; addl RTCs 1/13	21-Oct	addl comment 11/13	29-Oct
2	NFA Record of Decision for Site 62 - Asphalt Batch Plant	TriEco	1/21/2015	29-Jan	29-Jan	29-Jan
3	Removal Action Work Plan Site 1118 - Subsite 21565	Trevet				
4	Removal Action Completion Report Site 33 (52 Area Armory)	ECM		N/A		
5	Record of Decision for Site 21 (14 Area Surface Impoundment)	SDVJV				
6	Record of Decision for Site 1119 (26 Area Groundwater)	Tidewater				
7	ZVZ Pilot Study Report - 22/23 Area Groundwater	Brady				
8	Proposed Plan for Site 33 - 52 Area Armory	ECM				