



FINAL FORMER MARINE CORPS AIR STATION (MCAS) TUSTIN 100th Restoration Advisory Board (RAB) Meeting Summary 26 March 2015



Meeting Location: Clifton C. Miller Community Center, 300 Centennial Way, Tustin, California

Meeting Date/Time: 26 March 2015/7:05 PM to 8:36 PM

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Summary Prepared by: Tony Guiang, Accord MACTEC 8A Joint Venture (AM8AJV)

MCAS TUSTIN

SSIC NO. 5090.3.A

Attachments:

Presentation Slides:

- Environmental Program Status, Installation Restoration Program (IRP), Former Marine Corps Air Station Tustin

Attendees: A total of 16 people were in attendance for the Former MCAS Tustin RAB meeting:

Navy: Jim Sullivan, Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) and RAB Co-Chair; and Content Arnold, Lead Remedial Project Manager (RPM).

Regulatory Agencies: Patricia Hannon, Regional Water Quality Control Board, Santa Ana Region (RWQCB).

RAB Members: Desire' Chandler, RAB Community Co-Chair; Mary Lynn Norby; Robert Kopecky; Susan Reynolds; Don Zweifel; and Matt West.

Other Attendees: John Nielsen, Mayor Pro Tem; John Edwards, South Orange County Community College District (SOCCCD); Harry Takach, Pacific States Environmental Contractors, Inc.; Shawn Yavari, Environ; Donna Zweifel, community member; Tony Guiang and Teresa Toye, AM8AJV

WELCOME/INTRODUCTIONS/AGENDA REVIEW:

Mr. Jim Sullivan (BEC and Navy RAB Co-Chair) welcomed everyone to the 100th Former MCAS Tustin RAB meeting and thanked everyone for attending. Mr. Sullivan asked for self-introductions from those in attendance.

Following introductions, Mr. Sullivan turned the meeting over to Mr. John Nielsen, City of Tustin Mayor Pro Tem, who commended the RAB members for their years of service to the RAB on behalf of the City of Tustin (City). He presented a Proclamation to the Restoration Advisory Board that was signed by the City Council members. Mr. Sullivan presented all RAB members (Ms. Desire' Chandler [RAB Co-Chair], Ms. Mary Lynn Norby, Mr. Robert Kopecky, Ms. Susan Reynolds, Mr. Don Zweifel, and Mr. Matt West) with Certificates of Appreciation from the Navy for their dedication and active participation in the environmental cleanup effort at Former MCAS Tustin. The Certificate of Appreciation also acknowledged each RAB member's role as a significant service to the Tustin community. Mr. Sullivan invited each of the RAB members to join him in a photograph to commemorate the event. RAB members not in attendance included Mr. Chris Crompton and Mr. Randy Peebles.

Mr. Sullivan opened the floor to individual comments. Several RAB members expressed their appreciation to the Navy, community, and other RAB members for their service.

Mr. Zweifel expressed his gratitude to the Navy, in particular, former BEC Mr. Jim Callian, Ms. Content Arnold, and Ms. Lynn Hornecker; the Regulatory Agencies (Ms. Patricia Hannon and Mr. Ram Pedadda); and his fellow RAB members for their participation in the environmental cleanup at Former MCAS Tustin. He noted that he had hoped Mr. Callian and Mr. Pedadda would be present at this milestone. He added that without their active participation and dedication to the RAB, the cleanup effort at Former MCAS Tustin would not be where it is today. Mr. Sullivan explained that Mr. Callian had extended his regrets for not being able to attend the milestone event because he was scheduled to be out of town this evening. Ms. Patricia Hannon noted that she would convey Mr. Zweifel's sentiment and appreciation to Mr. Pedadda.

Ms. Desire' Chandler, RAB Community Co-Chair, expressed her gratitude to those RAB members who through the years have participated in the RAB; some of those present in the room signed the original RAB Charter for Former MCAS Tustin.

Ms. Mary Lynn Norby, RAB member, expressed her appreciation to the Navy for allowing the community to participate and take an active part in the environmental cleanup effort at MCAS Tustin. She added that her participation in the RAB has been an invaluable learning experience and that the environmental process demonstrated by the Navy has been thorough from the RAB's inception. Ms. Susan Reynolds, RAB member, added that without her participation in the RAB through the years, she would have never developed an interest in the topics discussed at the RAB meetings.

Ms. Arnold, Navy Lead RPM, thanked the RAB members for their dedication of time and interest in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process throughout the years. Similarly, Ms. Hannon, RWQCB, thanked the RAB members for their interest and dedication throughout the years.

Mr. Matt West, City, explained that he has been affiliated with the City for 14 years and he attended his first RAB meeting 9 years ago. He explained that his participation in the RAB has allowed him an opportunity to be a part of the environmental cleanup process at Former MCAS Tustin that most of his fellow colleagues have not had, and he was appreciative of the opportunity to have served in this liaison role between the City and Navy over this long period of time.

Mr. Sullivan continued the meeting by reviewing the meeting agenda and points of contact for both the regulatory and Navy teams. Mr. Sullivan noted that the new United States Environmental Protection Agency (USEPA) representative is Mr. Loren Henning, who will be supported by Ms. Mary Aycok, who is also the USEPA representative at Former MCAS El Toro. Mr. Sullivan reviewed the Information Repository (IR) and Administrative Records (AR) general information as well as helpful websites where the public can obtain information on the Navy's environmental cleanup efforts.

REGULATORY AGENCY UPDATE:

Ms. Patricia Hannon (RWQCB)

Ms. Hannon stated that few documents have been submitted for RWQCB review since the last RAB meeting update. She did, however, list a number of documents that have been finalized or are currently in review including the following documents: Final 2013-2014 Annual Performance Groundwater Monitoring Report for IRP Site 5S(a), IRP Site 6, and the Mingled Plumes Area, Addenda to the Work Plans for groundwater monitoring for the Operable Unit (OU) 4B Low and Moderate Concentration Sites, and the Draft 2014 Annual Long Term Monitoring Report for OU-3 (IRP 1), known as the Moffett Trenches.

PRESENTATIONS:

Environmental Program Status, Installation Restoration Program (IRP), Former Marine Corps Air Station Tustin

Slide 1 – Title

Mr. Sullivan presented the environmental status update. He mentioned that there was not a lot of new information to report since the last RAB meeting.

Slide 2 – Presentation Overview

Mr. Sullivan explained that he would be providing updates on the sites at Former MCAS Tustin, which are grouped into OUs. This presentation would provide updates on OU-1A, OU-1B, OU-3, OU-4B, and Neighborhood E. He explained that he would provide a brief background, status, and anticipated documents for each of the sites.

Slide 3 – OU-1A (IRP-13S) and OU-1B (IRP-3 and IRP-12)

Mr. Sullivan presented a map of OU-1A and OU-1B. He pointed out the original station boundaries and the Navy Carve-Out (CO) Areas 2, 5, 6, and 9. Mr. Sullivan explained that the COs represent the remaining Navy areas and all areas outside of the COs up to the station boundaries are areas that already have been transferred.

Mr. Zweifel asked Mr. Robert Kopecky whether the college was part of any of the CO areas shown on the map. Mr. Kopecky replied that a portion of the college falls within CO 5. Mr. Zweifel asked when the remaining areas would be transferred. Mr. West replied that the City is hoping that transfer of remaining parcels will occur in the next year or two.

Slide 4 – OU-1A (IRP-13S) and OU-1B (IRP-3 and IRP-12)

Mr. Sullivan provided background and a summary of the Remedial Action Objectives (RAOs) for OU-1A and OU-1B. He noted that the RAOs for the sites are established to guide the Navy's environmental cleanup process.

Slide 5 – OU-1A (IRP-13S) and OU-1B (IRP-3 and IRP-12)

Mr. Sullivan noted that the primary chemicals of concern (COCs) in groundwater are 1,2,3-trichloropropane (1,2,3-TCP) and trichloroethylene (TCE) at OU-1A, and TCE at OU-1B North and South. The numerical remediation goals (RGs) for the COCs are 0.5 micrograms per liter ($\mu\text{g}/\text{L}$) for 1,2,3-TCP and 5 $\mu\text{g}/\text{L}$ for TCE.

Slide 6 – OU-1A (IRP-13S) and OU-1B (IRP-3 and IRP-12)

Mr. Sullivan provided a brief summary of the selected remedy for groundwater identified in the Record of Decision (ROD) signed in 2004, including specific components of the remedy and the implementation dates for the remedial actions. This ROD also documented the no further action determination of soil at these OUs. Mr. Sullivan then discussed the institutional controls (ICs) at all the sites and mentioned that all the sites are on a five-year review cycle. He explained that remedial actions at OU-1A and OU-1B North commenced in December 2007 and at OU-1B in January 2008. Mr. Sullivan explained that the Five-Year Review was an integral part of the CERCLA process that takes place once a remedy has been implemented and the protocol is established to return and evaluate the efficiency of the remedy in protecting human health and the environment. Mr. Zweifel asked when the next Five-Year Review would be issued. Ms. Arnold stated that the next Five-Year Review is scheduled for October 2016.

Slide 7 – OU-1A (IRP-13S) and OU-1B (IRP-3 and IRP-12)

Mr. Sullivan explained that the current status of the sites is operation and maintenance and long-term monitoring (O&M/LTM), which includes semiannual and annual groundwater monitoring. Results from the semiannual groundwater monitoring are compiled into a data summary report. Results from both the semiannual and annual monitoring events are evaluated and compiled into an Annual Performance Evaluation Report that assesses the effectiveness of the remedy and provides recommendations for optimization.

Ms. Mary Lynn Norby asked who was responsible for preparing the semiannual data summary and the annual performance evaluation. Mr. Sullivan replied that the Navy is responsible for the reporting requirements. Ms. Norby asked whether the regulatory agencies would be reviewing these documents. Mr. Sullivan confirmed that all reports are provided by the Navy to the regulatory agencies as well as to the RAB Community Co-Chair for review.

Slide 8 – OU-1A (IRP-13S) and OU-1B (IRP-3 and IRP-12)

Mr. Sullivan listed the OU-1A and OU-1B documents anticipated within the next 6 months, including the Final Explanations of Significant Differences (ESDs) Final Land Use Control Remedial Design (LUC RD) Amendment, and Draft 2014 Performance Evaluation Report. The ESDs and LUC RD Addendum document additional ICs that address potential vapor intrusion risk.

Mr. Zweifel asked what types of vapor were of concern at OU-1A. Mr. Sullivan explained that vapor intrusion relates to volatilization of chemicals in the groundwater. Mr. Zweifel asked whether this was occurring at the site. Mr. Sullivan explained that volatilization occurs to some

degree at all sites. Further, he explained that the potential for vapor intrusion was evaluated during the Five-Year Review process.

Slide 9 – OU-3 (IRP-1)

Mr. Sullivan presented an aerial photograph location for OU-3 (IRP-1), known as the Moffett Trenches and Crash Crew Burn Pits. Mr. Zweifel stated that some members of the RAB requested the Moffett Trenches to be excavated years ago. Ms. Chandler replied it was not standard practice to excavate a landfill that been intact many years. Furthermore, the existing cap is working as intended.

Slide 10 – OU-3 (IRP-1)

Mr. Sullivan summarized the RAOs, including controlling or eliminating discharge of contaminated groundwater into the Peters Canyon Channel, preventing or minimizing the downward migration of contaminated groundwater, preventing and minimizing exposure to contaminated groundwater, and implementing appropriate remedial action as necessary to facilitate property transfer and reuse.

Slide 11 – OU-3 (IRP-1)

Mr. Sullivan presented the remedy components for the site, as documented in the 2001 ROD. The remedy selected in the ROD includes a steel-reinforced concrete containment wall; groundwater, surface water, and landfill gas monitoring; inspections of the containment wall and monitoring wells; ICs; and Five-Year Reviews.

Slide 12 – OU-3 (IRP-1)

Mr. Sullivan presented the status of the remedial action at OU-3 (IRP-1), reporting requirements, and documents anticipated in the next 6 months. Mr. Zweifel asked when the Final 2014 Annual LTM Report is expected. Ms. Arnold stated that the draft is currently out for agency review and once comments are received, the document can be finalized.

Slide 13 – OU-4B (IRP-5S (a), IRP-6, IRP-11, IRP-13W, and Mingled Plumes Area [MPA])

This slide showed an aerial photograph of the location of OU-4B, which comprises IRP Sites 5S (a), 6, 11, 13W, and the MPA.

Slide 14 – OU-4B (IRP-5S (a), IRP-6, IRP-11, IRP-13W, and MPA)

Mr. Sullivan explained that OU-4B is subdivided into Low Concentration Sites, where concentrations of volatile organic compounds (VOCs) in groundwater are generally detected at <20 µg/L, and Moderate Concentration Sites where concentrations of VOCs in groundwater are generally detected at >20 µg/L. Mr. Zweifel asked if the VOC was TCE. Mr. Sullivan stated that, for most of the sites, TCE is the only COC; for IRP Site 6 only, 1,1-dichloroethane is also a COC.

For the Moderate Concentration Sites, Mr. Zweifel asked whether detected concentrations in groundwater far exceeded 20 µg/L. Mr. Sullivan replied that concentrations were detected that

slightly exceed 20 µg/L and that the concentrations varied from site to site and between monitoring wells sampled.

Slide 15 – OU-4B (IRP-5S(a), IRP-6, IRP-11, IRP-13W, and MPA)

Mr. Sullivan provided a summary of the RAOs for OU-4B and the primary COCs and RGs for the sites.

Slide 16 – OU-4B (IRP-5S(a), IRP-6, IRP-11, IRP-13W, and MPA)

Mr. Sullivan presented the remedy components for the IRP sites in OU-4B, as documented in the 2010 ROD. The remedy selected in the ROD for the Low Concentration Sites includes ICs, groundwater monitoring, and Five-Year Reviews. The remedy selected for the Moderate Concentration Sites includes in situ bioremediation via substrate injections, monitored natural attenuation (MNA), performance monitoring, Five-Year Reviews, and ICs. Mr. Zweifel asked how often they were monitoring the Moderate Concentration Sites. Ms. Arnold explained that it started out on a quarterly basis; however, now monitoring is conducted semiannually. Mr. Zweifel asked Ms. Hannon whether the RWQCB agreed that semiannual monitoring provided enough information for evaluating the contaminant concentrations at the site. Ms. Hannon replied the RWQCB was in agreement with reducing the monitoring frequency to semiannually.

Slide 17 – OU-4B (IRP-5S(a), IRP-6, IRP-11, IRP-13W, and MPA)

Mr. Sullivan explained that there was no remedial action construction required at the Low Concentration Sites, but that the remedial action at the Moderate Concentration Sites was completed in January through April 2013. For all sites, the current status is LTM/O&M, including groundwater monitoring and reporting.

Slide 18 – OU-4B (IRP-5S(a), IRP-6, IRP-11, IRP-13W, and MPA)

Mr. Sullivan provided a summary of the documents anticipated in the next 6 months.

Slide 19 – Neighborhood E

Mr. Sullivan presented an aerial photograph depicting the location of Neighborhood E.

Slide 20 – Neighborhood E

Mr. Sullivan stated that in Neighborhood E, at the request of the City, the Navy is conducting a site investigation for TCE in groundwater. The analytes also include total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, xylene, and naphthalene. He explained that the Navy has already conducted three rounds of groundwater sampling and a fourth round is scheduled for April 2015. Mr. Sullivan anticipates that the Draft Site Inspection (SI) Report will be submitted within the next 6 months.

Ms. Reynolds asked what has been found so far in sampling. Ms. Arnold replied that, based on the data collected thus far, low levels of TCE were detected in groundwater. She noted that an

entire year's worth of data is obtained (four quarterly groundwater sampling events) and data would be evaluated. The SI Report would include recommendations for the site.

Ms. Norby asked whether there was any information on why there was contamination and why the contaminants were not detected during the initial site investigation. Mr. Sullivan stated that he did not have an answer at this time, but could provide one at the next RAB meeting. Further, this topic would be an appropriate topic for the next RAB meeting, because, by that time, a Draft SI report will have been issued. Ms. Norby thought the RAB members would be interested in hearing about this.

Ms. Norby asked whether Neighborhood E had been transferred to the City. Mr. Sullivan replied that Neighborhood E has been transferred, but there is currently no activity on the site. Mr. West said that this transfer was part of a 2006 transfer. He explained that the developer was grading the property and discovered the impacted soil. Upon discovery, the developer remediated the impacted soil by excavating it from the site. In 2010, the City severed ties with the developer and the property was returned to the City. The City then approached the Navy to address the outstanding groundwater issue. Ms. Reynolds asked whether there was additional soil that needed to be excavated from the site. Mr. West replied that the soil component issue at Neighborhood E is closed and that they are currently addressing the potential groundwater contamination at the site. Mr. West noted that a condition documented in the Final Closure Report was to evaluate the potential for groundwater contamination remaining at the site.

Mr. Sullivan said to expect this to be an agenda item for the next RAB meeting.

Slide 21 – Questions

Slide 22 – Acronyms

FUTURE TOPICS/SCHEDULE FOR NEXT RAB MEETING AND SUBCOMMITTEE MEETING/MEETING EVALUATION AND CLOSING

Mr. Sullivan discussed the next meeting and asked for recommendations for future topics.

Mr. Kopecky nominated Mr. John W. Edwards, Director of Site Development at SOCCCD, as a RAB member. Mr. Edwards is replacing Dr. Randy Peebles, who is retiring. Ms. Reynolds and Mr. Zweifel seconded the nomination. Ms. Chandler accepted the nomination. Mr. Sullivan stated that the next step is to review the membership application and to approve it at the next meeting.

Mr. Zweifel asked what was to become of the RAB now that the environmental cleanup effort at Former MCAS Tustin was winding down. Mr. Sullivan replied that the path forward for the RAB is an issue that the Navy and community members need to come to a consensus on. He explained that now that the Navy has completed decision documents for all the OUs, the RAB and the Navy need to decide the RAB's future. Mr. Zweifel asked the opinion of the regulatory agencies. Ms. Hannon replied that the decision is up to the RAB members to determine based on whether there is continued interest. Ms. Chandler made the suggestion to move the RAB meeting frequency to yearly. Further, she noted that this could be a topic for discussion at the next RAB meeting.

Ms. Norby asked how long BRAC operations would remain active. Ms. Chandler replied that BRAC would remain active until all the requirements of the decision documents were achieved. Mr. Sullivan confirmed that as long as there are ICs or sites that have not met the RGs, BRAC would remain active. Ms. Chandler asked if that meant that the RAB would also continue to meet. Mr. Sullivan said maybe there could be a flexible RAB schedule where meetings would be on an as-needed basis, depending on documents. Mr. West suggested that the RAB be placed in a dormant stage in case an issue arose.

Ms. Chandler asked whether everyone would receive the groundwater reports for Neighborhood E discussed during the update. Mr. Sullivan said that typically the documents go to the RAB Community Co-Chair and it is up to that person to distribute the documents. RAB members stated their interest in viewing the Neighborhood E groundwater report. Ms. Reynolds asked whether an executive summary could be emailed to them. Mr. Sullivan said that they would look at their options and make sure the Neighborhood E document was available.

Mr. Zweifel expressed interest in a site tour and Mr. Sullivan explained that a site tour was on an as-requested basis and there was not much to see at Former MCAS Tustin. He noted that the request for a site tour was something they would consider.

Mr. Sullivan stated that the site of the next Former MCAS Tustin RAB meeting would return to the Tustin Senior Center.

Mr. Zweifel asked Mr. West about the City's plans for Hangars 1 and 2. Mr. Sullivan explained that the inquiry was more of a reuse issue and should be discussed outside of the RAB. He noted that he would be happy to discuss this with Mr. Zweifel after the meeting.

In closing, Mr. Sullivan thanked everyone for attending the 100th Former MCAS Tustin RAB meeting and stated that he looks forward to seeing everyone in September 2015 for the 101st meeting. He thanked Mr. West for accommodating the meeting at the Community Center. The RAB meeting adjourned at 8:36 PM.

LIST OF HANDOUTS PROVIDED AT THE MEETING:

- 26 March 2015 Former MCAS Tustin RAB Meeting Agenda
- Presentation Slides: "Environmental Program Status, Installation Restoration Program (IRP), Former Marine Corps Air Station Tustin"
- Environmental Websites
- Points-of-Contact Former MCAS Tustin
- RAB Mission Statement and Operating Procedures
- Former MCAS Tustin RAB Fact Sheet/Membership Application
- Former MCAS Tustin Mailing List Coupon

Copies of the meeting summaries and handouts are available at the IR for Former MCAS Tustin located in the Government Publication Section of the University of California at Irvine, Ayala Science Library, in Irvine, California. Library hours are 10:00 AM to 8:00 PM Monday through Thursday; 10:00 AM to 5:00 PM Friday; and 1:00 PM to 5:00 PM on Saturday and Sunday. The library phone number is (949) 824-7362 or (949) 824-6836. Copies of the meeting summaries and handouts are also available in the CERCLA AR File.

Final Summaries from previous RAB meetings can be found on the internet at the Navy BRAC Program Management Office (PMO) website: www.bracpmo.navy.mil.

INTERNET SITES:

Navy and Marine Corps Internet Access: BRAC PMO website (includes RAB meeting summary): <http://www.bracpmo.navy.mil/>

Department of Defense - Environmental Cleanup Home Page Website:

Homepage: <http://www.dtic.mil/envirodod/>

U.S. EPA:

Homepage: www.epa.gov

Superfund information: www.epa.gov/superfund

National Center for Environmental Assessment: www.epa.gov/ncea

Federal Register Environmental Documents: www.epa.gov/federalregister

California Agencies:

California Environmental Protection Agency Homepage: www.calepa.ca.gov

DTSC: www.dtsc.ca.gov

Department of Health Services: www.cdph.ca.gov

Santa Ana RWQCB: www.waterboards.ca.gov/santaana

Additional Websites: Reuse and Redevelopment

City of Tustin: www.tustinlegacy.com

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Environmental Program Status

Installation Restoration Program (IRP)

Former Marine Corps Air Station Tustin

Restoration Advisory Board (RAB) Meeting
James Sullivan, BRAC Environmental Coordinator

3/26/2015

Presentation Overview



Sites

- **Operable Units (OUs)**
 - OU-1A, OU-1B, OU-3, and OU-4B
- **Neighborhoods**
 - D South and E

Background

- **Location**
- **Remedy Overview/Chemicals of Concern (COC)**

Current Status

Documents Anticipated in Next 6 Months

**OU-1A (IRP-13S)
OU-1B (IRP-3 and IRP-12)**



**OU-1A (IRP-13S)
OU-1B (IRP-3 and IRP-12)**



Remedial Action Objectives (RAOs)

- Reduce concentrations of volatile organic compounds (VOCs) in groundwater to levels consistent with remediation goals (RGs), or until the plumes have stabilized, and prevent or limit VOC migration beyond the current plume boundaries.
- Protect human health by preventing extraction of VOC-impacted shallow groundwater for domestic use until RGs are achieved.
- Protect ecological receptors in Peters Canyon Channel and Barranca Channel by preventing the off-station migration of groundwater that contains VOCs at concentrations exceeding site RGs.
- Implement appropriate remedial actions as necessary to facilitate the transfer and reuse of the properties.

**OU-1A (IRP-13S)
OU-1B (IRP-3 and IRP-12)**



**Primary Chemicals of Concern (COCs) in
Groundwater**

- **OU-1A (IRP-13S)**
 - 1,2,3-Trichloropropane (1,2,3-TCP)
 - Trichloroethene (TCE)
- **OU-1B North (IRP-12)**
 - TCE
- **OU-1B South (IRP-3)**
 - TCE

RGs

- **1,2,3-TCP = 0.5 microgram per liter (µg/L)**
- **TCE = 5 µg/L**

**OU-1A (IRP-13S)
OU-1B (IRP-3 and IRP-12)**



2004 Final Records of Decision (RODs)

- **Soil: No Further Action**
- **Groundwater: Hydraulic Containment with Hot-Spot Removal**

Remedy Components

- **Groundwater extraction, treatment, and performance monitoring**
- **Soil removal to optimize the remedy**
- **Institutional controls (ICs)**
- **Five-year reviews**

Remedial Action

- **OU-1A, OU-1B North: 7 December 2007**
- **OU-1B South: 2 January 2008**

**OU-1A (IRP-13S)
OU-1B (IRP-3 and IRP-12)**



Current Status

➤ **Ongoing Long-Term Monitoring/Operation & Maintenance (LTM/O&M)**

- Inspection and maintenance of remedial components
- Semiannual groundwater monitoring
 - Groundwater level measurements to track flow directions
 - Groundwater sampling and analysis

➤ **Reporting**

- Semiannual Data Summary
- Annual Performance Evaluation

**OU-1A (IRP-13S)
OU-1B (IRP-3 and IRP-12)**



Documents Anticipated in Next 6 Months

- **Final Explanation of Significant Differences**
- **Final Land Use Control Remedial Design (LUC RD) Amendment**
- **Draft 2014 Performance Evaluation Report**

OU-3 (IRP-1)



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OU-3 (IRP-1)



RAOs

- Control or eliminate the discharge of contaminated groundwater above the RGs into Peters Canyon Channel that could potentially impact human health or the environment and to preserve existing high-quality surface water.
- Prevent or minimize the downward migration of contaminated groundwater above the RGs into deeper groundwater zones to preserve existing high-quality groundwater.
- Prevent or minimize exposure to contaminated groundwater above the RGs, buried wastes, and subsurface soils that have reported contamination above health-based levels.
- Implement appropriate remedial actions as necessary to facilitate rapid transfer and reuse of the OU-3 property.

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OU-3 (IRP-1)



2001 Final ROD Remedy Components

- **Steel-reinforced concrete containment wall**
- **Groundwater and surface water monitoring**
 - Final round to support the 2016 Five-Year Review
- **Inspections**
 - Steel-reinforced concrete containment wall
 - Monitoring wells
- **ICs**
- **Five-year reviews**

OU-3 (IRP-1)



Current Status

- **Ongoing LTM/O&M**
 - Inspection and maintenance of remedial components
 - Enforcement of ICs

- **Reporting**
 - Annual LTM Report

Documents Anticipated in Next 6 Months

- **Final 2014 Annual LTM Report**

OU-4B
(IRP-5S(a), IRP-6, IRP-11, IRP-13W, and MPA)



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OU-4B
(IRP-5S(a), IRP-6, IRP-11, IRP-13W, and MPA)



Low Concentration Sites

- VOCs in groundwater at concentrations <20 µg/L
- IRP-11: Drum Storage Area No. 1
- IRP-13W: Drum Storage Area No. 3

Moderate Concentration Sites

- VOCs in groundwater at concentrations >20 µg/L
- IRP-5S(a): Drainage Area No. 1, Ditch 5a South
- IRP-6: Paint Locker and Drum Storage Area
- **Mingled Plumes Area (MPA):** Comprised of 5 areas of concern including collapsed sewer lines, paint stripper disposal area and hazardous materials storage yard

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OU-4B
(IRP-5S(a), IRP-6, IRP-11, IRP-13W, and MPA)



RAOs

- **Protect human health by limiting the use of shallow groundwater containing COCs at concentrations exceeding health-protective levels.**
- **Reduce concentrations of COCs in shallow groundwater at areas of attainment for OU-4B sites to health-protective levels.**

Primary COCs in Groundwater/RGs

- **TCE = 5 µg/L**
- **1,1-Dichloroethene = 6 µg/L (only for IRP-6)**

OU-4B
(IRP-5S(a), IRP-6, IRP-11, IRP-13W, and MPA)



2010 Final ROD Remedy Components

- **NFA for Soil at All Sites**
- **Low Concentration Sites**
 - ICs
 - Annual groundwater monitoring (to determine need for ICs)
 - Five-year reviews
- **Moderate Concentration Sites**
 - In situ bioremediation via substrate injections
 - Monitored natural attenuation
 - Performance monitoring
 - Five-year reviews
 - ICs

OU-4B
(IRP-5S(a), IRP-6, IRP-11, IRP-13W, and MPA)



Remedial Action

- **Moderate Concentration Sites: January - April 2013**

Current Status (Low & Moderate Concentration Sites)

- **Ongoing LTM/O&M**
 - Groundwater monitoring
 - Reporting

OU-4B
(IRP-5S(a), IRP-6, IRP-11, IRP-13W, and MPA)



Documents Anticipated in Next 6 Months

- **Moderate Concentration Sites**
 - Draft 2014 Annual Performance Monitoring Report
 - Draft & Final O&M Plan
 - Revised Draft & Final LUC RD
- **Low Concentration Sites**
 - Draft & Final 2014 Annual IC Compliance Report

Neighborhood E



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Neighborhood E



Background

- TCE in groundwater detected by City of Tustin

Current Status

- Navy conducting additional site investigations for TCE, TPH, benzene, toluene, ethylbenzene, xylene, and naphthalene
- Additional groundwater sampling April 2015

Documents Anticipated in Next 6 Months

- Draft Site Inspection Report

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Questions?



Acronyms



BCT – BRAC Closure Team	LUC RD – Land Use Control Remedial Design	RG – Remediation Goal
BRAC – Base Realignment and Closure	MPA – Mingled Plumes Area	ROD – Record of Decision
COC – chemical of concern	NAVFAC – Naval Facilities Engineering Command Southwest	RWQCB – California Regional Water Quality Control Board
IC – institutional control	O&M – operation and maintenance	SI – Site Inspection
IRP – Installation Restoration Program	OU – Operable Unit	TCE – trichloroethene
LTM – long-term monitoring	RAB – Restoration Advisory Board	TCP – trichloropropane
	RAO – Remedial Action Objective	TPH – total petroleum hydrocarbons
		VOC – volatile organic compound
		µg/L – micrograms per liter

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