

**FINAL  
MEETING MINUTES  
RESTORATION ADVISORY BOARD  
NAVAL STATION TREASURE ISLAND  
21 August 2007  
Meeting Number 131**

**Community Restoration Advisory Board (RAB) Members in attendance:**

Nathan Brennan, Alice Pilram

**Regulatory Agency, City of San Francisco (City), and U.S. Department of the Navy (Navy) RAB Members in attendance:**

Agnes Farres (Regional Water Quality Control Board [Water Board]), Richard Perry (Department of Toxic Substances [DTSC]), James Sullivan (Navy), Henry Wong (DTSC)

**Other Navy Staff and Consultant Representatives in attendance:**

Scott Anderson (Navy), Pam Baur (Sullivan International Consulting Group), Pete Bourgeois, (Shaw Environment and Infrastructure [Shaw]), Kevin Hoch (Tetra Tech EM Inc. [Tetra Tech]), Carolyn Hunter (Tetra Tech), Charles Perry (Navy), Marcie Rash (Tetra Tech), John Warmerdam (Tetra Tech)

**Public Guests**

Herbert Benitez (John Stewart Company [JSCO]), William Blecker (Resident), Chuck Carpenter (Job Corps), Kenneth Harbison (Resident), Loraine Lee (JSCO), Marc McDonald (Treasure Island Development Authority [TIDA]), Annie Wu (JSCO)

**Welcome Remarks and Introductions**

James Sullivan (Base Realignment and Closure [BRAC] Environmental Coordinator) opened the 21 August 2007 meeting at 6:55 P.M. at the Casa de la Vista (Building 271).

Mr. Sullivan welcomed those in attendance and stated extra copies of the meeting materials were located at the back of the room. Mr. Sullivan asked attendees to sign in at the back of the room. Mr. Sullivan then asked for changes or comments on the agenda. No changes were requested.

**Public Comment and Announcements**

Mr. Sullivan stated two public comment periods were included on the agenda to afford members of the public an opportunity to comment on the Navy's environmental program at Naval Station (NAVSTA) Treasure Island (TI), one at the start of the meeting and one near the end. Mr. Sullivan noted that, in addition to the two public comment periods, attendees were invited to ask questions or make comments at any time during the meeting. Mr. Sullivan noted

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the Navy had scheduled a tour prior to the meeting, but no one attended. He offered to hold another tour before the October meeting if it was still light enough. Mr. Sullivan also stated attendees could see him after the meeting if they wanted to schedule a tour at a different time and date.

Kenneth Harbison (resident) stated that he lives on Bayside Drive and noticed some water remained in an area of excavation for about 3 weeks. Mr. Sullivan stated he could answer the question briefly, and more details would be provided in the presentation about that work. Mr. Harbison stated he would wait for the presentation.

### **Site 12 (TI Housing) Removal Action Update**

Mr. Sullivan introduced Pete Bourgeois (Shaw), who provided the field activities update for Site 12.

Mr. Bourgeois stated Shaw has continued to screen soil in the Solid Waste Disposal Areas (SWDA) of Site 12 with Detector Array Rack Towed (DART) equipment (proprietary equipment provided by Shaw's subcontractor New World Technology). Mr. Bourgeois explained DART has 12 detectors that take a radiological count of an area while being towed. This allows the team to locate areas with elevated readings for radium. The team marks areas having elevated readings and then returns to the marked areas for further investigation.

In answer to the question from Mr. Harbison, Mr. Bourgeois stated the excavation workers are encountering groundwater about 2.5 feet below ground surface because the housing area is the lowest part of the island, and the tides change over time. To address the groundwater soils, Shaw has had to dig the 2- to 3- and 3- to 4-foot soil excavation layers all at once due to tidal influence. The soil was placed into a drying rack to be dried and DART scanned later. With the tidal influence, Shaw must put in drain rock up to an elevation about 4 inches above the water table, and then backfill the remainder of the excavations with clean fill. Mr. Bourgeois explained this will allow the soil to be compacted as required in these areas.

Mr. Bourgeois stated excavated soil was still being stockpiled and loaded onto trucks for removal at Site 6. Mr. Bourgeois noted that, to date, the team had removed 211 truck loads, about 4,800 tons of California Class I hazardous waste soil, and 144 truck loads or about 2,800 tons of California Class II non-hazardous waste soil. In addition, Mr. Bourgeois stated Shaw uses bins to store soil with low-level radiological contamination. To date, there were about 70 bins of low-level radiological impacted class I and II waste stored on-site.

Mr. Bourgeois stated that the 1207/1209 area and the 1231/1233 area are expected to be completed, with full restoration, by the end of November 2007.

That was later than originally anticipated because of the additional radiological screening and the tidal influences impacting the work. Work at Debris Areas A and B on Westside Drive and Lester Court was expected to begin the week of September 10, 2007, with a completion date of around June 2008.

Mr. Bourgeois stated Shaw would give another update at the October 16, 2007 RAB meeting. In addition, he provided the e-mail address for James Sullivan at the Navy, and invited attendees to visit the Shaw office at Treasure Island Building 570 with any questions they may have.

William Blecker (resident) stated he thought the contamination was benzene from fuel and perhaps lead, but did not recall radiation being a concern. Mr. Bourgeois replied that originally the investigation focused on lead, PCBs (polychlorinated biphenyls), and PAHs (polycyclic aromatic hydrocarbons) in soil. A Historical Radiological Assessment document was prepared for all of NAVSTA TI and suggested screening portions of Site 12 as a precaution. Initially, Shaw was screening about 50 percent of the excavations. However, screening showed some detections of low levels of radiation, so they reevaluated their approach and began screening 100 percent of the excavations.

Mr. Bourgeois stated that photos of some of the items with radiological contamination were presented at previous RAB and BRAC Cleanup Team (BCT) meetings. Those items included decorative buttons and deck markers, which contained a small amount of low-level radium. The items may have degraded over time, contaminating the soil around the item and requiring removal based on the soil screening results. Mr. Blecker stated he lives at 1205 Bayside Drive, and asked whether those types of buttons had been found in that area. Mr. Bourgeois stated no buttons or markers had been found in the 1205 area. He added that the excavation at Building 1205 is complete, and sidewall sample analysis confirmed no contaminants at levels of concern. Backfill has already been put in place, and the remaining work in that area includes a few items such as sidewalk restoration.

Mr. Blecker asked what is the difference between soil Classification I and Classification II. Mr. Bourgeois explained Class I is California hazardous soil, and is classified as such because of levels of lead. That material must go to a specific type of landfill. Class II is California non-hazardous and goes to low-level landfills, such as Altamont or B&G. Mr. Bourgeois stated lead contamination is the specific driver for the classification of soil on TI. The low-level radiation levels are below levels that present a public health hazard, and will likely be sent to a landfill that takes such waste, perhaps in Idaho or Utah. Charles Perry (Navy) clarified that the levels of radiation present are similar to what might be found in a home smoke detector.

Mr. Sullivan summarized the discussion by stating that the Navy provides information about the project to the public by attending community meetings and holding Navy information sessions, and is available to answer any future questions or would consider holding another information session. Mr. Blecker stated he was receiving e-mail updates on the project from the leasing office, JSCO, but had not received any recently. Mr. Sullivan stated Mr. Blecker could contact the leasing office or the Navy directly, and stated the Navy and JSCO work closely to make sure questions from residents are answered.

### **Site 21 and Site 24 Update and Path Forward**

Mr. Bourgeois began the update for Site 21 (the Sailing Club) and Site 24 (the former dry-cleaning plant), which includes Buildings 96, 99, and 260. Mr. Bourgeois stated Building 99 was a dry cleaning facility from 1942 to 1977. Contaminants of concern, from dry cleaning practices, impacted the groundwater. The Navy was unsure of the contaminants, but suspected TCE (trichloroethylene), DCE (dichloroethylene), trichlorethene, vinyl chloride, and low-level ethane; and assumed these contaminants may be found both in low concentrations mixed with groundwater and as DNAPL (dense non-aqueous phase liquid). After tests were conducted, the Navy discovered the actual contaminants of potential concern in the groundwater were TCE, DCE, and vinyl chloride. It was decided that anaerobic bioremediation would be used as the most effective way to treat the plume, breaking the contaminants down to the nontoxic product ethene.

Mr. Bourgeois explained that three different sections of the plume were treated in slightly different ways. Shaw injected into the different areas (1) a fermentable food such as sodium lactate, (2) bacteria made in the lab or already present at the site, or (3) sometimes hydrogen. The bacteria made in the lab is called SDC9. The treatment was successful, so the study was expanded to include a total of 17 injection and 26 extraction wells that were installed from January to April 2005. The system was operated from May through August 2005, with over 6 million gallons of water and 6,000 gallons of lactic acid being pumped through the system. Then it was monitored for progress from August until December 2005 by a computer system located in Building 96.

Mr. Bourgeois showed diagrams of the initial plume boundaries prior to the treatment, then the reduced sizes after the treatment, noting the overall success in treating the plume. Mr. Bourgeois stated that, to date, there were some areas where the treatment had not been recirculated enough, and contaminants of concern were still present. The Navy plans to readjust some of the injection and extraction wells at Site 24, and is currently preparing a work plan. The system is expected to operate beginning in fall 2007, with monitoring from winter through spring 2008.

Mr. Bourgeois moved on to explain the history of Site 21, the Sailing Club area. He noted there was a parts cleaning operation outside the Building 3 hangar. There were also some aboveground storage tanks in the area before the Sailing Club was present. Initially there were high levels of VOCs (volatile organic compounds) including PCE (perchloroethylene) down to 35 feet below ground surface. The same type of bioremediation treatment was used at Site 24 with the area being divided into about 50 circular subareas. Each circle was injected with the bacteria and lactic acid. In addition, in five of the outer circles, the Navy pumped in ferrous iron to create a barrier between the plume and the water in Clipper Cove. This was to ensure the plume wouldn't migrate into the cove.

There is an office trailer with a deck at the site, and all areas beneath this building could not be reached with the treatment. The next step, then, involves driving direct-push rods into the ground in order to inject, with high pressure, the bacteria and lactic acid. The radius of influence for the rods is about 15 feet, so the presumption is the remaining contamination can be reached without the need to move the trailer or break down the deck. Mr. Bourgeois stated the high pressure injection was expected to be conducted in fall 2007, with monitoring from fall through spring 2008.

Scott Anderson (Navy) reminded the RAB that, previously, the Navy considered recirculation for Site 21, similar to what is planned at Site 24, to treat the remaining contamination. However, the remaining contamination at Site 21 is in a more shallow groundwater aquifer zone, making it difficult to reach with recirculation. The direct injection into the shallow aquifer zone is expected to have better results.

Mr. Blecker asked whether there were any potential hazards with the use of SDC9 or the rest of the bioremediation process. Mr. Bourgeois replied that the bugs die off after they have finished consuming the bacteria and breaking down the contaminants, so an excessive amount of the bacteria does not remain in the soil. Charles Perry (Navy) added that though the bugs were concentrated in the laboratory, they are the kind that occur naturally. The bugs in the lab are developed to be more potent at breaking down the contaminants.

### **Sites 8, 28, and 29 (Yerba Buena Island Sites) Draft Remedial Investigation Report Preview**

Mr. Sullivan stated the Navy is about to issue the Draft Remedial Investigation (RI) Report for Sites 8, 28, and 29 on Yerba Buena Island (YBI), and wanted to provide a preview for RAB members so people receiving the report will know what to expect. He then introduced John Warmerdam (Tetra Tech) to give the presentation.

Mr. Warmerdam explained his presentation would cover the RI and Feasibility Study (FS) process, the site history for all three sites, the history of environmental investigations, and the ecological and human health risk assessments (HHRA).

Mr. Warmerdam reviewed the description of the RI process from the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which includes collecting data to characterize what is at the site, assessing risk to humans and to ecological receptors at the site, and determining whether some action needs to take place based on the investigations. If an action is needed, an FS would be prepared. In an FS, various remedial alternatives are evaluated.

Moving on to site descriptions, Mr. Warmerdam stated Site 8 was the Army Point Sludge Disposal Area on YBI. Between 1968 to 1976, it was a disposal area where wastewater sludge from the TI Treatment Plant was spread on the ground to remove the water. Mr. Warmerdam noted there was currently a lot of activity at the site related to construction of the new eastern span of the San Francisco-Oakland Bay Bridge. Therefore, the site has been disturbed with a lot of dirt being moved around to build a bridge footing, and a lot of construction equipment being used at the site.

Site 28 is on the western side of YBI, and includes the western side on- and off-ramps. The ramps have been in use since 1936. Mr. Warmerdam explained possible lead contamination exists at the site because of cars using the road and paint being cleaned off the bridge and deposited at the site. Mr. Warmerdam noted the site is very steep, and showed some photos he took at a recent site visit.

Mr. Warmerdam moved on to Site 29, which includes the eastern side on- and off-ramps on YBI. Mr. Warmerdam stated Site 29 has similar usage and contaminants of concern as Site 28. In addition, Site 29 has also been impacted by construction for the new eastern span of the San Francisco-Oakland Bay Bridge, with construction equipment and soil disruptions at the site.

Mr. Warmerdam then showed an extensive list of previous investigations from 1988 through 2001 at the three sites, noting they are all listed specifically in the RI document. Mr. Warmerdam began discussing the ecological risk assessment (ERA), stating an RI report in 1997 indicated possible risk to the peregrine falcon from lead and DDT (dichlorodiphenyltrichloroethane) using a conservative model. A subsequent validation study was conducted including examination of some species of the falcon, review of current literature, and refining of the risk assessment numbers. Ultimately, it was determined there is minimal risk to the peregrine falcon and no further action was recommended for all three sites.

Mr. Warmerdam then discussed the HHRA. He stated the purpose of an HHRA is to estimate lifetime cancer and non-cancer risks to potentially exposed individuals at the sites. Mr. Warmerdam stated there are different methods to calculate risks, one follows U.S. Environmental Protection Agency (EPA) methodology and one follows California EPA DTSC methodology. To begin, contaminants of potential concern (COPCs) that are most likely associated with site-related health risks are identified.

Mr. Warmerdam stated that after the COPCs are selected an exposure assessment is conducted. This will identify exposure pathways that allow chemicals into the body, either from contact with soil or groundwater. Then a toxicity assessment is conducted, which identifies the potential effects of COPCs to humans.

Lastly, the three previous steps are combined into a risk characterization. Mr. Warmerdam stated that, when calculating the cancer risks, numbers between  $10^{-4}$  and  $10^{-6}$  need to be managed. A number less than  $10^{-6}$  is typically not a risk. When calculating non-cancer risks, there is a hazard index threshold of 1. A number above 1 might need to be managed, and a number below 1 may not be an issue.

Mr. Warmerdam stated that for Site 8 cancer risks for hypothetical future residents and commercial/industrial workers are within the management range. For hypothetical future construction workers, the risk is less than  $10^{-6}$ . The non-cancer hazard risk for all categories, except hypothetical child residents, is less than 1.

Mr. Warmerdam explained that for Site 28 all of the COPCs are non-carcinogenic so there is no cancer risk. The non-cancer hazard index is less than 1 for all receptors, however, there is some lead in localized areas that exceeds industrial preliminary remediation goals (PRG).

At Site 29, Mr. Warmerdam noted, the cancer risks for hypothetical future residents exceed the risk management range using DTSC methodology. However, using site-specific parameters when calculating risk, the risk decreases to within the risk management range. Cancer risks for other hypothetical future residents and all commercial/industrial workers are within the risk management range, and for the future hypothetical construction worker they are below  $10^{-6}$ . The non-cancer hazard indices are greater than 1 for the hypothetical future child resident. For all others it is less than 1. Mr. Warmerdam added that, as at Site 28, there is some lead in localized areas that exceeds industrial PRGs at Site 29.

Mr. Warmerdam stated that the Navy considered the impact of the amount of activity at Sites 8 and 29 by California Department of Transportation (Caltrans) as part of bridge construction. Soil is being moved around and may affect what the potential risk at those sites might be. Therefore, a qualitative risk assessment was performed, which compared site data prior to Caltrans activity and what data are expected to look like after Caltrans activity. Mr. Warmerdam explained the data are evaluated to see what happens at the exposure point concentrations (EPC). When reviewing the data, the EPCs were likely to decrease as soil was removed.

Mr. Warmerdam stated that, when evaluating the data for Site 29 two of the chemicals, dibenzo(a)pyrene and dibenzo(a,h)anthracene, decreased by 50 percent, because the Caltrans activity will remove the soil with the highest concentrations of those COPCs. Mr. Warmerdam explained removal of the soil with the highest concentrations of those COPCs will directly result in a decrease to EPCs and subsequently cancer and non-cancer risks.

Mr. Warmerdam then reviewed some of the conclusions in the RI report. Sites 8, 28, and 29 have been fully characterized, and based on those results, these sites do not pose an unacceptable risk to current users. For hypothetical future users, there may be some risks associated with various chemicals at the different sites. For Site 8, there may be risks associated with benzopyrene and naphthalene. For Site 28, there may be risks associated with lead. For Site 29, there may be risks associated with lead, benzopyrene, dibenzo(a,h)anthracene, and naphthalene.

Mr. Warmerdam clarified that future use of the sites is limited by ongoing construction and Caltrans uses. Specific to Site 28, Mr. Warmerdam noted that future use is also limited by the topography of the steep site as well as the potential that the site may be included in the Tidelands Trust.

Mr. Blecker asked what is the definition of an unacceptable risk. Mr. Warmerdam explained the Navy and regulatory agencies work together to determine what may be an unacceptable risk. There is no specific definition, it is determined by a negotiation process that considers the big picture for the site, including future use and other factors. The goal is to determine a reasonable, appropriate, and safe response to what is at the site.

Mr. Blecker asked how the data at these sites would compare to a piece of land or region that is free of contaminants and poses no risk whatsoever, or what would be expected within the reasonable or acceptable risk. Mr. Warmerdam stated that some chemicals naturally occur in soil and some chemicals are deposited in the soil from other sources; therefore, there is no piece of land with an absolute zero risk. However for comparison purposes, the lifetime cancer risk identified

in some studies is between .33 and .5 for the human population. So, if there is a site with a  $10^{-6}$  risk that poses a 1 in a million risk or an additional .000001 to lifetime background risk. Mr. Warmerdam stated that is a small number relative to what people typically might experience in a lifetime.

Mr. Sullivan stated that cleanup decisions require public input as well. At a later stage in the decision-making process, there will be a public meeting, information will be mailed out, and public comment will be gathered and considered in the final decision.

### **Site 33 Update**

Mr. Sullivan displayed a map listing all of the environmental sites at NAVSTA TI. He noted the sites are numbered 1 through 33 chronologically, with 1 being the oldest site and 33 being the newest. He added that, based on work to-date, the Navy does not expect to add a Site 34 to the cleanup program. Mr. Sullivan then introduced Kevin Hoch (Tetra Tech) to provide the update on Site 33.

Mr. Hoch stated Site 33 is located in the south central part of TI. It was developed in 1941 and used for barracks, a police station, and other administrative offices. Mr. Hoch stated currently the site has several unoccupied buildings, streets, and a small open grassy area.

Mr. Hoch stated that during the initial basewide investigation in 1988, the area was listed as needing some investigation for petroleum and fuel lines. In 2002, when pipelines were being removed, some burnt material and larger metal debris was found. At the same time, review of a historic as-built drawing identified a note indicating some debris had been found in the area of the utility corridors. Therefore, the Navy decided to conduct further investigation, referred to as data gap investigation, in 2003.

Mr. Hoch stated the work involved trenching to look for debris in the area, as well as groundwater testing to see if any chemicals had gotten into the groundwater. Mr. Hoch showed a photograph of some of the debris found, which included foot-long pieces of burnt wood and some other metal debris.

Mr. Hoch stated the RI report for Site 33 was delayed because the Navy and agencies were working together to change the format of some RI reports. The Navy wanted the Site 33 report to be consistent with the agreed upon format changes.

Mr. Hoch reviewed the COPCs found at Site 33. Some low levels of petroleum and petroleum-related chemicals were found, including benzo(a)pyrene. Metals (arsenic and lead) were also found at the site in the areas where debris was

found. In addition dioxin, which is related to burnt material, was found in the trenches. Mr. Hoch stated that all the COPCs were detected at low levels.

Samples of standing water were also collected in trenches and shallow groundwater samples were collected by pushing a small probe into the ground. The results indicated low levels of metals that slightly exceeded the criteria set for groundwater at TI. Mr. Hoch stated the Navy then put in groundwater monitoring wells to collect more accurate samples because the monitoring wells, using screens, eliminate fine materials that may be collected during the crude probe sampling. Mr. Hoch stated the water from the wells did not contain chemicals detected above the groundwater screening criteria. Mr. Hoch stated that in the initial sampling, the water was being stirred up as collection was taking place, resulting in sand and other material being collected with the water resulting in a false positive.

Mr. Hoch stated an ERA was conducted for all of TI, including Site 33. He noted that ERA document had been finalized in spring/summer of 2007. That ERA concluded that due to the poor habitat and low levels of chemicals, there is no concern about an impact to terrestrial ecological receptors at Site 33.

Mr. Hoch stated the material Mr. Warmerdam reviewed for the HHRA process is the same for Site 33. The HHRA considered future hypothetical users of the site including commercial/industrial workers, adult and child residents, construction workers, and recreational visitors. The site does not have any current residents or workers. Mr. Hoch stated that the exposure pathways were identified as dermal contact, ingestion of soil, inhalation of particulates and vapors, and any groundwater contact or inhalation of vapors from groundwater.

In reviewing the results of the HHRA, Mr. Hoch stated the cancer risks were either within or below the risk management range. There were no non-cancer risks that exceeded a hazard index of 1. Specific chemicals were also reviewed, and the only chemicals of concern were arsenic and lead. Mr. Hoch reviewed a table listing the specific cancer risks for the various future hypothetical users. The risks ranged from 4 times  $10^{-7}$  to 3 times  $10^{-5}$  for a resident.

Mr. Hoch stated the conclusion of the report is Site 33 has been fully characterized. Under current land use, there is no unacceptable human health or ecological risk. For future use, there may be a risk based on the presence of arsenic and lead.

Mr. Hoch stated the Navy and regulatory agencies will discuss whether the risk posed by the two contaminants warrant moving on to an FS and possibly a remedial action. The public will be kept informed throughout the process.

Mr. Sullivan stated Sites 8, 28, and 29 will be discussed in one Draft RI report, noting those sites were combined into one report partially because of geography. Site 33 will be discussed in a separate RI report that will be issued in draft form sometime within the next month. Mr. Sullivan noted both reports would be available in the Navy's information repositories, located on TI in Building 1 and in the San Francisco Main Public Library in the government documents section. Mr. Sullivan also noted several RAB members receive and review technical documents, and would be receiving both of those RI reports. Mr. Sullivan noted everyone is welcome to review the documents and provide comments to the Navy.

### **Upcoming Documents and Field Schedule**

#### **Documents**

Reading from the Document Tracking Sheet, Marcie Rash (Tetra Tech), presented the following documents that are or would become available in the next 2 months:

- Final Sites 9 and 10 Record of Decision, 27 August
- Final Site 27 SAP/Health and Safety Plan, 31 September
- Draft Sites 8, 28, and 29 Revised RI Report, 28 August issued for review, comments due 27 September
- Draft PCB Summary Report Phase I and II, issued for review 9 February, regulatory agency comments overdue since 9 March
- Draft Annual Groundwater Status Report, issued for review 12 June, regulatory agency comments overdue since 12 July
- Draft PCB Work Plan, issued for review 26 April, regulatory agency comments overdue since 23 May
- Draft Site Management Plan, issued for review 22 June, regulatory agency comments overdue since 25 July
- Final Island Times Volume 13 - Spring/Summer will be issued 28 August
- Draft Site 30 Proposed Plan, issued 23 March, overdue since 18 June
- Draft Site 31 Proposed Plan, issued 23 March, overdue since 18 June

#### **Field Schedule**

Ms. Rash stated there was a radiological investigation taking place at Buildings 233, 343, and 344, which is expected to end around 21 September. Ms. Rash stated an arsenic in groundwater pilot study began 17 August and is expected to end 21 November.

### **June 2007 RAB Meeting Minutes**

Mr. Sullivan stated there is a transcript of each RAB meeting, from which the RAB meeting minutes are produced, which are usually about 12 pages long. He then asked for any comments on the June 2007 RAB meeting minutes. There

were no corrections, and Nathan Brennan (RAB member) motioned to accept the June 2007 RAB meeting minutes, with the stipulation that absent RAB member Dale Smith be given the opportunity to review and comment. Alice Pilram (RAB community Co-chair) seconded and the motion was approved. Mr. Sullivan stated the final June minutes would be mailed with the packet for the October RAB meeting.

### **Co-Chair Announcements**

Mr. Sullivan clarified for attendees that the RAB is comprised of community members as well as governmental members. Mr. Sullivan is the Navy Co-chair and Ms. Pilram is the community Co-chair. Mr. Sullivan introduced the other governmental representatives present: Agnes Farres with the Water Board and Henry Wong with the DTSC. Mr. Sullivan stated that additional community members are always welcomed, and that the community members select additional community members to participate on the board.

Mr. Sullivan turned over the meeting to Ms. Pilram for announcements. Ms. Pilram reminded everyone that the Bay Bridge was scheduled to be closed for construction over the Labor Day weekend. She noted that residents must have a pass to get on and off the bridge. Ms. Pilram also stated TI is hosting an annual community picnic at the end of September, and a rock concert, the Treasure Island Festival, on September 15 and 16. She stated more details could be found at the TIDA website.

### **BRAC Cleanup Team Update**

Mr. Sullivan explained for new attendees that the BRAC Cleanup Team, or BCT, is part of former President Clinton's established 10-point plan to improve the base closure process. The BCT includes Navy and state and federal regulatory agency members who work as a team. The BCT has regular monthly meetings.

Mr. Sullivan stated there had been two BCT meetings since the last RAB meeting, one in July and one in August. At the July meeting, the BCT had an update about the Site 12 removal action, discussed the RI report for Site 11, discussed administrative items, and planned for this August RAB meeting. Mr. Sullivan stated the August meeting was a 2-day event, and asked Ms. Rash to give an update about that meeting.

Ms. Rash stated the August BCT meeting included a technical discussion about a planned soil gas investigation for Site 12, for which a Sampling and Analysis Plan will be issued. In addition, Ms. Rash stated the team discussed the Site 32 RI report, receiving regulatory agency comments and discussing Navy responses. In addition, the team discussed how comments to the Site 32 RI report may impact the Site 33 RI report.

Ms. Rash stated the Navy provided a preview of the Sites 8, 28, and 29 RI report to give regulatory agency members an idea of what to expect. In addition, there was a discussion about the Site 24 treatability study that Mr. Bourgeois presented at the RAB meeting that night.

Ms. Rash stated that, on the second day of the BCT meeting, the team discussed Site 12, which is a standing agenda item at the meetings. The team also discussed the Site Management Plan, then went over standard items such as future agendas and action items.

### **Other Public Comment and Announcements**

Mr. Sullivan asked Mr. Brennan if he had an update from the Citizen's Advisory Board (CAB). Mr. Brennan stated the CAB had not met since 5 June 2007, and he was not sure whether there would be a meeting in September. Mr. Brennan added that people should check the CAB website, listed on the RAB agenda, for schedule updates. He noted there is now a development plan in place, and that it would be implemented over 10 to 12 years. Mr. Brennan stated that like the cleanup process, the redevelopment process is a long one and is moving forward slowly. Mr. Brennan also invited everyone to talk to him later if they had any questions.

Mr. Sullivan stated the RAB agenda has meeting website information for both the CAB meetings and the TIDA meetings.

### **Future Meeting Agenda Items**

Mr. Brennan asked if the Navy could present an extended work plan for the work at Site 12, including the next phase of work and how long it will last. Mr. Sullivan agreed to provide such an update. Mr. Sullivan also said the Navy would present whatever was timely, including information on documents that had been or were just about to be issued.

### **Closing Remarks/End of Meeting**

Mr. Sullivan stated the next RAB meeting is scheduled for 16 October 2007, and the RAB teleconference is scheduled for 3 October 2007. Mr. Sullivan noted that, in addition to the Navy's website and San Diego address, listed on the agenda, the Navy has an office in Building 1 on TI. He invited interested people to stop in and ask questions any time. He then thanked everyone for attending and brought the meeting to a close at 8:21 p.m.

### **August 2007 RAB Meeting Handouts**

- TI RAB Meeting No. 131 Agenda, 21 August 2007
- Field Efforts, Solid Waste Disposal Site 12 (TI Housing) Removal Action Update, 21 August 2007
- Sites 24 and 21 In Situ Bioremediation Treatability Studies, 21 August 2007

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- Sites 8, 28, and 29 Revised Draft RI Report Preview, 21 August 2007
- Site 33 Waterline Replacement Area Draft RI Report Preview, 21 August 2007
- Document Tracking Sheet
- Navy Field Schedule

NAVAL STATION TREASURE ISLAND  
ENVIRONMENTAL RESTORATION ADVISORY BOARD MEETING  
Tuesday, 21 August 2007  
7:00 PM.  
**Casa de la Vista (Building 271)**  
Treasure Island

**MEETING NO. 131**

- 6:15 – 6:45 **Optional Van Tour of Site 12 TI Housing Fieldwork  
(meet at Casa de la Vista)**
- 7:00 - 7:05 **Welcome Remarks and Introductions**  
Lead: James Sullivan, Navy Co-Chair
- 7:05 - 7:10 **Public Comment and Announcements**  
Lead: James Sullivan, Navy Co-Chair
- 7:10 - 7:25 **Site 12 (TI Housing) Removal Action Update**  
Lead: Pete Bourgeois, Shaw Environmental & Infrastructure
- 7:25 – 7:35 **Site 21 and Site 24 Update and Path Forward**  
Lead: Scott Anderson, Navy Project Manager
- 7:35 – 7:50 **Site 8, 28 and 29 (YBI Sites) Draft Remedial Investigation Report  
Preview**  
Lead: John Warmerdam, Tetra Tech EMI
- 8:00 – 8:15 **Site 33 (Water Line Replacement Area) Draft Remedial Investigation  
Report Preview**  
Lead: Kevin Hoch, Tetra Tech EMI
- 8:15 – 8:20 **Upcoming Documents and Field Schedule**  
Lead: Marcie Rash, Tetra Tech EMI
- 8:20 – 8:25 **June 2007 RAB Meeting Minutes**  
Lead: James Sullivan, Navy Co-Chair
- 8:25 – 8:30 **Co-Chair Announcements**  
Lead: Alice Pilram, Community Co-Chair
- 8:30 – 8:35 **BRAC Cleanup Team Update**  
Lead: James Sullivan, Navy Co-Chair
- 8:35 – 8:40 **Other Public Comment and Announcements**  
Lead: James Sullivan, Navy Co-Chair





## Installation Restoration Sites 8, 28, and 29 Revised Draft Remedial Investigation Report - Preview

August 21, 2007  
NAVSTA Treasure Island  
RAB Meeting

## Outline



- Purpose
- Site History
- Investigation History
- Ecological Risk Assessment
- Human Health Risk Assessment
- Quantitative Results
- Qualitative Results
- Conclusions

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## PURPOSE



- The purpose of this remedial investigation (RI) as stated in U.S. Environmental Protection Agency (EPA) guidance under the Comprehensive, Environmental Response, Compensation, and Liability Act (CERCLA) is to:
  - “serve as the mechanism for collecting data to characterize site conditions, determine the nature of the waste, and assess risk to human health and the environment”
- If determined necessary during the RI, the results will be used to “evaluate the potential performance and cost of treatment technologies” in a Feasibility Study (FS).

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## SITES 8, 28, and 29



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## SITE HISTORY



### Site 8 - Army Point Sludge Disposal Area

- Located on northeastern portion of YBI
- From 1968-1976 - disposal area for wastewater sludge from the TI waste water treatment plant (WWTP).
- Sludge was spread on ground for dewatering.
- Final disposition of the sludge is unknown. (Burial of sludge at the site is unlikely due to the thin layer of surface soil above bedrock at the site).
- Site is approximately 60-70 feet above sea level.
- Estimated groundwater depth - 60 feet bgs.
- Approximately one third of the surface soils removed or disturbed from Bay Bridge construction activities.

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## SITE HISTORY - Cont.

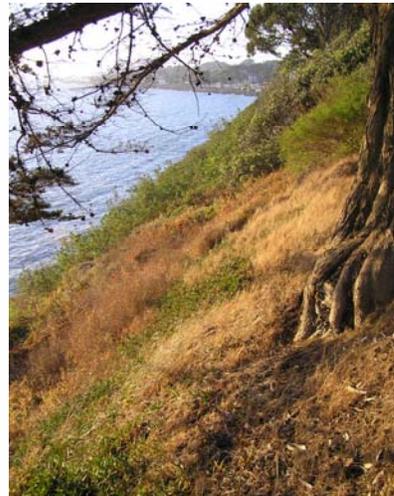


### Site 28 - West Side On- and Off-Ramps

- Located on western portion of YBI along the west side on- and off-ramps.
- On- and off-ramps in operation since the Bay Bridge was constructed in 1936.
- Possible surface soil contamination by lead and other metals as a result of vehicle emissions and ramp painting and maintenance.
- Site is steep and slopes from the YBI road down to the Bay; vegetated with brush and trees.

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## SITE 28 TOPOGRAPHY



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## SITE HISTORY - Cont.



### Site 29 East Side On- and Off-Ramps

- Located on eastern side of YBI along Bay Bridge corridor.
- On- and off-ramps in operation since the Bay Bridge was constructed in 1936.
- Possible surface contamination by lead and other metals as a result of vehicle emissions as well as ramp painting and maintenance.
- Caltrans geotechnical borings encountered groundwater at 31 feet bgs near the former fire station.
- Bay Bridge construction activities have impacted some areas of Site 29 due to soil excavations and road building.

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## INVESTIGATIVE HISTORY - SITE 8



- **Preliminary Assessment (Dames & Moore 1988)**
- **Site Inspection (PRC 1990)**
- **Phase I Remedial Investigation (PRC 1992)**
- **Phase IIB Remedial Investigation (PRC 1995)**
- **Site Investigation (Caltrans 2001)**
- **Validation Study For Sites 8, 11, 28, and 29 (Tetra Tech 2001)**

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## INVESTIGATIVE HISTORY - SITE 28



- **Health and Safety Soil Sampling Investigation (Blaine 1993)**
- **Phase IIB Remedial Investigation (PRC 1995)**
- **Validation Study For Sites 8, 11, 28, and 29 (Tetra Tech 2001)**

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## INVESTIGATIVE HISTORY - SITE 29



- **Phase IIB Remedial Investigation (PRC 1995)**
- **Inactive Fuel Line Investigation (SCI 1995)**
- **UST 270 Investigation (ERM 1995-1997)**
- **Fuel Line Excavation and Sampling (Tetra Tech 1997-1998)**
- **Focused Investigation (Tetra Tech 2000-2001)**
- **Site Investigation (Caltrans/Geocon 2001)**
- **Validation Study For Sites 8, 11, 28, and 29 (Tetra Tech 2001)**
- **Additional Investigation (Tetra Tech 2002)**

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## ECOLOGICAL RISK ASSESSMENT



### **Draft Final RI (1997)**

- Food-chain modeling (FCM) conducted in the screening level ecological risk assessment (SLERA) indicated potential risk to peregrine falcons at Sites 8, 11, 28, and 29.

### **Peregrine Falcon Validation Study/BERA (2001)**

- Except for lead and DDTs, COPECs at Sites 8, 11, 28, and 29 were less than the no-effect-level daily dose (low toxicological reference value {TRV}).
- Lead daily doses for Sites 8, 11, 28, and 29 were between the low and high TRV; however, when a more relevant raptor-specific TRV is used, the HQ dose/low TRV is less than 1.0, indicating a situation with a low potential for risk at Sites 8, 11, 28, and 29.
- Total DDT HQs for Sites 8 and 11 are slightly above the low TRV, but well below effects levels reported in the literature; risk to the peregrine falcon from exposure to DDT at Sites 8 and 11 was considered minimal.

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## Validation Study Conclusions

- Based on the information and data evaluated, chemical levels in soils at Sites 8, 11, 28, and 29 were shown to pose minimal risk to the Peregrine falcon.
- No further investigation or action was recommended for Sites 8, 11, 28, and 29.

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- Conducted baseline human health risk assessment (HHRA) to estimate potential lifetime cancer risks and adverse noncancer health effects associated with site-related activities at Sites 8, 28, and 29.
- Methods are consistent with EPA and DTSC guidelines and Navy policy.
- HHRA is based on soil and groundwater data collected from 1990 to 2005.
- Evaluated hypothetical future reuse scenarios.

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## HUMAN HEALTH RISK ASSESSMENT - Cont.



- **COPC Selection:** Identify detected COPCs that are most likely associated with site-related health risks
  - Method 1 (Navy / EPA based)
    - Essential nutrient screen
    - Frequency of detection screen
    - Ambient background screen
    - Risk-based criteria screen
  - Method 2 (DTSC preferred)
    - Essential nutrient screen
    - Ambient background screen

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## HUMAN HEALTH RISK ASSESSMENT - Cont.



- **Exposure Assessment:** Identify most likely exposed human receptors and complete exposure pathways
  - Potentially exposed human receptors
    - Commercial/industrial worker
    - Adult/child residents
    - Construction worker
  - Exposure Pathways
    - Soil – surface soil (0 to 2 feet below ground surface [bgs]), combined surface and subsurface soil (0 to 10 feet bgs)
      - Dermal contact
      - Incidental ingestion of soil
      - Inhalation of particulates
      - Inhalation of chemical vapors
    - Groundwater
      - Dermal contact (construction workers only)
      - Inhalation of chemical vapors

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## HUMAN HEALTH RISK ASSESSMENT - Cont.



- **Toxicity Assessment:** Identify toxicity criteria used to evaluate adverse noncancer health effects and cancer risks.
  - **Method 1 Toxicity Criteria**
    - Toxicity factors selected from EPA hierarchy (EPA 2003).
  - **Method 2 Toxicity Criteria**
    - Toxicity factors selected per DTSC preferences:
      - Slope factors selected as the most health-protective of federal and State of California values.
      - Inhalation reference doses/reference concentrations selected from IRIS, RELs, or alternative sources.
      - Oral/dermal reference doses selected from EPA hierarchy (EPA 2003).

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## HUMAN HEALTH RISK ASSESSMENT - Cont.



- **Risk Characterization:** Combines COPC Selection, Exposure Assessment, and Toxicity Assessment to estimate potential cancer risks and noncancer adverse health effects:
  - $1 \times 10^{-6}$  to  $1 \times 10^{-4}$  cancer risk management range
  - Noncancer hazard index (HI) threshold of 1

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## QUANTITATIVE RESULTS



### Site 8

- Cancer risks for **hypothetical future residents and commercial/industrial workers** are within risk management range ( $1 \times 10^{-4}$  to  $1 \times 10^{-6}$ ).
- Cancer risks for **hypothetical future construction worker** less than  $1 \times 10^{-6}$ .
- Risks estimates calculated with **DTSC and EPA** assumptions can **differ by a factor of 2 to 3**.
- $HI > 1$  for **future hypothetical child resident**, all other receptors less than 1.

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## QUANTITATIVE RESULTS - Cont.



### Site 28

- All COPCs are noncarcinogenic (No slope factors)
- $HI < 1$  for all receptors
- Lead concentration in localized area exceeds residential and industrial preliminary remediation goals PRGs.

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## QUANTITATIVE RESULTS - Cont.



### Site 29

- Cancer risks for **hypothetical future residents** exceed risk management range using DTSC assumptions and soil to 10 feet bgs ( $2 \times 10^{-4}$ ).
  - Risk decreases to within the risk management range when site-specific parameters are used for vapor intrusion.
- Cancer risks for other **hypothetical future residents and all commercial/industrial workers** are within risk management range.
- Cancer risks for **hypothetical future construction worker** are less than  $1 \times 10^{-6}$ .
- Risks estimates calculated with **DTSC and EPA** assumptions can **differ by a factor of 2 to 15**.
- HI > 1 for **hypothetical future child resident**, all other receptors less than 1.
- Lead concentration exceeds residential and industrial PRGs.

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## QUALITATIVE RESULTS



- Qualitative analysis of actual and proposed Caltrans removal actions.
  - Compare data sets before and after soil removal or disturbance.
  - Compare data sets to exposure point concentrations (EPCs).
- Some EPCs likely to decrease more than 50% (benzo(a)pyrene and dibenzo(a,h)anthracene at Site 29).

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## CONCLUSIONS



- The nature and extent of contamination at Sites 8, 28, and 29 have been fully characterized.
- Based on the results of the human health and ecological risk assessments, soil and groundwater do not pose an unacceptable risk under current land use conditions.
- For hypothetical future use scenarios, risk may be associated with the following chemicals:
  - Site 8: Benzo(a)pyrene, naphthalene
  - Site 28: Lead
  - Site 29: Lead, benzo(a)pyrene, dibenzo(a,h)anthracene, naphthalene
- Future use at each of these sites is limited by ongoing construction (Sites 8 and 29), site topography (Site 28), and potential inclusion in the Tidelands Trust (Site 28).

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## QUESTIONS ?



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**Naval Station Treasure Island  
Environmental Cleanup Program  
Document Tracking Sheet  
August 2007 - April 2008**

Item	Document Title & Information	CTO/DO	INTERNAL DRAFT			DRAFT							RTC		INTERNAL F I N A L			F I N A L	NOTES									
			Internal Draft Due to Navy	Navy Comments Due	Response to Navy Comments (if applicable) / Draft to Navy	Draft to Agencies	Date Due	Agency Comments					Priority Level	Preliminary RTCs to Agencies	Resolve and Concur on RTCs	Internal Final to Navy	Navy Comments Due	Final to Agencies	Comments									
								DISC	Water Board	EPA	TIDA	RAB								OTHER								
<b>SulTech - Non Petroleum Related Documents</b>																												
1	Site 32 Remedial Investigation Report	94	08/18/06	✓	09/17/06	✓	N/A	✓	10/20/06	✓	02/14/07	✓	✓	✓	✓	✓	07/27/07	✓	08/27/07	TBD	TBD	TBD	*Other* agency comments provided by US Fish and Wildlife.					
	RPM: Scott Anderson																											
	PM: Pam Baur																											
2	Site 33 Remedial Investigation Report	103	09/07/06	✓	10/16/06	✓	TBD		TBD		TBD						TBD		TBD	TBD	TBD	TBD	TBD pending resolution at Site 32.					
	RPM: Scott Anderson																											
	PM: Kevin Hoch																											
3	Sites 9 and 10 Record of Decision	24	12/21/06*	✓	01/19/07*	✓	03/30/07*	✓	05/04/07	✓	07/30/07	✓	✓	✓	x		07/30/07	✓	07/30/07	✓	08/13/07	✓	08/20/07	✓	08/27/07	* RTCs incorporated into agency review period. * Navy technical review ** Navy legal review		
	RPM: Scott Anderson																											
	PM: Laura Newman																											
4	Site 24 Remedial Investigation Report/ Focused Feasibility Study	92 /123	12/22/06*	✓	01/31/07*	✓	TBD		04/30/07	✓	07/02/07	✓	✓	✓	✓		TBD		TBD	TBD	TBD	TBD	TBD	* Navy technical review ** Navy legal review				
	RPM: Scott Anderson																											
	PM: Jean Michaels																											
5	Site 27 SAP/HSP	43	04/06/07	✓	04/20/07	✓	04/26/07	✓	05/10/07	✓	06/13/07	✓	✓	✓	✓		08/24/07		09/07/07		09/13/07		09/20/07		09/31/07	Field investigation scheduled for October 2007.		
	RPM: Charles Perry																											
	PM: Cindi Rose																											
6	Sites 8, 28, and 29 Revised Remedial Investigation Report	104	07/23/07	✓	08/10/07	✓	08/28/07		08/28/07		09/27/07						10/11/07		10/18/07		11/09/07		11/20/07		12/04/07	The Draft RI Report was submitted in March 2006.		
	RPM: James Whitcomb																											
	PM: Marcie Rash																											
7	Site 6 Remedial Investigation Report	91	TBD		TBD		TBD		TBD		TBD						TBD		TBD		TBD		TBD		TBD			
	RPM: James Whitcomb																											
	PM: Von Gusa																											
8	Site 21 Feasibility Study	144	TBD*		TBD*		TBD*		TBD		TBD						TBD		TBD		TBD		TBD		TBD	* Navy technical review ** Navy legal review		
	RPM: Scott Anderson																											
	PM: Jean Michaels																											
9	Site 12 EU Calculations White Paper	52	TBD		TBD		TBD		TBD		TBD						TBD		TBD		NA		NA		NA			
	RPM: James Whitcomb																											
	PM: Victor Early																											
10	Site 12 Remedial Investigation Report	117	TBD		TBD		TBD		TBD		TBD						TBD		TBD		TBD		TBD		TBD			
	RPM: James Whitcomb																											
	PM: Ginna Demetrios																											
11	Fact Sheet: Site 12 Remedial Investigation Report	52	TBD		TBD		TBD		TBD		TBD						TBD		TBD		TBD		TBD		TBD	Fact sheet will be distributed near the submittal of the Draft RI Report.		
	RPM: James Whitcomb																											
	PM: Ginna Demetrios																											

**Naval Station Treasure Island  
Environmental Cleanup Program  
Document Tracking Sheet  
August 2007 - April 2008**

Item	Document Title & Information	CTO/DO	INTERNAL DRAFT			DRAFT							RTC		INTERNAL F I N A L			F I N A L	NOTES	
			Internal Draft Due to Navy	Navy Comments Due	Response to Navy Comments (if applicable) / Draft to Navy	Draft to Agencies	Date Due	Agency Comments					Priority Level	Preliminary RTCs to Agencies	Resolve and Concur on RTCs	Internal Final to Navy	Navy Comments Due	Final to Agencies	Comments	
								DISC	Water Board	EPA	TIDA	RAB								OTHER
<b>SulTech - Non Petroleum Related Documents (continued)</b>																				
12	Fact Sheet: Radiological Program Update	FZN6	TBD	TBD	TBD	TBD	TBD							TBD	TBD	TBD	TBD	TBD		
	RPM: James Whitcomb																			
	PM: Marcie Rash																			
<b>Sullivan Consulting Group/Tetra Tech EM Inc. - Non Petroleum Related Documents</b>																				
13	PCB Summary Report (Phase I and II)	CLIN0001	09/12/06	01/27/07	02/02/07	02/09/07	03/09/07						2	TBD	TBD	TBD	TBD	TBD	Awaiting DTSC comments on draft.	
	RPM: Scott Anderson																			
	PM: Pam Baur																			
14	Annual Groundwater Status Report, Site 12	CLIN0002	03/02/07	03/05/07	03/16/07	03/26/07	05/02/07			x					TBD	TBD	TBD	TBD	EPA deferred to the Water Board's review of the document (dated 26 April 2007).	
	RPM: James Whitcomb																			
	PM: Pam Baur																			
15	Annual Groundwater Status Report, Sites 6A and 25	CLIN0002	04/24/07	05/04/07	05/11/07	06/12/07	07/12/07			x				4	TBD	TBD	TBD	TBD	Awaiting DTSC comments on draft.	
	RPM: James Whitcomb																			
	PM: Pam Baur																			
<b>Shaw Group</b>																				
16	PCB Work Plan	FZN1	03/19/07	04/10/07	04/23/07	04/26/07	05/23/07			x	x				1	TBD	TBD	TBD	TBD	Awaiting DTSC comments on draft.
	RPM: Scott Anderson																			
	PM: Pete Bourgeois																			
17	Site 21 and Site 24 Work Plan	FZN1	TBD	TBD	TBD	TBD	TBD								TBD	TBD	TBD	TBD		
	RPM: Scott Anderson																			
	PM: Pete Bourgeois																			
18	Site 12 Work Plan for Arsenic in Groundwater Pilot Study	FZN1	TBD	TBD	TBD	TBD	TBD								TBD	TBD	TBD	TBD		
	RPM: Scott Anderson																			
	PM: Pete Bourgeois																			
<b>Tetra Tech EM, Inc.</b>																				
19	2007 Site Management Plan	FZN6	05/24/07	06/15/07	NA	06/22/07	07/25/07							5	TBD	TBD	TBD	TBD	TBD	Awaiting agency comments on draft.
	RPM: Charles Perry																			
	PM: Marcie Rash																			
20	Island Times Volume 13 - Summer 2007	FZN6	05/04/07	06/01/07	TBD	06/11/07	07/09/07					x			NA	NA	07/30/07	08/07/07	08/28/07	
	RPM: James Sullivan																			
	PM: Marcie Rash																			
21	Community Involvement Plan 2007	FZN6	10/19/07	11/20/07	TBD	12/05/07	01/03/08								01/08/08	01/17/08	01/17/08	01/24/08	01/26/08	Anticipate conducting interviews July 26 through September 28, 2007.
	RPM: James Sullivan																			
	PM: Marcie Rash																			

**Naval Station Treasure Island  
Environmental Cleanup Program  
Document Tracking Sheet  
August 2007 - April 2008**

Item	Document Title & Information	CTO/DO	INTERNAL DRAFT			DRAFT							RTC		INTERNAL F I N A L		F I N A L	NOTES												
			Internal Draft Due to Navy	Navy Comments Due	Response to Navy Comments (if applicable) / Draft to Navy	Draft to Agencies	Date Due	Agency Comments						Priority Level	Preliminary RTCs to Agencies	Resolve and Concur on RTCs	Internal Final to Navy	Navy Comments Due	Final to Agencies	Comments										
								DTSC	Water Board	EPA	TIDA	RAB	OTHER																	
<b>Tetra Tech EC, Inc.</b>																														
22	Basewide Radiological Support Work Plan RPM: James Whitcomb PM: Brian Maidrand	21	11/29/06	✓	01/04/07	✓	TBD	✓	02/20/07	✓	04/05/07	✓			x	✓			✓	05/15/07	✓	07/25/07	✓	08/01/07	✓	08/07/07	✓	08/20/07	✓	'Other' agency comments provided by the California Department of Health Services (CDHS). CDHS requested an extension for RTC review.
<b>Barajas &amp; Associates, Inc.</b>																														
23	Site 30 Proposed Plan RPM: Charles Perry PM: Margaret Berry	25	12/22/06	✓	03/06/07	✓	03/09/07	✓	03/23/07	✓	06/18/07								3	TBD		Awaiting DTSC comments on draft. Navy comments on internal draft includes legal review.								
24	Site 31 Proposed Plan RPM: Charles Perry PM: Margaret Berry	25	01/19/07	✓	03/06/07	✓	03/09/07	✓	03/23/07	✓	06/18/07								3	TBD		Awaiting DTSC comments on draft. Navy comments on internal draft includes legal review.								
25	Site 11 Remedial Investigation Report RPM: Scott Anderson PM: Margaret Berry	24	TBD		TBD		TBD		TBD		TBD									TBD		TBD		TBD		TBD		TBD		

- ✓ Production or review of document is complete.
- X Received notification of no comments or comments deferred to other agency.

Abbreviations:

CTO = Contract Task Order  
DHS = Department of Health Services  
DO = Delivery Order  
DTSC = Department of Toxic Substances Control  
EU = Exposure Unit  
HSP = Health and Safety Plan

NA = Not Applicable  
PCB = Polychlorinated Biphenyls  
PM = Project Manager  
RAB = Restoration Advisory Board  
RPM = Remedial Project Manager  
SAP = Sampling and Analysis Plan

TBD = To Be Determined  
TIDA = Treasure Island Development Authority  
Water Board = Regional Water Quality Control Board

Grey shading indicates the document is finalized.

Blue shading indicates agency review comments are due within the next 60 days or are outstanding.

Yellow shading indicates documents that will be issued draft or final within the next 60 days.

**Naval Station Treasure Island  
Navy Field Schedule**

**August - October 2007**

Item	Activity & Investigation Area	DTR #	Field Dates	Navy RPM	CTO/DO	PM	FTL	Complete
<b>Tetra Tech EC Inc.</b>								
1	Radiological Investigation <i>Bldgs 233, 343, and 344</i>	Doc 23	Start: 09/04/07 Finish: 09/21/07	James Whitcomb (619) 532-0936	21	Brian Maidrand (619) 471-3570	Jennifer Dessort (949) 753-7541	
<b>Shaw</b>								
2	Site 24 Treatability Study Phase II <i>Site 24</i>	Doc N/A	Start: 01/29/07 Finish: TBD	Scott Anderson (619) 532-0938	FZN1	Peter Bourgeois (415) 277-6983	David Cacciatore (925) 288-2299	
3	Site 21 Pilot Treatability Study <i>Site 21</i>	Doc N/A	Start: 01/29/07 Finish: TBD	Scott Anderson (619) 532-0938	FZN1	Peter Bourgeois (415) 277-6983	Dan Leigh (925) 288-2193	
4	Non-Time Critical Removal Action <i>Site 12</i>	Doc N/A	Start: 02/26/07 Finish: 02/28/08	Jim Whitcomb (619) 532-0936	10	Peter Bourgeois (415) 277-6983	Peter Bourgeois (415) 277-6983	
5	Arsenic in Groundwater Pilot Study <i>Site 12</i>	Doc N/A	Start: 08/17/07 Finish: 11/21/07	Jim Whitcomb (619) 532-0936	FZN1	Peter Bourgeois (415) 277-6983	Peter Bourgeois (415) 277-6983	
<b>Sullivan</b>								
6	Basewide Groundwater Sampling <i>Sites 6, 12, and 25</i>	Doc N/A	Start: 08/01/07 Finish: 8/2/2007	James Whitcomb (619) 532-0936	FZN1	Pam Baur (415) 321-1795	Jamie Hamm (415) 321-1790	✓

CTO - Contract Task Order

DO - Delivery Order

DTR # - Denotes document tracking reference. The number listed corresponds to the associated documentation listed on the Document Tracking Sheet

FTL - Field team lead

N/A - not applicable, there is no associated documentation listed on the DTS.

RPM - Remedial Project Manager

TBD - To Be Determined

✓ Field work is complete.

Yellow shading indicates field activities that will start or finish within the next 60 days.

Grey shading indicates field activities are complete.