



Final

92nd Restoration Advisory Board (RAB) Meeting Minutes FORMER MARINE CORPS AIR STATION (MCAS) TUSTIN

Meeting Location: Tustin Senior Center, Tustin, California

Meeting Date/Time: 18 May 2011, 7:00 PM - 8:50 PM

Minutes Prepared by: Mike Allen, CDM Federal Programs Corporation (CDM)

Attachment:

Presentation slides: Former MCAS Tustin Status Update for Operable Unit (OU)-3, Installation Restoration Program (IRP) Site 1, and The Five-Year Review Plan, Former MCAS Tustin IRP Sites 1, 3, 12, and 13S.

WELCOME/INTRODUCTIONS/AGENDA REVIEW:

Mr. Jim Callian, the Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) and Navy Restoration Advisory Board (RAB) Co-Chairman, welcomed everyone and introduced the Community RAB Co-Chairman, Mr. Don Zweifel; self-introductions followed by those in attendance; a total of 17 attendees were present.

ANNOUNCEMENTS:

Mr. Callian began the meeting with the following announcements and discussions.

- Mr. Callian reviewed the RAB meeting agenda; no changes to the agenda were suggested by the RAB.
- Mr. Callian mentioned that the 03 March 2011 RAB Email Update requested RAB member participation and input in the five-year review process. Participation can be providing input in writing on an interview form or verbally in person. Mr. Callian asked that interested RAB members please talk with him after the meeting tonight.
- Mr. Callian presented a series of slides listing key Navy and Regulatory Agency contacts, RAB points of contact, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Administrative Record (AR) File and Information Repository (IR) locations and hours, and environmental and reuse/redevelopment websites. Mr. Callian announced the dates for the upcoming 2011 RAB meeting/email updates. The next meeting is scheduled for 21 September 2011 at the current location. The next email update will be issued on 07 December 2011.
- Mr. Callian announced that the snacks provided in the foyer are part of tonight's celebration of appreciation and recognition of Mr. Zweifel's exemplary service as a founding member of the Tustin RAB and Community Co-Chair since 2003. Mr. Zweifel's dedication of time and service has been an invaluable asset to the Navy and the entire RAB. Mr. Callian presented a Certificate of Appreciation to Mr. Zweifel.

- Mr. Callian started discussing old business with a reference to the 01 December 2010 RAB meeting and the 03 March 2011 RAB Email Update, and identified RAB Community Co-Chair elections are scheduled for tonight. Nominations can be written on the nomination form provided or verbally. RAB members preferred verbally. Discussions followed and Ms. Susan Reynolds asked if Mr. Zweifel was interested in continuing as the Community Co-Chair. Ms. Mary Lynn Norby wanted to know the eligibility requirements to be nominated. Ms. Content Arnold stated that the RAB by-laws have the information and the current RAB members are eligible for the Co-Chair position. Discussion followed to identify current RAB members. A nomination was made for Mr. Zweifel. Ms. Norby asked if Mr. Matt West would accept nominations, and he declined. The nomination of Mr. Zweifel was seconded and the vote was in favor of Mr. Zweifel continuing as Community Co-Chair.
- Mr. Callian asked Mr. Zweifel to review and ask the RAB for approval of the 01 December 2010 Draft RAB Meeting Minutes. Mr. Zweifel requested input/comments from RAB members. The minutes were approved without change. Mr. Callian stated the minutes would be finalized and uploaded to the BRAC website.

Mr. Callian explained that tonight's RAB meeting does not include a discussion of Finding of Suitability for Transfer (FOST) 9 because the RAB mission is to provide input to the environmental documents leading to remedial decisions. Because the FOST is not an environmental document, it is not a formal topic for RAB review and input. Mr. Callian explained that the FOST is a real estate document addressing legal and land transfer topics. Mr. Callian acknowledged that the general status of FOST 9 would be provided, and currently the document is on hold pending submission and resolution of regulatory agency comments. Previous agency comments (not on the Five-Year Review Report) requested an evaluation of specific cleanup aspects and the Navy is conducting an evaluation in response to those comments as part of the ongoing Five-Year Review process. The five-year review and evaluation process is part of tonight's presentation to the RAB. In response to a question by Ms. Norby, Mr. Callian explained that the general status of FOSTs are discussed at RAB meetings to note when property is available for transfer, but policy is that the FOSTs are not publicly reviewed documents. Discussion followed and Mr. Zweifel explained that the close interrelations between cleanup, land use restrictions, and reuse, are dynamic processes of great interest to the public and specifically to members of the RAB. Mr. Callian explained that in general, all property included in a FOST has already followed the cleanup process that has RAB involvement through at least completion of Record of Decisions (RODs) and Operating Properly and Successfully (OPS) determinations. Mr. Callian indicated that FOST 9 is delayed pending an evaluation of revised information on health effects for a specific chemical present at one of the sites. The evaluation of affects, related to changes in toxicity criteria for one chemical, is a process included in a five-year review. Mr. Callian explained that the Five-Year Review currently ongoing for MCAS Tustin includes this evaluation. Specifically, the chemical for which the value has changed, affects only a portion of the property, at Carve-Out 5, IRP Site 13S, and is identified in the presentation tonight. Mr. Matt Suarez requested that the Navy update the RAB on the status. Mr. Zweifel requested that the FOST be included on the agenda. Mr. Callian concluded and reiterated that the evaluation process is underway and is part of the environmental evaluation in the Five-Year Review.

ENVIRONMENTAL STATUS UPDATE

Mr. Callian provided an overview of the MCAS Tustin Environmental Program. The Environmental Status Update is incorporated into the PowerPoint presentation and in the handouts. The handout provides a chronology of the program history and the current or upcoming items are bulleted in blue font. Mr. Callian noted that several new acronyms have been added to the Environmental Status Update and the acronyms can be found on the last page.

- OU-1A and OU-1B: Both OU-1A and OU-1B are on similar tracks, so monitoring and reporting are performed on the same schedule. Since the last RAB meeting in December 2010, the following report has been submitted: the Third Quarter Groundwater Monitoring Data Summary (MDS), December 2010. On-going operation and maintenance (O&M) activities include biweekly, monthly, and quarterly inspections; quarterly effluent sampling; quarterly groundwater monitoring and reporting; and annual system optimization. In June 2011, the Navy will issue the Draft 2010 Annual Groundwater Performance Evaluation Report (PER). PERs are annual documents wherein the Navy provides optimization of the monitoring systems. In September 2011, the Navy plans to issue the 2011 Semiannual Groundwater MDS. Mr. Callian referenced the map and showed the locations of these two sites.
- OU-3: This is IRP Site 1 and is the subject of a presentation later in the meeting. In February 2011, the Navy issued the Final 2009 Annual Long-Term Monitoring Report. In March 2011, the Navy submitted the Draft 2010 Annual Long-Term Monitoring Report. For upcoming reports, the Navy will submit the Draft Final 2010 Annual Long-Term Monitoring Report in July 2011, and in September 2011, the Navy will issue the Final 2010 Annual Long-Term Monitoring Report. The Navy continues the long-term operations, maintenance, and monitoring at IRP Site 1, similar to OU-1A.
- OU-4B: This includes three Moderate Concentration Sites, IRP-5S[a], IRP-6, and the Mingled Plumes Area (MPA) and three Low Concentration Sites, IRP-11, IRP-13W, and Miscellaneous Major Spill (MMS)-04. In January 2011, the Navy submitted the Draft 2010 Annual Groundwater Monitoring Report and the final version would be issued at the end of May 2011. Other reports submitted in 2011 are listed on the handout. Upcoming reports include: the Draft Final (in June 2011) and Final (in August 2011) Remedial Action Completion Report (RACR) for MMS-04; the Draft (in June 2011) and Draft Final (in August 2011) Remedial Design/Remedial Action (RD/RA) Work Plan & Long-Term Operation and Maintenance Plan (OMP) for Low Concentration Sites IRP-11 and IRP-13W; and the Draft (in July 2011) and Final (in September 2011) RD/RA Work Plan for Moderate Concentration Sites. The RD/RA Work Plan for the Moderate Concentration Sites will be the basis for implementing the in situ bioremediation remedy that was the topic of the presentation to the RAB in December 2010. Mr. Callian noted that for MMS-04, the Navy completed one year of quarterly groundwater monitoring and concentrations of the target chemical of concern, trichloroethene (TCE), are far below the cleanup goal. MMS-04 will be recommended for no further action and the site will be closed. Mr. Callian referenced the map and showed the locations of the six sites that OU-4B comprises. Ms. Kaleena Johnson (Eviron, Inc.) asked what is next for MMS-04 after the determination of no further action. Ms. Arnold explained that the environmental cleanup process ends with a determination of no further action. Mr.

Callian explained that MMS-04 would not be part of a five-year review because there is no contamination left in place. The discussion followed with Mr. Suarez asking if the site would be brought into the FOST that covers the same area. Mr. Callian stated that because it is not an environmental cleanup subject he does not have an answer but perhaps can get an answer for the RAB.

Methyl Tert-Butyl Ether (MTBE) Plume, Underground Storage Tank (UST) Site 222: Since the last RAB meeting, the Navy submitted the Third Quarter 2010 Groundwater MDS Report in December 2010. The Navy is continuing the on-going O&M activities that include quarterly groundwater monitoring, optimization reviews, and quarterly effluent sampling. In June 2011, the Navy will submit the Draft 2010 Petroleum Corrective Action Plan (PCAP) Annual Report that includes the annual system optimization evaluation. In August 2011, the Navy will issue the 2011 Semi-Annual Groundwater MDS. Ms. Norby inquired about the cleanup status. Mr. Callian indicated that the Navy and the Regional Water Quality Control Board are working toward an expedited closure of UST Site 222, since MTBE is present only in a limited area at concentrations exceeding, but very near the cleanup goal. Further discussion followed with a question from Ms. Johnson regarding the second water-bearing zone in the Source Area. Mr. Louie Cardinale explained that MTBE in groundwater for this water-bearing zone in the Source Area has been below cleanup goals with no rebound of concentrations. Ms. Norby asked what the timeframe would be and Mr. Callian explained that within about a year the Navy and agencies might have a decision. Mr. West asked what would be the final action or decision. Mr. Callian explained that the Navy would be requesting no further action and closure. Mr. Callian concluded the review of the environmental program status by identifying that the last page presents the chronology of completed FOSTs and Finding of Suitability for Lease (FOSL) with the parcels identified for each. Acronyms are included on the last page.

Mr. Callian asked the RAB for further questions, and with no questions, proceeded to the regulatory agency update.

REGULATORY AGENCY UPDATE

Mr. Ram Peddada (Department of Toxic Substances Control [DTSC])

Mr. Peddada provided an overview of the documents that DTSC had recently reviewed. These documents include the Draft 2010 Annual Groundwater Monitoring Report for OU-3. Mr. Peddada stated that the DTSC has no comments and a letter would be sent very soon to the Navy stating no comments and the document can go to final. DTSC completed review of the Draft RACR for MMS-04. Mr. Peddada identified that the four quarters of groundwater monitoring produced results below criteria. Therefore, the DTSC letter will concur with the report that the action is complete, and recommend going to the final report. The other report reviewed by DTSC was the Final Pre-Remedial Design Pilot Study Report for the OU-4B sites. DTSC will send a letter stating that the Navy has addressed all comments and agree this is the final report. Mr. Peddada discussed the DTSC's review of documents from the City of Tustin. Several of these reports, known as Project Environmental Review Forms, were reviewed for the City's plans to build roads and utilities and conduct geotechnical borings (Parcel 22) on property that has an active remedy. These forms are to document that the planned activity will not disturb the components of the remedial actions. Discussion followed regarding the location

of Parcel 22 and Ms. Arnold identified that a map in the handouts identified the parcel numbers. Mr. West described the planned activity for new athletic fields at the City Park.

Mr. Peddada announced that DTSC has a new statewide director, Ms. Debbie Raphael, in the Sacramento office. Ms. Raphael will take the position before the end of May 2011 and has expressed interest in touring a site or two.

Mr. Callian thanked Mr. Peddada and referred to the next topic for an update of OU-3.

PRESENTATION: IRP SITE 1, OU-3

Mr. Cardinale began the evening's presentation to the RAB, identified the handouts, and the general topics covered in the presentation. The presentation is a summary of information from the March 2011 Draft 2010 Annual Long-Term Monitoring Report for OU-3.

Slide 1 – is the title slide: IRP Site 1 Update, OU-3

Slide 2 – is an overview that lists five topics addressed by the presentation.

Slide 3 – is the site map showing the site location.

Slide 4 – provides an overview of the major remedy components for IRP Site 1: hydraulic containment, long-term monitoring of groundwater and surface water, institutional controls (ICs), inspections and maintenance, and five-year reviews.

Slide 5 – provides an overview of the long-term monitoring including groundwater and landfill gas monitoring, surface water sampling, quarterly inspections, and ICs.

Slide 6 – is the site map showing the groundwater wells and surface water sampling locations, concrete containment wall, and groundwater contours and flow directions from the Draft 2010 Annual Long-Term Monitoring Report. Mr. Cardinale called out the location of Jamboree Road that covers the top of the landfill.

Slide 7 – is a photograph of the northwest side of IRP Site 1 showing the location of monitoring well I001MW47D relative to the fill and Jamboree Road crossing the top of the landfill.

Slide 8 – is a photograph of the northeast side of IRP Site 1 showing Jamboree Road, the containment wall, site security fencing, and surface water in Peters Canyon Channel.

Slides 9 and 10 – provide a list of the key conclusions from the 2010 Annual Long-Term Monitoring Report. Groundwater and surface water monitoring results from 2001 to current form the basis for conclusions in the Report. The Report concludes that the concrete retaining wall is effectively preventing chemicals in groundwater from migrating into the surface water of Peters Canyon Channel. The quarterly inspections with annual monitoring will continue for 2011. This Site is included in the Five-Year Review process.

Slide 11 – summarizes the reporting schedule for IRP Site 1 long-term monitoring. Mr. Cardinale provided a verbal update to the 2010 Annual Long-Term Monitoring Report schedule noting that based upon Mr. Peddada's statement of concurrence with the draft report and

recommendation to go final, the next version will be final and will be issued before September 2011.

Slide 12 – provides the definitions of acronyms used in the slides.

Mr. Zweifel asked Mr. Cardinale to identify the hazardous material or chemicals at this Site. Mr. Cardinale explained that the Site is the former Crash Crew training burn pit and landfill that has several chemicals of concern (COCs) in groundwater such as 1,1,1-dichloroethane (1,1,1-DCA). Discussion followed regarding why this Site does not have a treatment system to remove chemicals and instead uses containment and land use restrictions. Mr. Cardinale explained that the remedy selected is very cost effective and successfully contains the chemicals and allows the landfill to be capped with a useful roadway. Mr. Suarez asked if there is an expectation for the chemicals to breakdown to low concentrations over a long period of time. Mr. Cardinale stated that the chemicals will breakdown. Ms. Arnold added that the chemical concentrations were very low when the remedy was selected in 2001 and the remedy is protective of human health and the environment. Ms. Norby asked to review Slide 9 for an explanation of wording regarding the occurrence of chemicals in the second water-bearing zone. Mr. Cardinale explained that monitoring results showed the presence of 1,1-DCA at concentrations less than the remedial goal in one sample for the last two years. The concentrations were qualified as estimated values and “J” flagged by the laboratory. Mr. Callian explained that the values were less than the remedial goals, and referred to a previous presentation to the RAB for an explanation of concentrations estimated by the laboratory. Ms. Norby inquired about the surface water sampling and locations. Discussion followed showing the surface water sampling locations. COCs have not been reported in any of the surface water samples. RAB members Ms. Reynolds and Ms. Norby expressed their understanding and satisfaction that the remedy is performing well and has been a familiar topic for many years, including a site tour they attended several years ago.

Mr. Cardinale asked for further questions and received none. The RAB thanked Mr. Cardinale.

Mr. Callian identified the next presentation as the Five-Year Review and asked for member participation and input in the five-year review process. Mr. Callian asked interested members to talk to him directly after the meeting this evening. Participation can include input in writing on an interview form or verbally. Ms. Reynolds asked about the type of information that would be requested and a discussion followed. Mr. Callian stated that the interview form would have approximately six open-ended questions regarding an individual’s general knowledge about the remedial process, the remedial actions at sites, site visits and the general opinion of the remedial actions and site conditions. Ms. Norby asked if there was a document to review. Mr. Callian continued with the explanation that yes, there is a Five-Year Review Report and the interview forms will be included as an appendix to the Report. Mr. Suarez expressed his opinion that the information would essentially confirm that a RAB member has been involved, informed, and provided input to the remedial process. Ms. Arnold identified that the presentation will provide a detailed description and be beneficial to the RAB members understanding of the role for community involvement.

PRESENTATION: FIVE-YEAR REVIEW PLAN MCAS TUSTIN IRP SITES 1, 3, 12, AND 13S

Mr. Callian provided an introduction of the presentation and introduced Mr. Mike Wolff (ECS) who will give the presentation. Mr. Wolff introduced his role as a Navy contractor performing the review and getting timely input from the RAB members.

Slide 1 – is the title slide: Five-Year Review Plan Former MCAS Tustin, IRP Sites 1, 3, 12, and 13S for the RAB Meeting 18 May 2011.

Slide 2 – is the presentation overview listing topics covered in this presentation, including introduction, purpose and objective, components, site-specific highlights, schedule and acronyms.

Slide 3 – identifies the four sites OU-3 (IRP Site 1), OU-1B South (IRP Site 3), OU-1B North (IRP Site 12), and OU-1A (IRP Site 13S), and that the Five-Year Review was announced in the 03 March 2011 RAB Email Update. Mr. Wolff emphasized the importance of community input, and encouraged RAB members to talk to Mr. Callian after the presentation. The review will, in part, be based on the first Five-Year Review for IRP Site 1 (2006) and the OPS Report for IRP Sites 3, 12, and 13S (2010).

Slide 4 – is a map showing the locations of sites in the Five-Year Review including pertinent groundwater plumes associated with each site. Mr. Wolff identified each site and provided some site characteristics.

Slide 5 – indicates that the purpose of a five-year review is to evaluate and determine whether the remedy remains protective of human health and the environment. The review is a statutory requirement at sites where hazardous substances will remain on site at concentrations that do not allow for unlimited use and unrestricted exposure. The review must be completed at a minimum of every five years. The objective is to document that remedies continue to be protective and to evaluate changes that may have occurred in the remedy or at the site.

Slide 6 – presents a diagram of the six components of the five-year review process. Four of these are data collection steps. The fifth step is the protectiveness evaluation and the sixth step is the community involvement process.

Slide 7 – provides a list of typical documents and a few of the specific documents that will be reviewed. The review includes documents and different types of data for each of the sites and remedies involved in the review.

Slide 8 – lists the types of data used in the technical analyses and protectiveness determination. The data used includes sampling results, remedial system performance, risk assessments, and land use controls compliance information.

Slide 9 – describes the site inspections component as a two-step process and is one of the six key components listed in Slide 6. Site inspections document the conditions of the site, the remedy, and adjacent conditions. The first part of the site inspection is a walk through to observe

general features and conditions. The second step is a detailed specific site inspection that follows a checklist.

Slide 10 – describes the interviews that are another key component of the review process. Interviews include representatives from the Navy, community, agencies, contractors working on and operating the remedy, and stakeholders. The interviews follow a specific format determined by the interview form that is used to document the information. The community members are represented by RAB members that volunteer to be interviewed. The interview form will be part of the report.

Slide 11 – describes the protectiveness assessment that is one of the six key components. The slide lists the three questions used as decision points for determining protectiveness. These three questions are:

- “Is the remedy functioning as intended?”
- “Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives still valid?” and;
- “Has any other information come to light that could call into question the protectiveness of the remedy?”

Slide 12 – identifies the community involvement and notification component of the review process. The RAB is the primary means for obtaining community input. Public notice was given through the newspaper announcement of the Five-Year Review presentation as the topic of the 18 May 2011 RAB meeting. Mr. Wolff stated that tonight, the Navy is specifically requesting the RAB members to provide input to the review. Mr. Zweifel expressed his interest in land use controls. Ms. Arnold explained that during the development of the ROD, the objectives, function, and administration of land use controls are thoroughly explained. Following the ROD, during the design phase, the controls are further defined and the administration process is established with a detailed description of the required restrictions. After remedy implementation, as part of the O&M, there are the land use control inspections and documentation of administration during each of the scheduled inspection events. Mr. Wolff continued and explained that the land use control inspections for the review will be documented in the report and provided for review.

Slide 13 – lists particular physical features of the remedy for IRP Site 1 that are part of the inspection process. The slide shows pictures of the concrete containment wall along the west bank of Peters Canyon Channel and site fencing. These features are engineered controls and will be inspected as a part of the protectiveness evaluations. Mr. Wolff described the excellent condition of the concrete containment wall used to contain groundwater and prevent chemical migration to the surface water. Mr. Zweifel and Mr. Wolff discussed the depth of the wall, the subsurface material that it is keyed into, the expansion joint spacing, thickness, and overall condition.

Slide 14 – identifies hydraulic containment of chemicals in groundwater as a particular aspect of the technical analyses for IRP Sites 3, 12, and 13S. The slide has three maps that depict the

capture zone analyses performed using 2009 data. The capture zone analyses for this Report will be completed using fourth quarter 2010 monitoring data.

Slide 15 – identifies the Five-Year Review trigger dates. The initial Five-Year Review period started with signature of the IRP Site 1 ROD. The first Five-Year Review ended with the signature of the final document on 31 October 2006. Signature of the final first review triggered the second Five-Year Review period. Therefore, the current ongoing Five-Year Review is due 31 October 2011. Mr. Wolff explained that the review completion and signature of the final document is a fixed date and is the driving factor for the Navy's need to have timely input from the public and complete the draft on schedule. Community input is needed for the draft document.

Slide 16 – provides the schedule milestones for the Five-Year Review process.

- Draft Five-Year Review Report - June 2011
- Agency Comments Due - July 2011
- Draft Final Five-Year Review Report - September 2011
- Final Five-Year Review Report - October 2011

The date of the final report is a fixed date, prescribed by the previous Five-Year Review, as described in Slide 15. Mr. Zweifel asked if there is 30 days for the public review. Mr. Wolff explained that the schedule shows the draft document being issued for a 30-day review.

Mr. Wolff asked for further questions. Ms. Norby stated that the Navy is performing the review and checks of itself through their contract with ECS to perform the review.

Mr. Harry Takach, of Pacific States Environmental Corporation (PSEC), asked if the evaluation of risks could change some of the current cleanup levels. Mr. Wolff stated that the purpose of the protectiveness evaluation is to determine if a change in cleanup levels would be appropriate. Mr. Wolff explained that the review of risk assessment is site specific because each site had a risk assessment as part of the remedial decision process. The criteria used in risk assessments are national and for some chemicals are specific to California. When a criteria changes, the evaluation considers the new criteria and assesses whether the overall protectiveness changes. Not all changes have an effect that revises the overall conclusion of the original assessment. Ms. Norby asked if the previous discussion this evening about Site 13S is an instance where the toxicity criteria has changed and the assessment would be reviewed. Mr. Wolff concurred that the protectiveness evaluation for IRP Site 13S is being performed in consideration of the changed criteria for 1,2,3-trichloropropane. Ms. Norby asked about the qualification of the individuals performing the risk assessments. Mr. Wolff explained that the individual doing this part is an experienced toxicologist with about 30 years of experience. Mr. Callian added that the evaluations and reports are reviewed by technical experts at each regulatory agency.

Slide 17 – is the acronyms and abbreviations used in the presentation.

The RAB members thanked and complimented Mr. Wolff on a fine presentation.

MEETING SUMMARY AND CLOSING COMMENTS

In closing, Mr. Callian stated that the next meeting is scheduled for 21 September 2011 and asked for possible topics for that meeting.

Mr. Zweifel asked for an update on the Five-Year Review as a topic for the next meeting. Mr. Callian noted that would be appropriate.

Mr. West requested an update on the remedial design for OU-4B Moderate Concentration Sites. Mr. Callian noted that as a potential topic.

Mr. Zweifel asked for a report on the Navy's cleanup budget for remediation and Mr. Callian offered to take that into consideration.

Mr. Callian asked Mr. Zweifel for a summary and concluding statement. Mr. Zweifel asked if all enjoyed the excellent presentations and thanked the presenters. Several RAB members responded affirmatively to Mr. Zweifel and thanked the Navy for information well presented, informative, and useful to them.

Mr. Callian thanked everyone for attending tonight's RAB meeting and noted the Navy's continued appreciation for the RAB members' commitment.

The 92nd Former MCAS Tustin RAB Meeting was adjourned at 8:50 pm.

LIST OF HANDOUTS PROVIDED AT THE MEETING

- 18 May 2011 Former MCAS Tustin RAB Meeting Agenda
- RAB Meeting Schedule
- Former MCAS Tustin - Where to Get More Information
- Environmental Websites
- MCAS Tustin Environmental Program Status
- Presentation Slides: Update on OU-4B Pilot Study
- Former MCAS Tustin RAB Mission Statement
- Former MCAS Tustin RAB Fact Sheet/Membership Application
- Former MCAS Tustin Mailing List Coupon

Copies of the meeting minutes and handouts provided at the 01 December 2010 RAB meeting are available at the CERCLA IR for former MCAS Tustin located at the University of California, Irvine, Main Library, Government Publications Section. Library hours are 8:00 AM to 7:00 PM Monday through Thursday, 8:00 AM to 5:00 PM Friday and Saturday, and 1:00 PM to 5:00 PM on Sunday. It is recommended that people call the library for confirmation of these hours as they may be modified during final exam and holiday periods. The Government Publications Section may be reached at (949) 824-7362. In addition, copies of the meeting minutes and handouts are also available at the CERCLA AR File, maintained at Building 307 at former MCAS El Toro by Ms. Rawal. Documents can be viewed by appointment (call Ms. Rawal at [949] 859-6014) between 09:00 AM and 1:00 PM Monday through Thursday.

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

INTERNET SITES

Navy and Marine Corps Internet Access

BRAC PMO Web Site (includes RAB meeting minutes): <http://www.bracpmo.navy.mil/>

Department of Defense - Technical Information Center Home Page Web Site:

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

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

Cal/EPA:

Homepage: www.calepa.ca.gov

Department of Toxic Substances Control: www.dtsc.ca.gov

Department of Health Services, reorganized into the Department of Health Care Services and the Department of Public Health: www.dhs.ca.gov

Santa Ana Regional Water Quality Control Board: www.waterboards.ca.gov/santaana

Additional Websites: Reuse and Redevelopment

Orange County Great Park: www.ocgp.org

Great Park Conservancy: www.orangecountygreatpark.org

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May 2011

ENVIRONMENTAL PROGRAM STATUS FORMR MARINE CORPS AIR STATION TUSTIN

Operable Unit 1A (Installation Restoration Program [IRP] Site 13 South – 1,2,3-Trichloropropane [TCP] in groundwater)

Carve-Out: CO-5

Brief Project History:

- 2002: Time Critical Removal Action (hydraulic containment)
- 2004: Final Record of Decision (ROD): Selected remedy includes:
 - Hydraulic containment for 1,2,3-TCP-impacted groundwater;
 - Construction, operation, and maintenance of groundwater extraction and treatment system; and
 - Institutional controls (ICs).
 - Hot-spot soil excavation was also conducted to enhance groundwater remedy.
- 2007: Began Final Remedial Design (RD) and Remedial Action (RA)
- December 2007: Treatment system operational
- July 2008: 1st Quarter 2008 Groundwater Monitoring Data Summary (MDS)
- October 2008: 2nd Quarter 2008 Groundwater MDS
- December 2008: Final Interim-Remedial Action Completion Report (I-RACR); the main purpose of the I-RACR is to document that the remedy is constructed per the Final RD
- December 2008: 3rd Quarter 2008 Groundwater MDS
- July 2009: 1st Quarter 2009 Groundwater MDS
- September 2009: Final Long-Term Operation and Maintenance Plan (OMP)
- October 2009: 2nd Quarter 2009 Groundwater Monitoring Data Summary
- December 2009: 3rd Quarter 2009 Groundwater Monitoring Data Summary
- February 2010: Final 2008 Annual OU-1A and -1B Performance Evaluation Report (PER)
- February 2010: Final Operating Properly and Successfully (OPS) Report
 - Obtained U.S. EPA OPS determination in December 2009
- June 2010: Draft 2009 Annual OU-1A and -1B PER
- July 2010: 1st Quarter 2010 Groundwater MDS
- September 2010: 2nd Quarter 2010 Groundwater MDS
- November 2010: Final 2009 Annual OU-1A and -1B PER
- December 2010: 3rd Quarter 2010 Groundwater MDS

Next steps:

- On-going operation and maintenance (O&M) activities:
 - Biweekly, monthly, and quarterly inspections
 - Quarterly effluent sampling
 - Quarterly groundwater monitoring and semiannual reporting; data used to track system performance and (annually) evaluate and optimize the system
 - Annual system optimization evaluation to be included in the 2010 Annual PER
- June 2011: Issue Draft 2010 Annual PER
- September 2011: Issue 2011 Semiannual Groundwater MDS

May 2011

ENVIRONMENTAL PROGRAM STATUS FORMER MARINE CORPS AIR STATION TUSTIN

Operable Unit 1B (IRP Sites 3 and 12 – Trichloroethene [TCE] in groundwater)

Carve-Outs: CO-5 and CO-6

Brief Project History:

- 2004: Final ROD: Selected remedy includes:
 - Hydraulic containment of TCE-impacted groundwater;
 - Construction, operation, and maintenance of groundwater extraction and treatment systems; and
 - Institutional Controls.Hot-spot soil excavation also conducted to enhance groundwater remedy
- 2007: Began Final Remedial Design and Remedial Action Implementation
- January 2008: Treatment system became operational
- July 2008: 1st Quarter 2008 Groundwater MDS
- October 2008: 2nd Quarter 2008 Groundwater MDS
- December 2008: Final I-RACR.
- December 2008: 3rd Quarter 2008 Groundwater MDS
- July 2009: 1st Quarter 2009 Groundwater MDS
- September 2009: Final Long-Term OMP
- October 2009: 2nd Quarter 2009 Groundwater MDS
- December 2009: 3rd Quarter 2009 Groundwater MDS
- February 2010: Final 2008 Annual OU-1A and -1B PER
- February 2010: Final OPS Report
 - Obtained U.S. EPA OPS determination in December 2009
- June 2010: Draft 2009 Annual OU-1A and -1B PER
- July 2010: 1st Quarter 2010 Groundwater MDS
- September 2010: 2nd Quarter 2010 Groundwater MDS
- November 2010: Final 2009 Annual OU-1A and -1B PER
- December 2010: 3rd Quarter 2010 Groundwater MDS

Next steps:

- Same as for OU-1A above

May 2011

ENVIRONMENTAL PROGRAM STATUS FORMER MARINE CORPS AIR STATION TUSTIN

Operable Unit 3 (IRP Site 1– Moffett Trenches Landfill)

Carve-Out: CO-10 – PARCEL TRANSFERRED IN 2006

Brief Project History:

- December 2001: Final ROD
- May 2003: Final OMP
- November 2003: Final OPS Report
 - Obtained U.S. EPA OPS determination in March 2004
- October 2006: Final First Five-Year Review
- On-going O&M activities
- January 2010: Final 2008 Annual Groundwater Monitoring Report
- June 2010: Draft 2009 Annual Groundwater Monitoring Report
- December 2010: Issue Draft Final 2009 Annual Long-Term Monitoring Report
- February 2011: Issue Final 2009 Annual Long-Term Monitoring Report
- March 2011: Issue Draft 2010 Annual Long-Term Monitoring Report

Next steps:

- Continue O&M activities
- **July 2011: Issue Draft Final 2010 Annual Long-Term Monitoring Report**
- **Sept 2011: Issue Final 2010 Annual Long-Term Monitoring Report**

May 2011

ENVIRONMENTAL PROGRAM STATUS FORMER MARINE CORPS AIR STATION TUSTIN

Operable Unit 4B

*Moderate Concentration Sites (IRP-5S[a], IRP-6, and the Mingled Plumes Area [MPA])
and Low Concentration Sites (IRP-11, IRP-13W, and Miscellaneous Major Spill [MMS-04])*

Carve-Outs: CO-2, CO-5, and CO-9

Brief Project History:

- 2000: Draft OU-4 Focused Feasibility Study (FS) Report
- 2004: Final OU-4 Tech Memo for 2003 shallow groundwater investigation
- 2005-2006: Groundwater Monitoring
- 2007: IRP-6 and MPA Supplemental Investigation field activities
- September 2008: Final Tech Memo Supplemental Investigation at IRP-6 and MPA
- October 2008: Final FS Report
- February 2009: Proposed Plan. Public comment period: February 04-March 06, 2009
- May 2009: Final Work Plan for Groundwater Monitoring at OU-4B Sites
- August 2009: Installed additional wells at the MPA, MMS-04, IRP-11, and IRP-13W in accordance with the Final June 2009 Work Plan
- January 2010: 3rd Quarter 2009 Data Summary Report
- January 2010: Final ROD
- April 2010: Replacement Pages for the Final ROD, including final signature sheet
- July 2010: Final Pre-Design Pilot Study Work Plan
- July to October 2010: Pre-Design Pilot Study Implementation
- October 2010: Final 2009 Annual Groundwater Monitoring Report
- October 2010: Final First Quarter 2010 Data Summary Report
- November 2010: Final Second Quarter 2010 Data Summary Report
- January 2011: Draft 2010 Annual Groundwater Monitoring Report
- February 2011: Draft Pre-Remedial Design Pilot Study Report
- April 2011: Draft RACR for MMS-04
- May 2011: Final Pre-Remedial Design Pilot Study Report

Next steps:

- May 2011: Issue Final 2010 Annual Groundwater Monitoring Report
- June 2011: Issue Draft RD/RA Work Plan & Long-Term OMP (Low Concentration Sites: IRP-11 & IRP-13W)
- June 2011: Issue Draft Final RACR for MMS-04
- July 2011: Issue Draft RD/RA Work Plan (Moderate Concentration Sites: IRP-5S[a], IRP-6 & the MPA)
- August 2011: Issue Draft Final RD/RA Work Plan & Long-Term OMP (Low Concentration Sites: IRP-11 & -13W)
- August 2011: Issue Final RACR for MMS-04
- Sept 2011: Issue Draft Final RD/RA Work Plan (Moderate Concentration Sites IRP- 5S[a], IRP-6 & the MPA)

May 2011

ENVIRONMENTAL PROGRAM STATUS FORMER MARINE CORPS AIR STATION TUSTIN

MTBE Plume (UST Site 222)

Carve-Out: CO-5

Brief Project History:

- 2001: Interim Petroleum Corrective Action Program (PCAP) plan implemented
- 2006: Final Soil Closure Report
- 2006: Interim PCAP Addendum No. 2 – Revised Cleanup Goals: 1st WBZ: 300 micrograms per liter (ug/L), 2nd WBZ: 44 ug/L, and 3rd WBZ: 13 ug/L.
- 2007: Final PCAP
- 2007/2008: Implement Final PCAP; Additional monitoring and extraction wells installed. Air Sparging/Soil Vapor Extraction (AS/SVE) initiated in March 2008.
- September 2008: AS/SVE system shutdown for rebound monitoring per Final PCAP requirements
- December 2008: 1st and 2nd Quarter 2008 Groundwater MDS
- April 2009: 3rd Quarter 2008 Groundwater MDS
- May 2009: Draft Final Annual 2007 PCAP Progress Report
- July 2009: Draft Annual 2008 PCAP Annual Report
- August 2009: 1st Quarter 2009 Groundwater MDS
- September 2009: 2nd Quarter 2009 Groundwater MDS
- September 2009: Final Annual 2007 PCAP Annual Report
- October 2009: Final/Replacement Pages for the Annual 2008 PCAP Annual Report
- January 2010: 3rd Quarter 2009 Groundwater MDS
- June 2010: Draft 2009 PCAP Annual Report
- August 2010: 1st Quarter 2010 Groundwater MDS
- October 2010: 2nd Quarter 2010 Groundwater MDS
- November 2010: Final 2009 PCAP Annual Report
- December 2010: 3rd Quarter 2010 Groundwater MDS

Next steps:

- On-going O&M activities:
 - Quarterly groundwater monitoring and semiannual reporting
 - Data used to track and optimize system performance, and to support Final PCAP Closure Report
- Quarterly effluent sampling for OCSD permit requirements
- Annual system optimization evaluation to be included in the 2010 Annual Report
- **June 2011: Issue Draft 2010 PCAP Annual Report**
- **August 2011: Issue 2011 Semi-Annual Groundwater MDS**

May 2011

ENVIRONMENTAL PROGRAM STATUS FORMER MARINE CORPS AIR STATION TUSTIN

FOST Summary

FOST #1 signed August 29, 2001	Parcels 3, 21, 38, 39 and portions of 40
FOST #2 signed September 28, 2001	Parcels 4-8, 10-12, 14, 25, 26, 30-33, 37, 42 and portions of 40 and 41
FOST #3 signed April 22, 2002	Parcels 23, 29, 34, 35 and 36, and portions of 1, 16, 17, 24, 27, 28, 40 and 41
FOST #4 signed September 26, 2002	Portions of 24 (PS clean area in CO-5)
FOST #5 signed December 17, 2002	COs 8 and 11
FOST #6 signed September 29, 2004	CO-10 and portion of CO-5
FOST #7 signed May 20, 2005	COs 3 and 7 and portion of CO-5
FOST #8 signed February 2006	COs 1 and 4

FOSL Summary

FOSL #2 signed February 28, 2002	COs 1 thru 4
FOSL #3 signed April 26, 2002	COs 5 thru 11

Acronyms

<p>AS/SVE – Air Sparge/Soil Vapor Extraction AST – Aboveground Storage Tank AOC – Area of Concern BCT – BRAC Cleanup Team (Navy, U.S. EPA, Cal/EPA) CO – Carve-Out Area DCE – Dichloroethene FOSL – Finding of Suitability to Lease FOST – Finding of Suitability to Transfer IC – Institutional Controls I-RACR – Interim Remedial Action Complete Report IRP – Installation Restoration Program MDS – Monitoring Data Summary MMS – Miscellaneous Major Spill MNA – Monitored Natural Attenuation MPA – Mingled Plumes Area MTBE – Methyl tert-butyl ether O&M – Operation and Maintenance OCSD – Orange County Sanitation District OMP – Operation and Maintenance Plan OPS – Operating Properly and Successfully OU – Operable Unit PCAP – Petroleum Corrective Action Plan PER – Performance Evaluation Report PS – Public Sale Parcel RA – Remedial Action RAP – Remedial Action Plan RCRA – Resource Conservation and Recovery Act RD – Remedial Design</p>	<p>ROD – Record of Decision TCE – Trichloroethene TCP – Trichloropropane Ug/L – micrograms per liter UST – Underground Storage Tank WBZ – Water Bearing Zone</p>
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Installation Restoration Program (IRP) Site 1 Update

Operable Unit 3 (OU-3)

**Former MCAS Tustin, California
Restoration Advisory Board Meeting**

May 18, 2011

Louie Cardinale, P.E. - Navy Remedial Project Manager



Presentation Overview



- **IRP Site 1 Location**
- **Remedy Overview**
- **Long-Term Operation and Maintenance**
- **2010 Annual Long-Term Monitoring Report**
- **Reporting Schedule**



IRP Site 1 (OU-3) Location





Remedy Overview



- The remedy for IRP Site 1 consists of
 - Hydraulic Containment
 - Long-Term Monitoring
 - Inspections and Maintenance
 - Institutional Controls (ICs)
 - Five-Year Reviews



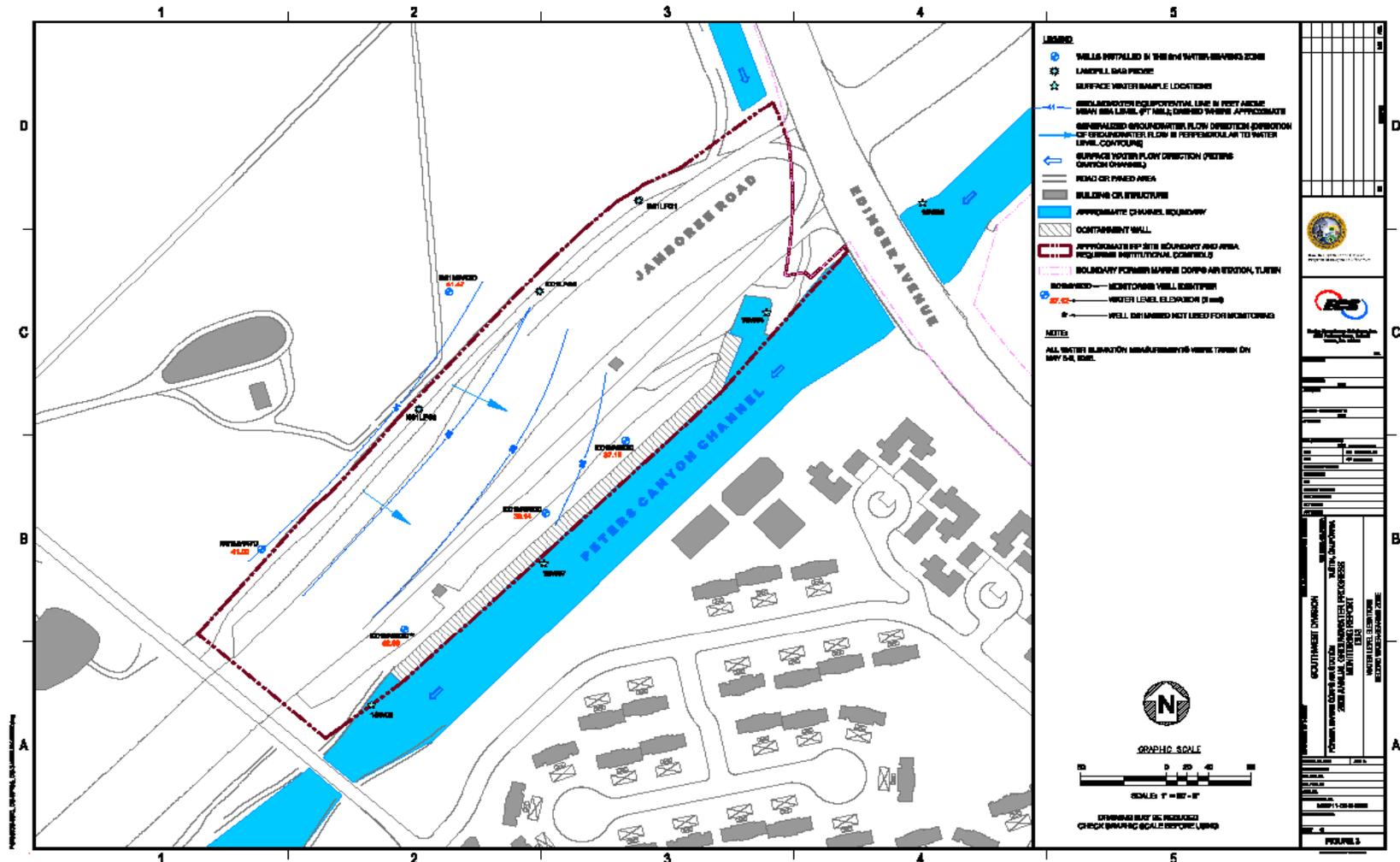
Long-Term Monitoring



- **Long-Term Monitoring**
 - **Groundwater Monitoring**
 - **Surface Water Sampling**
 - **Landfill Gas (LFG) Monitoring**
- **Quarterly Inspections - Maintenance**
- **ICs**
 - **Land use restrictions limit public exposure and protect the integrity of the remedy**



2010 Annual Long-Term Monitoring Report



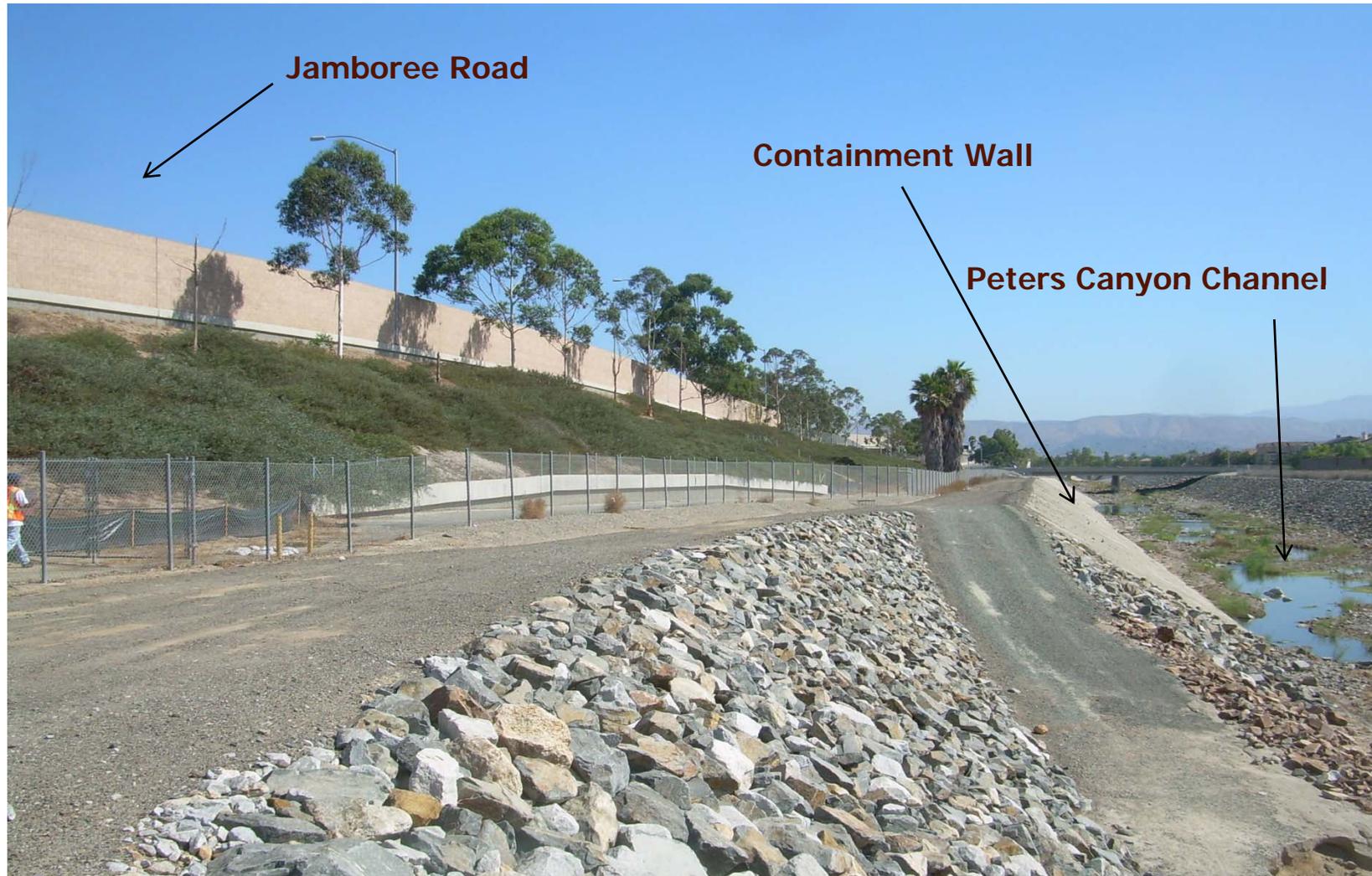


Northwest Side of IRP Site 1





Northeast Side of IRP Site 1





2010 Annual Long - Term Monitoring Report Conclusions



- **Groundwater and surface water monitoring results (since 2001) demonstrate that:**
 - **Steel-reinforced concrete containment wall is effectively preventing impacted groundwater from migrating into the surface water in Peters Canyon Channel**
 - **Chemicals of concern are not present in any downgradient First Water Bearing Zone wells**
 - **Chemicals of concern are not present above the remediation goals in any Second Water Bearing Zone wells**
 - **Methane was not recorded during the four monitoring events in 2010**



2010 Annual Long – Term Monitoring Report Conclusions (cont.)



- Engineering controls and ICs and have been successful in restricting access and ensuring the integrity of the remedy components.
- Quarterly Inspections and Annual Monitoring to continue for 2011



Reporting Schedule



- **Draft 2010 Annual Long-Term Monitoring Report**
- March 2011
- **Draft Final 2010 Annual Long-Term Monitoring Report**
- July 2011
- **Final 2010 Annual Long-Term Monitoring Report**
- September 2011



Acronyms



BRAC – Base Realignment and Closure

BCT – Base Realignment and Closure Cleanup Team

ICs – Institutional controls

IRP – Installation Restoration Program

LFG – Landfill Gas

MCAS – Marine Corps Air Station

OPS – Operating Properly and Successfully



Five-Year Review Plan

Former Marine Corps Air Station (MCAS) Tustin
Installation Restoration Program (IRP) Sites 1, 3, 12 and 13S

Restoration Advisory Board (RAB) Meeting
18 May 2011

Presented By
Michael Wolff, P.G., C.E.G. – ECS, Inc.

Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google



Presentation Overview



- *Introduction*
- *Purpose and Objective*
- *Components*
- *Site-Specific Highlights*
- *Schedule*
- *Acronyms*



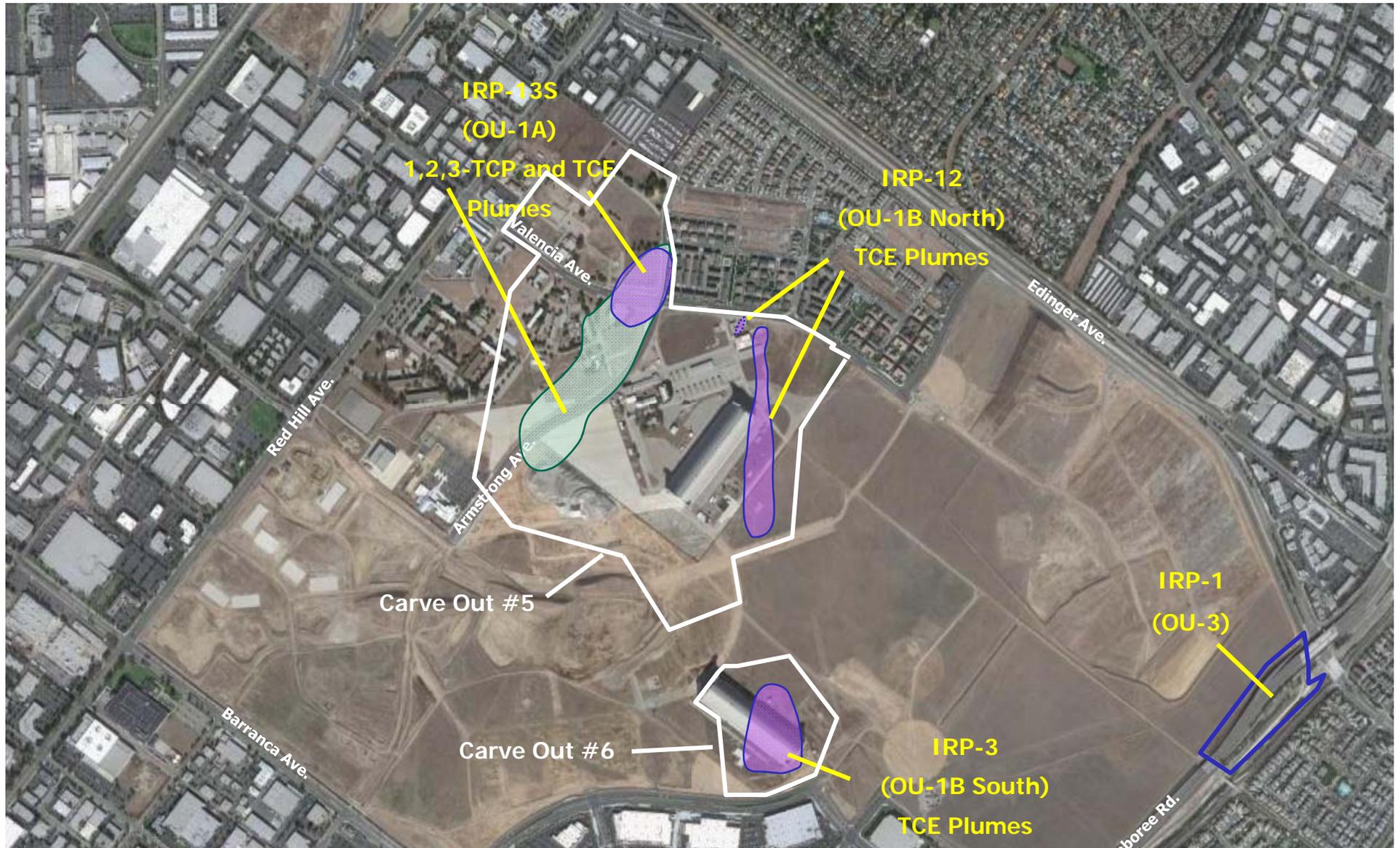
Introduction



- The Department of the Navy (DoN) is currently conducting its second Five-Year Review of in-place remedial actions at former Marine Corps Air Station (MCAS) Tustin.
 - IRP Site 1 (Operable Unit [OU] – 3)
 - IRP Site 3 (OU-1B South)
 - IRP Site 12 (OU-1B North)
 - IRP Site 13S (OU-1A)
- In the March 3, 2011 RAB Update, formal notification of the initiation of the five-year review process was provided.
- Key Documents Include:
 - First Five-Year Review Report for IRP Site 1 (2006)
 - Operating Properly and Successfully (OPS) Demonstration Report for IRP Sites 3, 12, and 13S (2010)



Sites Included





Purpose and Objective of Five-Year Review



PURPOSE:

- Under CERCLA §121(c), the lead federal agency (the DoN) is required to review the progress of CERCLA remedies at federal installations where hazardous substances remain on the site at levels that do not allow for unlimited use and unrestricted exposure. This must be done at a minimum frequency of five years but may be done more often if warranted.

OBJECTIVE:

- The fundamental objective of the five-year review is to ensure continuing protectiveness of the remedies.



Components of Five-Year Review





Components of Five-Year Review (cont.)



Document Review:

Types of documents that will be reviewed (as applicable):

- Records of Decision (RODs),
- Site Investigation Documents,
- Remedial Design (RD) /Remedial Action Work Plan (RAWP),
- Interim Remedial Action Completion Report (I-RACR),
- Operation and Maintenance Plans (OMPs),
- First Five-Year Review Report for IRP Site 1 (OU-3),
- OPS Demonstration Report for IRP Sites 3, 12, and 13S (OU-1B South, -1B North and -1A),
- Annual Performance Evaluation Reports,
- Land-Use Control (LUC) Compliance Documents.



Components of Five-Year Review (cont.)



Data Review and Analysis:

The following types of data form the primary basis for the technical analysis and subsequent protectiveness determination:

- Environmental Monitoring Data,
- Remedial System Performance Data,
- Risk Assessment Data,
- Land-Use Controls (LUC) Compliance Data.



Components of Five-Year Review (cont.)



Site Inspections:

- Site inspections will be employed to gather information about a site's current status and to visually confirm and document the conditions of the remedy, the site, and the surrounding area.
- Initial site visits to examine representative features.
- Detailed follow-up inspections document site information using detailed inspection checklists.



Components of Five-Year Review (cont.)



Interviews:

- Navy Personnel
- Agency Representatives
- O&M Contractor Personnel
- RAB Members
- Other Stakeholders



Components of Five-Year Review (cont.)



Assess Protectiveness:

- The fundamental purpose of a five-year review is to determine whether the remedy at a site is, or upon completion will be, protective of human health and the environment.
- A technical assessment is performed with the objective of answering the following three questions:

Question A: Is the remedy functioning as intended by the decision documents?

Question B: Are the exposure assumptions, toxicity data and Remedial Action Objectives used at the time of remedy selection still valid?

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?



Components of Five-Year Review (cont.)



Community Involvement and Notification:

- Per DoN policy, Restoration Advisory Board (RAB) is primary vehicle for community involvement:
 - RAB Meetings
 - Email Updates
 - BRAC Website Updates
 - Advertisement in Newspaper
- Notify RAB of Pending Five-Year Review
- Solicit Input.
- Notify RAB of Completion of Five-Year Review.
- Provide Report to Information Repository.



Site-Specific Highlights



IRP-1 (OU-3):

- Particular attention will be given to the condition and performance of engineering controls.



The steel-reinforced concrete containment wall along the west bank of Peters Canyon Channel was constructed in 1986 to restrict or prevent impacted groundwater seepage into Peters Canyon Channel.

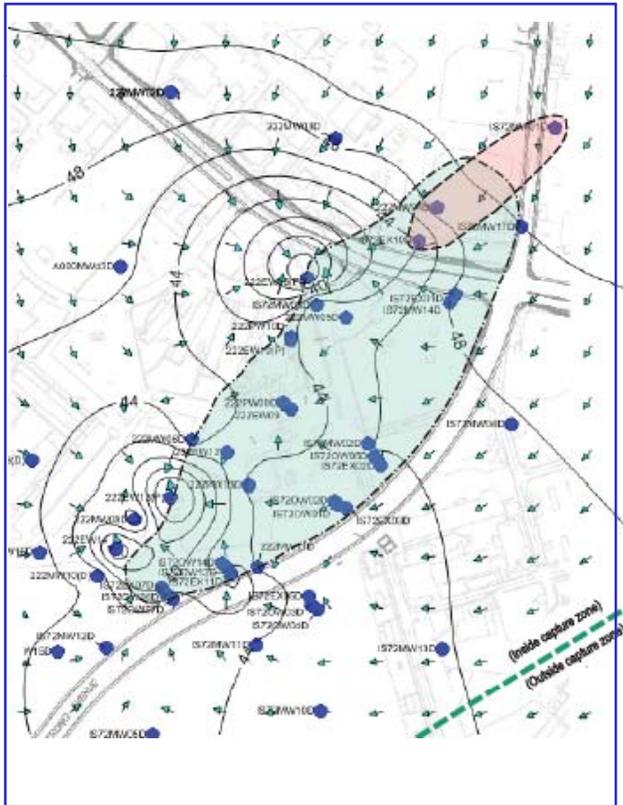


Site-Specific Highlights

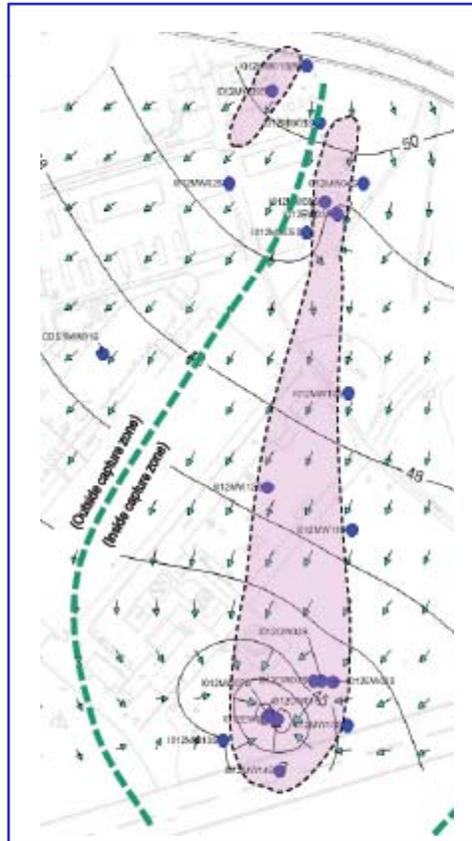


At IRP Sites 3, 12 and 13S (OU-1B South, OU-1B North and OU-1A) particular attention will be given to effectiveness of hydraulic containment through capture analyses performed using fourth quarter 2010 groundwater monitoring data.

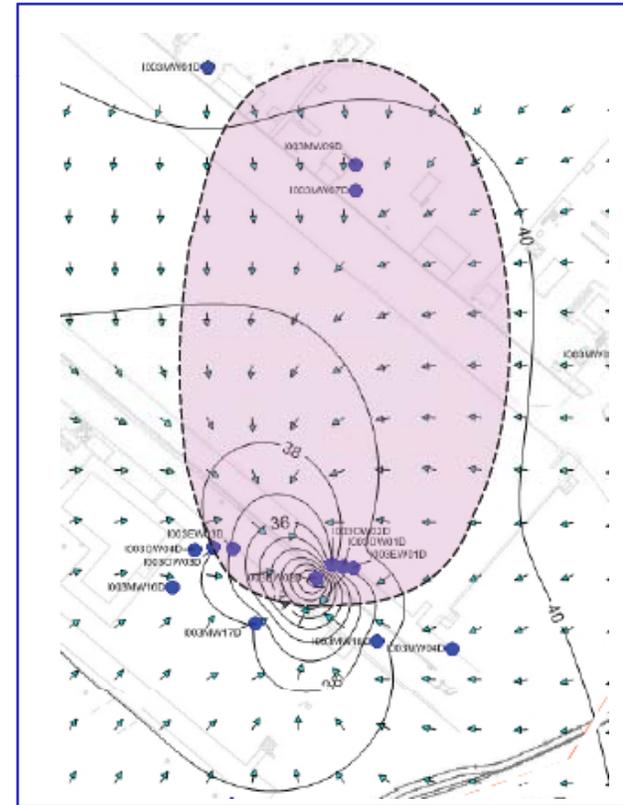
OU-1A



OU-1B North



OU-1B South



Note: Graphics depict 2009 data



Schedule



Trigger Date for Five-Year Reviews:

- Under DoN policy, the five-year review schedule is triggered by the initiation of the first remedial action that leaves hazardous substances, pollutants or contaminants on site at levels that do not allow for unlimited use and unrestricted exposure.
- For former MCAS Tustin, the first such remedial action was at IRP-1.
- The selected remedy for IRP-1 was already in place as of the date of the Record of Decision (ROD); therefore, the trigger date for former MCAS Tustin was the signature date of the ROD – 21 December 2001.
- After completion of the first statutory five-year review, the trigger for subsequent reviews is the signature date of the previous five-year review report (October 31, 2006).



Timeline



Submit Draft Five-Year Review Report to
BRAC Cleanup Team (BCT)

June 2011

Agency Comments Due

July 2011

Submit Draft Final Five-Year Review Report

September 2011

Issue Final Five-Year Review

October 31, 2011



Acronyms



§	section
BCT	BRAC cleanup team
BRAC	base realignment and closure
C.E.G.	certified engineering geologist
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
DoN	Department of Navy
ECS	Enviro Compliance Solutions, Inc.
I-RACR	Interim remedial action completion report
IRP	Installation restoration program
LUC	Land use controls
MCAS	Marine Corps Air Station
O&M	Operation and maintenance
OPS	operating properly and successfully
OU	operable unit
P.E.	professional engineer
P.G.	professional geologist
RD	remedial design
RAB	restoration advisory board
RPM	remedial project manager
ROD	record of decision
ROICC	resident officer in charge of construction
TCE	trichloroethene
TCP	trichloropropane