FINAL
Former Naval Station Treasure Island
Restoration Advisory Board (RAB) Meeting Minutes

Meeting # 138 | 21 October 2008

Community Restoration Advisory Board (RAB) Members in attendance:
Nathan Brennan, John Gee, Chris Grasteit, Alice Pilram, Doug Ryan, Dale Smith

Regulatory Agency, City of San Francisco (City), and U.S. Department of the Navy (Navy) RAB Members in attendance:
James Sullivan (Navy), Paisha Jorgensen (San Francisco Bay Regional Water Quality Control Board [Water Board]), Ryan Miya (Department of Toxic Substances Control [DTSC])

Other Navy Staff and Consultant Representatives in attendance:
Scott Anderson (Navy), Pete Bourgeois, (Shaw Environment and Infrastructure [Shaw]), Tommie Jean Damrel (Tetra Tech EM Inc. [Tetra Tech]), Chen Wen Don (Sullivan Consulting), Kevin Hoch (Tetra Tech), Charles Perry (Navy), Deanna Rhoades (Sullivan Consulting)

Public Guests
Lavina De Silva (Boys and Girls Club), Deb Eberhart (Boys and Girls Club), Bart Rugo (Treasure Island Resident), Mirian Saez (Treasure Island Development Authority), Dan Stone (John Stewart Company)

Welcome Remarks and Introductions
James Sullivan (Base Realignment and Closure [BRAC] Environmental Coordinator) opened the 21 October 2008 meeting at 7:00 P.M. at the Casa de la Vista (Building 271) on Treasure Island (TI).

Mr. Sullivan welcomed those in attendance and stated there were additional copies of all handouts at the sign-in table. Mr. Sullivan then asked if there were any comments regarding the meeting agenda (Attachment A). There were none, so he moved into the first topic.

Public Comment and Announcements
Mr. Sullivan stated there are two public comment periods included in the RAB agenda to provide members of the public an opportunity to comment on the Navy's environmental program at former Naval Station TI (NAVSTA TI). One at the start of the meeting and one near the end. Mr. Sullivan added that attendees are invited to ask questions or make comments at any time during the meeting. There were no public comments our announcements so Mr. Sullivan proceeded on to the next agenda item.

Update on Treasure Island Priorities

Mr. Sullivan introduced Mirian Saez, Director of Island Operations for Treasure Island Development Authority (TIDA), to give an update on the TIDA priorities for TI. (Attachment B) Ms. Saez thanked the RAB for the opportunity to make a presentation and formally introduce herself to the RAB. Ms. Saez stated that she has been working on the islands for two years now, and for TIDA the project is currently entering a new phase. Ms. Saez described this period as an interim period, expected to last three to seven years. During this interim period, TIDA will continue to be in operation as a proprietor, providing housing and commercial leases. In addition, TIDA is making TI the event place for many types of events, large and small, around the Bay Area. Ms. Saez explained her presentation would cover things currently in place for TI as well as items planned for the interim period.

Ms. Saez described herself as the "cheerleader" of the island for this interim period. She explained she and her staff are working hard to get more people out to TI, to see all that it has to offer. The hope is that people will look towards the future possibility of buying a home on NAVSTA TI if they are familiar with and understand the island. Ms. Saez stated she is surprised by how many people in the area have never been on TI.

Ms. Saez stated residents may have noticed that TIDA is having many more events on TI. TIDA is working hard to continue commercial and residential leasing. However, they are not at the same point they were two years ago. They are gearing up to make TI the recreation destination. Ms. Saez then unveiled the new TIDA logo, with a view of the City of San Francisco skyline seen through palm trees and the tag line "Your Recreation Destination."

Ms. Saez stated her presentation is also used as an orientation for new TIDA members, so she would not go through the entire history of the island, as the RAB members are familiar with it. She stated that TI got its name because people thought gold could be found in the soil. Ms. Saez noted that, during the original construction of TI, there were two bridges being built and the U.S. was about to enter World War II. Ms. Saez stated it feels like time is repeating itself at TI, with the country at war, economic troubles, and the new span of the Bay Bridge being built.

Ms. Saez showed a photograph of the Tower of the Sun from the Golden Gate International Exposition (GGIE), and stated TIDA is hoping to bring back a similar structure during redevelopment construction. Ms. Saez stated that Zoe Dell Lantis, known as the Pirate Girl during the GGIE, visited the TIDA offices and shared many stories from the GGIE. Ms. Saez also stated that many great artists participated in the GGIE, including Miguel Covarrubias and Diego Rivera.

Ms. Saez showed a photograph of the Golden Key of the GGIE, which previously was thought to be lost. It was found at the Fine Arts Museum of San Francisco. Because it is valued at $1.2 million it is stored away safely in an undisclosed location.

Ms. Saez explained that, after the GGIE, the Navy took over TI. She stated that TIDA, via the City of San Francisco, became the caretaker of TI in 1997. TIDA has an operational staff of eight on TI, and a staff of two at City Hall. Today, TI has many recreational opportunities, including a sailing center, athletic fields and perimeter path, Little League, the Boys and Girls Club, the Marina at Clipper Cove, and the yacht club. Ms. Saez added that TIDA has done some work at the Fog Watch picnic area and the Great Lawn to accommodate residents and visitors to TI. Ms. Saez stated that Gaelic Football Fields are being developed. TI will host the President of Ireland on 12 December 2008, as she dedicates the fields.

Ms. Saez stated there are many annual events held at TI, including the triathlon in November and the Alzheimer's walk, which happened in October during Fleet Week. Ms. Saez stated that during fleet week TI had thousands of people for the view of the planes, 6,000 for the Alzheimer's walk, and three weddings, so it was very busy at that time. Ms. Saez stated the TI Music Festival is in its second year and they hope to continue it. In addition, Oracle held their annual employee event on the island, which was a spectacular event with over 30,000 people present in one night. The Girl Scouts also hold their "Camporee" on TI.

Ms. Saez added that Mayor Gavin Newsom holds many press conferences and other media events on TI. California Governor Arnold Schwarzenegger has also been on TI, along with former British Prime Minister Tony Blair via video. There have also been sports figures practicing and doing promotions on the islands.

Ms. Saez added there are several special events venues. TIDA now has a joint venture managing the venues for weddings and events. The joint venture includes the Treasure Island Homeless Development Initiative, Toolworks, and Wine Valley Catering. They manage venues such as the church, the Building 1 lobby, the Casa de la Vista, the Great Lawn and the Nimitz Mansion. In addition, TIDA has just added the library as a useable venue, which can seat up to 200 guests.

Ms. Saez stated TIDA demolished the Fog Watch Building, and noted it was bittersweet because the building had been present for so long. However, it cleared the area for TIDA to install a tent pavilion. The tent pavilion will allow for events with up to 1,000 people while taking advantage of the wonderful view of the San Francisco skyline.

Ms. Saez emphasized that the operations of TI are a complete enterprise, entirely self-funded, without a penny coming from the City of San Francisco. That means all of the special events and leases on TI pay for electricity, road repairs, and essential services such as fire and police. Ms. Saez stated that makes it even more crucial for TIDA to host more events and seek more commercial opportunities.

Ms. Saez stated the residential population on TI is 3,000, and TIDA is trying to provide for those tenants. They are trying to make TI like a neighborhood within the city, rather than something completely separate. Other services on TI include the Job Corps and the Life Learning Academy. In addition, Glide is now utilizing the school at the back of TI, near the Boys and Girls Club. The Sheriff's Department is also starting the Five Keys Charter School in that location.

Ms. Saez then moved into a discussion of the future of TI. She explained the negotiation between the Navy and the City for the price the City will pay for TI has not been completed, but may be completed in six to eighteen months. Originally, TIDA was hoping to already have that negotiated. However, because the housing market and economic situation overall in the U.S. has dramatically changed recently, TIDA does not know how that will impact the project.

Ms. Saez explained the cornerstones of the development plan for TI are sustainability, parks and recreation, housing, and community benefits. The development plan calls for

- 6,000 homes,
- Up to 500 hotel rooms,
- Up to 270,000 square feet of retail space,
- 300 acres of open space,
- Up to 325,000 square feet of commercial space through historic adaptive re-use
- Job and community benefits.

Ms. Saez added that job creation is one of the obligations TIDA has in order to take possession of TI. Ms. Saez stated that the master plan will be LEED Gold certified, and the developer will make efforts to achieve platinum certification. [LEED is Leadership in Energy and Environmental Design]. TIDA's goal is to make TI the greenest community in SF when redevelopment is complete, which includes maximizing on-site renewable energy production. Ms. Saez added that the redevelopment goal is to make TI compact and walkable. She showed a figure indicating the time it will take to walk from the new ferry terminal to any of the areas of TI, and the connection from the TI ferry to the SF ferry terminal. Ms. Saez indicated that the plan for the ferry terminal location is to be right in

front of the administration building on TI. In addition, there will be buses and shuttles on and off of TI. Ms. Saez added that some people have suggested there be no cars on TI at all. She stated she is not sure about such an idea, but that it would be discussed in the years to come.

Ms. Saez stated that the redevelopment plan calls for the southern and western portions of TI to be developed, 65 acres in total, with the remaining 365 acres to be open space. That open space will include wetlands and recreational areas. Ms. Saez added that some semblance of the current Great Lawn will remain. Behind the "Gateway District", where the ferry will be located, there will be a "Town Center District" which will be the core of the island, with low rise buildings.

Ms. Saez stated the redevelopment plans call for housing on the western and southeastern portions of TI. She added that Yerba Buena Island (YBI) would also have housing opportunities. The housing on TI will largely be apartments and condominiums. Ms. Saez added that TI will have the types of facilities that are common within SF, such as museums and an art park.

Ms. Saez explained the islands will be redeveloped in phases, with the first phase being seismic upgrades and shoring up of TI. The first phase is currently estimated to be 2010 through 2013.

The building of infrastructure will begin on the south side of the island. The second phase will be the Cityside and Clipper Cove neighborhoods, historic adaptive re-use, a school, YBI West, wetlands, open space, the urban core, and the Waste Water Treatment Plant. Ms. Saez explained the first phase of homes for purchase will be on YBI. The sale of those homes will help fund future phases of development. This second phase is currently estimated to run from 2012 through 2014.

The third phase of development includes the Eastside Neighborhood, ball fields, YBI East, and the YBI historical sections. That phase should run from 2014 through 2016. The final phase, phase 4, will include the rest of the urban core, the northern farming area, and the remainder of the Great Park. The final phase is currently estimated to run from 2016 through 2018. Ms. Saez then showed an artist's rendition of what TI will look like from SF, with some hotels on the south side and high rises on the west side, and the new Tower of the Sun seen from a distance.

Ms. Saez closed by saying that in the interim, TIDA is devoted to the residents, which means bringing in revenue through commercial leases and special events to provide services.

Chris Grasteit (RAB member) asked if the presentation was available for RAB members and the public to view. Ms. Saez stated that most of the information in the presentation, including development plans, is on the TIDA website, though perhaps not in this format. Ms. Saez stated she would make the presentation available. Ms. Saez stated she would also make herself available to the RAB to answer any questions they may have.

Ms. Saez stated her take-home message is that the development project is not delayed. She wants people to know TIDA is moving forward with plans, they are just unsure of the exact schedule and they will continue to provide services to the current residents.

Site 12 (TI Housing Area) Removal Action Update
Mr. Sullivan introduced Pete Bourgeois (Shaw) to provide an update on the removal action and current site access at Site 12, the TI Housing Area (Attachment C). Mr. Bourgeois stated the Navy has put a temporary hold on their work at Solid Waste Disposal Area (SWDA) A&B. The purpose of the hold is to complete a field work variance document to allow Shaw to slightly change their work plan to update health and safety measures. Mr. Bourgeois explained there have been some elevated measurements of alpha particles, a product of the decay of radium-226 that is being addressed. Mr. Bourgeois stated the updated health and safety measures are for the crew members who are doing the actual excavation. The safety measures in place for residents continue to be protective.

Mr. Bourgeois stated that work continues at Site 6, which is the staging area for the excavated soil. Workers are loading bins with stockpiled soil that has low-level radiological contamination. Mr. Bourgeois stated they hope to have all of that soil loaded off of the island soon.

Mr. Bourgeois stated that the Navy, at the request of TIDA, had stopped the watering and maintenance of the sod and hydroseed that was placed in backfilled areas. Dale Smith (RAB member) asked if the reason watering was stopped was due to the cost of water, and Mr. Bourgeois confirmed that is the case. Ms. Smith asked what would happen to the groundcover, and whether all the previous effort to maintain it would be wasted. Mr. Bourgeois explained the hydroseed will lie dormant until it is watered again. He stated some of the sod is getting brown in some areas, but that TIDA has begun watering in those few sections. Mr. Sullivan added that the sod that was put down is a hearty grass that tolerates excesses and shortages of water.

Mr. Grasteit asked Mr. Bourgeois to explain a bit more about the alpha measurements that were causing the work delay. He asked specifically if the alpha particles were more dangerous than the radium-226.

Mr. Bourgeois explained the alpha particle issue is generated from the radium 226 decay, remains localized, and the particles only travel an inch or so from the radium source. He noted the alpha particle generated from radium 226 can be harmful if the radium source is swallowed or inhaled, but because alpha particles do not travel very far, the concern is the protection of workers. To protect workers, Shaw has put a breathing zone monitor on their shoulder. So when they get near the soil the monitor will verify they are not breathing in anything dangerous.

Mr. Grasteit asked if the radium 226 is something that could get on the fur and paws of animals and be spread around. He noted there has been an explosion in the raccoon population on NAVSTA TI. Mr. Bourgeois noted that something as thin as a piece of paper is enough to provide a barrier to alpha, so regular clothes are protective. Mr. Bourgeois stated the field workers immediately cover any spots of alpha with a plastic barrier as soon as they are discovered. The plastic is durable and cannot be torn by a small animal.

Ms. Smith asked if the Navy is going back to other areas to look for elevated alpha measurements again, since they were not originally screening for that. Mr. Bourgeois answered that there was not an alpha issue in the other two areas (Bayside Drive and Northpoint Drive). [Note: alpha emissions occur through the decay of radium 226, and would have been detected with the instrumentation that had already been used at the Bayside Drive and Northpoint Drive excavations.]

Mr. Bourgeois showed a status figure, color-coded to indicate the depth of excavation completed to date. He noted the Navy has not begun excavating in the area behind Building 1321. Mr. Bourgeois stated they are seventy percent done with the entire project. He reiterated that there were some issues in SWDA A&B with elevated alpha measurements, and the need for field work variances is slowing the process.

Mr. Bourgeois stated Shaw is also still excavating Class I and Class II material. To date, roughly 10,138 tons of Class I material and 11,000 tons of Class II material have been disposed of. Mr. Bourgeois stated there are still some soil stockpiles in the parking lot at Building 461 that the Navy hopes to have removed during the next soil load out. Mr. Bourgeois stated that the disposal broker had removed a total of 400 bins of low-level radiologically impacted soil from Site 6. Currently there are more than 23 bins filled, the equivalent of 600 tons of soil, that are ready to transport. There are 1,200 tons of low-level radiologically impacted soil in stockpiles at Site 6 that need to be put in bins and transported off site.

Mr. Bourgeois reviewed the schedule for the project, noting the due dates had extended because of the slow-down to accommodate the alpha contamination. He noted the estimated time for completed of excavation is February 2009, and the soil disposal and demobilization is April 2009.

Ryan Miya (DTSC) asked how it was initially identified that there is alpha emitting radium 226 contamination. Mr. Bourgeois stated the field workers use professional detectors that test specifically for alpha emissions. Those detectors are used to scan workers, equipment, and the soil. Detections of alpha began showing up in some of the excavations. Mr. Miya asked if the alpha contamination was detected in the bins that the soil broker, EMS, scanned and whether they had it speciated to determine the actual nuclide. Mr. Bourgeois said the alpha is from the radium-226 nuclide. He explained that alpha contamination is a health concern, but not a disposal concern. It falls below the millirem level for the disposal site, which is in Idaho.

Site 30 (Daycare Center) and 31 (Former South Storage Yard, [playground for the elementary school]) Proposed Plans/Draft Remedial Action Plans
Mr. Sullivan stated the Navy held a meeting about the Proposed Plans (PP) for Sites 30 and 31 on 7 October 2008 here at the same location as the RAB meetings. He explained the PP is a key point in the CERCLA process for public involvement. (CERCLA stands for the Comprehensive Environmental Response, Compensation, and Liability Act, and is often referred to as Superfund.) He then introduced Charles Perry (Navy), the Lead Remedial Project Manager for NAVSTA TI, and the project manager specifically for Sites 30 and 31, to give an overview of the PPs. (Attachment D)

Mr. Perry noted to the attendees that he had seen many of them at the public meeting on 7 October, and stated he would be giving the same presentation, just abbreviated to allow for the shorter amount of time on the schedule for the RAB meeting. He stated he would present a brief history of the sites, summarize the PPs that were mailed, and review the schedule. He noted that Mr. Miya would also discuss the Draft Remedial Action Plan (RAP) and the California Environmental Quality Act of 1970, known as CEQA, and give information on how to submit comments.

Mr. Perry reviewed the CERCLA process that Mr. Sullivan had mentioned. He explained the Navy has already completed the first three steps, the Preliminary Assessment/Site Inspection, the Remedial Investigation (RI), and the Feasibility Study (FS). Those documents were presented at previous RAB meetings. Mr. Perry noted that the RAB has had input at all of these stages, but the public in general is more involved at the PP stage, with the PP being mailed to the entire community mailing list and invited to a public meeting.

Mr. Perry stated the due date for public comments on the PPs is 23 October, 2008. He stated all comments are put into a Responsiveness Summary. The Responsiveness Summary is included with the following CERCLA phase, the Record of Decision (ROD). Mr. Perry stated the CERCLA phases after the ROD are the Remedial Design and the Remedial Action.

Mr. Perry indicated the locations of Sites 30 and 31 on a map, noting they are in the north central portion of TI. Site 31 is just north of Site 30. He noted there were posters on display around the room that attendees could look at to get a better idea of the site locations. Mr. Perry noted the portion of Site 30 that is being addressed is just a building foundation, which he pointed out on a map.

Mr. Perry explained Site 30 is also referred to as the Daycare Center because it does serve as a daycare location on NAVSTA TI. It was constructed by the Navy in 1985 and closed when NAVSTA TI closed in 1997. The center was leased to TIDA and reopened in 2003. In 2002, the Navy found a drawing that identified a utility line at the site, and the drawing had a note saying there was a trash dump. The Navy went out to investigate, which included some trenching, and then conducted a time-critical removal action on either side of 11th Street to remove some contaminated soil. They also conducted some groundwater sampling, and then moved into the RI and then the FS phases.

Mr. Perry stated that, based on the evaluations in the RI and FS, the Navy prepared remedial action objectives (RAO). The first RAO is to protect the current daycare receptors, and that can be achieved by preventing ingestion and contact with the soils beneath the Daycare Center Building. The other RAO is to protect future commercial/industrial or residential receptors, also by preventing contact with soils beneath the building, and beneath the concrete pad next to the building. In the FS document, the Navy developed three alternatives to meet the RAOs. The first alternative, as required, is no action. Mr. Perry explained no action is always an alternative so it can be compared to other alternatives.

The second alternative is engineering controls and institutional controls. The engineering control would be to maintain the concrete pad currently in place to ensure it continues to prevent exposure to soil beneath. The institutional controls would be restrictions on any covenants or deeds that state work would have to be done in order to remove the concrete pad and expose the soil beneath it. [Institutional Controls are designed to provide regulations to future property owners to ensure the concrete pad and soil beneath are protected and left undisturbed.] The third alternative is to demolish the building, excavate the soil, and dispose of it off-site at a licensed landfill.

Mr. Perry stated the alternatives are then reviewed against the nine National Contingency Plan evaluation criteria developed by the Environmental Protection

Agency. The nine criteria are broken into three types: threshold, primary balancing, and modifying. Mr. Perry noted that community acceptance is a modifying criterion, and is what the Navy is seeking during the public comment period on these PPs.

Mr. Perry stated that, based on the criteria, the Navy prepared a PP for Site 30 that notes a preference for alternative 2, engineering controls and institutional controls. This alternative meets the Navy's RAOs by protecting daycare center users (children and adults) and protects future residents and workers by preventing exposure to the soil.

Mr. Perry moved on to a description of Site 31. He noted Site 31 has five debris areas: A, B, C, D, and E. Mr. Perry noted that areas A, B, and E were likely originally one large area, but that some of the area was previously removed during the time-critical removal action mentioned earlier. Mr. Perry explained the site was used by the Navy as a storage yard during the 1970's, which is why it is called the South Storage Yard. In the late 1970's it was paved over and used as a school yard for the elementary school. The same drawing identifying a trash dump at Site 30 also identified a trash dump at Site 31. It became a site officially in September 2003.

Mr. Perry stated Site 31 has been through similar CERCLA phases as Site 30, including the time-critical removal action, groundwater investigation, and the RI and FS phases. Mr. Perry explained the RAO is to prevent ingestion or contact with soil by current users and potential future users including construction workers or recreational users. Mr. Perry explained the site is not an active elementary school, but does have an active Boys and Girls Club and some other tenants on the site.

Mr. Perry reviewed the alternatives for Site 31, noting they include no action, as required. Alternative 2 is engineering controls combined with institutional controls. Alternative 3 is engineering controls, institutional controls, and some excavation of Debris Area E. Alternative 4 is engineering controls, institutional controls, and some excavation of Debris Areas C and D, excluding the street. Alternative 5 is complete removal of all five debris areas. Mr. Perry explained the Navy reviewed all of these alternatives against the nine EPA criteria, and is presenting alternative 5 as the preferred alternative in the Site 31 PP.

Mr. Perry reviewed the schedule for the Sites 30 and 31 PPs. He noted a public notice about the availability and to announce the public meeting ran in the San Francisco Chronicle newspaper on 23 September 2008, and the 30-day public comment period on both documents runs through 23 October 2008. The public meeting was held on 7 October 2008. Mr. Perry stated the Navy would prepare a Responsiveness Summary to all comments received on the PPs and include that

in the ROD. Following the ROD, the Navy will prepare the Remedial Design in the form of the Remedial Action Work Plan, and then conduct the Remedial Action sometime in 2009. Mr. Perry then introduced Mr. Miya to present a brief update on the CEQA portion of the project.

Mr. Miya stated CEQA is a law that was passed in 1970. It requires that the impacts to the environment from proposed activities be considered, and that means to avoid or reduce environmental impacts be considered. Mr. Miya stated that DTSC prepared an Initial Study and a Draft Negative Declaration CEQA document that describes the activities being proposed in the PPs and their potential impacts to the environment. Mr. Miya explained the public and other California agencies are invited to comment on both CEQA documents. He added that the documents help verify related environmental regulations of other state agencies are also being followed. Those regulations include the Endangered Species Act and the Clean Water Act.

Mr. Miya listed a few of the things that are considered in CEQA, including: air quality; biological resources; cultural resources; geology and soils; hazards and hazardous materials; and hydrology and water quality. Mr. Miya noted this is a sampling of the items that are considered, not a full list. Mr. Miya stated many of these considerations were already reviewed in some of the CERCLA documents that Mr. Perry mentioned. He added that, although CEQA is a separate process, they can use the information gathered in the CERCLA documents.

Bart Rugo (resident) asked for more information about the Negative Declaration. Mr. Miya explained the environmental considerations he listed were evaluated. Based on that evaluation, DTSC concluded there would be no significant impact to the environment. So the Initial Study states that, and is out for public review and comment. After it is reviewed and there is concurrence, it becomes a Negative Declaration.

Ms. Smith asked why the Navy did an FS, an RI, and a PP if DTSC will issue a Negative Declaration, stating there is no environmental impact. Mr. Miya explained the RI and FS documents were used to develop the evaluation that will lead to the Negative Declaration. Mr. Perry added that the Negative Declaration does not state that the sites have no impact on the environment; it states the proposed remedial actions have no negative impact.

Ms. Smith asked about the concrete pad at Site 30. She asked why the Draft ROD states the concrete pad posed neither positive nor negative impacts to exposure. Mr. Perry stated that, when the daycare center reopened in 2002, the Navy had not yet completed their full risk assessment, but they knew there was some contamination at depth. To be cautious, the Navy poured a concrete pad at the

site to prevent exposure to soil. However, since then, the risk assessment has been completed. The risk assessment concludes there is no risk to current daycare receptors. So if the concrete pad were removed, there still would be no risk at the site to current daycare receptors. He noted that language is in there so the concrete pad can be removed if desired. However, Mr. Perry noted that there would be a risk to future residential or commercial users of the site if the concrete pad were removed.

Mr. Perry proceeded to the final slide, providing information on where to submit comments on the PP/Draft RAP and on the Proposed Negative Declaration. Mr. Perry reminded everyone that the public comment period runs through 23 October 2008. He noted that, to have comments included in the Responsiveness Summary, they must be received by that date. However, Mr. Perry explained the Navy and DTSC would take all comments into consideration.

Mr. Perry presented the points of contact for the project, noting James B. Sullivan, the Navy Co-chair to the RAB, is always a good point of contact since everyone is familiar with him and can contact him about any project. He then stated he and Mr. Miya were both available. Mr. Perry noted that comments can be submitted to any of the three of them (Mr. Perry, Mr. Miya, or Mr. Sullivan) and they would make sure that the comments get to the right place.

Ms. Smith asked if the Navy and DTSC were taking RAB comments right now about the project. Mr. Perry stated yes, this comment period and presently at this meeting are the time to provide comments. Mr. Miya added that, in addition to comments, if anyone familiar with the sites has information to share, both agencies would welcome that information as well. Ms. Smith stated that, based on the proposed future use, she approves of the Navy's approach for both sites.

Mr. Miya asked for clarification on whether the Navy's plan is to remove and replace the road. Mr. Perry stated the plan is to remove the road, but whether or not to replace it will be determined in the Remedial Design phase. Ms. Smith noted the Draft ROD includes costs for replacing the road. Mr. Perry explained the FS document includes text about replacing the road, and the costs in the ROD are based on the FS. However, Mr. Perry noted that the work plan for the actual Remedial Action is where such determinations and corresponding costs would be decided upon. Mr. Perry noted the work plan would be made available for RAB review when it is ready.

Mr. Perry indicated on a map the location of the road that will be blocked off during remedial activities, as well as the portion of road that is scheduled to be excavated. Ms. Smith asked if the Navy would collect side-wall samples and step-out samples as appropriate. Mr. Perry stated the Navy would collect such samples. He noted that the remedial action work plan, which is a future phase, is

where the Navy will detail how many samples they will take and where they will take them.

Mr. Sullivan noted copies of the documents, as well as previous documents such as the FS, are available on the Navy's website. He added that the current CERCLA documents, as well as the CEQA documents that are out for review are available at the Navy's Information Repositories, located at the San Francisco Main Library and in the Navy's office in Building 1 on TI.

Update on Site 24 Treatability Study, and Sites 21 and 25
Mr. Sullivan introduced Scott Anderson (Navy) to give an update on Sites 21, 24, and 25. (Attachment E)

Mr. Anderson indicated the location of Site 24 on a map, and stated it is a former dry cleaning facility. Because of this past use, there is chlorinated solvent contamination in the groundwater. Mr. Anderson reminded the RAB that the Navy has done a pilot study in the contamination source area and completed one phase of a treatability study. Mr. Anderson stated the Navy is in the second phase of that treatability study.

Mr. Anderson stated that, during the first phase of the study, a portion of the plume near Building 99, which is the source area, had rebounded. Initially, the treatability study had reduced the volatile organic compounds (VOC) down to action goals. However, about a year later, the Navy sampled and found the levels had risen again, or rebounded. The Navy then questioned whether there may be another source area at Building 99, and whether there was potential DNAPL contamination (acronym for dense, non-aqueous phase liquid). So for the next phase of study, the Navy investigated this new potential source area to determine whether there was DNAPL. That information would determine what kind of treatment to use, including whether to use bioaugmentation and how much recirculation may be needed.

Mr. Anderson stated he would give a brief overview of what the Navy was doing in the field for the past several months during the treatability study. Mr. Anderson stated the Navy used different technologies, including a membrane interface probe, or MIP. A MIP is a piece of equipment that is pushed into a sampling location, and the various membranes on the MIP heat the soil and groundwater while taking readings to indicate the contamination levels in the soil and groundwater. The MIPs give real-time readings which are received on-site at a mobile laboratory. Based on those readings, the Navy collected soil samples at depths in adjacent borings that correlated with the highest readings in the MIPs borings.

Mr. Anderson stated another technology used to investigate the presence of DNAPL is a Flexible Liner Underground Technology, or FLUTe™ liner. Mr. Anderson explained the FLUTe™ is a flexible liner, almost like a sock, made out of Tyvek®-like material that has different colored lines on it. The FLUTe™ is inserted into the sampling well and expanded with water so it will touch the soil on the inside of the boring. If DNAPL is present, the color of the FLUTe™ liner will change.

Mr. Anderson stated the MIPs did present some elevated levels of chlorinated ethenes (CE) in soil. However, none of the FLUTe™ liners indicated the presence of DNAPL. Mr. Anderson stated the data shows some high-level chlorinated solvents in soil and groundwater near Building 99. It is possible there are some smaller, finger-like areas of DNAPL, but not a large amount, or enough to affect how the Navy plans to treat the chlorinated solvents. Mr. Anderson showed the locations of the contaminant detections. Ms. Smith asked if the plume is large. Mr. Anderson stated the new source area is actually small. He indicated on a figure the size and location relative to the nearby buildings.

Mr. Anderson showed photographs of the fieldwork, including a picture of the direct-push rig that made the borings, the MIP unit, and the MIP truck with all of the electrical equipment taking the readings from the MIP. Mr. Anderson then showed a photograph of a reading from the MIP unit, noting where a blip comes up that means elevated CE was detected, and stated that is how the Navy directed where to collect soil samples. Mr. Anderson showed another photograph of a MIP, indicating the various elements of the equipment. He also showed a photograph of a new FLUTE™ liner, then a photograph of several used FLUTe™ liners, noting where the colors would have changed if DNAPL was detected.

Mr. Anderson explained that soil sampling was conducted to verify what was detected by the MIPs. Mr. Anderson stated that around 30 to 35-foot depths the conductivity was changing. This indicates that the MIPs are encountering salt water. Mr. Anderson then showed a figure indicating the outline of the original plume, then the current plume, which is significantly smaller. Mr. Anderson noted that during the first treatability study much of the contamination was reduced to ethene, and there has not been rebound in that area.

Mr. Anderson said that, in addition to testing for DNAPL, the purpose of this field investigation is to determine how to reconfigure the existing injection-extraction wells and see if any new wells need to be installed. Mr. Anderson stated the Navy will install one new injection well in the center of the new source area, and will install two new extraction wells. In addition, in the southern portion of the plume, the Navy is proposing to put in several additional extraction wells. Mr. Anderson stated that the Navy noticed the plume was

moving slightly to the southeast during the time the system was shut down. So the Navy installed a series of test wells to determine how much the plume boundary had changed. All the wells came back as non-detect or at very low levels of detected contamination. That information will help the Navy determine where to put the additional extraction wells. Mr. Anderson stated the Navy will also do a direct injection of substrate and microorganisms in the test wells.

Ms. Smith asked if the Navy would do the injection into the test wells even if the wells are downgradient of the plume. Mr. Anderson stated that, though the wells are downgradient, there will be an injection well in the plume that will pull the substrate towards it. Mr. Anderson explained the Navy does not want to put an injection well at the edge of a plume because it could expand the boundary of the plume.

Mr. Anderson stated that the BCT had a meeting about this specific project earlier that day and had agreed on the path forward. The Navy will take a closer look at the area of the plume that is close to the San Francisco Bay, to verify the contamination is not reaching the Bay.

Nathan Brennan (RAB member) stated he could see how the Navy is controlling the plume from north to south and east to west. Mr. Brennan asked if the Navy was also controlling the depth of the plume. Mr. Anderson stated the Navy has a good idea about the depth of the plume, which is generally in the 19 to 25-foot range. In the wells that are deeper or are more shallow than that, they are not getting detections of contaminants. Mr. Anderson stated there was evidence of some deeper contamination in the new source area, but it was not found at the same depth downgradient. Mr. Anderson added that the Navy would take a look at various depths in the source area to confirm the depth.

Mr. Anderson explained the next step is for the Navy to install the new extraction wells and injection wells. Ms. Smith asked how long the process would take. Mr. Anderson stated the Navy would do a recirculation for three months. It could be a longer or shorter duration, depending how well it appears to be working. However, the estimate is three months of recirculation, and six to nine months of letting the injections work, with periodic sampling during that time. Mr. Anderson stated the Navy would continue to update the RAB during the study.

Ms. Smith asked whether the rainy season might impact the recirculation or impact the effectiveness of the treatment. Mr. Anderson stated a rainy season should not affect the system. He noted that rain may change the water levels, but does not seem to change the gradient of the plume, and does not impact the effectiveness of the treatment. Mr. Bourgeois added that the nine-month time

period is similar to the time periods of previous studies, so they have data on how the rainy season affects the system.

Mr. Anderson stated there is also a plume of chlorinated solvents at Site 21, though the levels are lower than the contamination levels at Site 24. Mr. Anderson stated Site 21 is near the Sailing Center. Mr. Anderson stated that the Navy did not initially achieve a good distribution of the substrate at the location of the Sailing Center trailer, so they will do a second phase of treatment. Mr. Anderson stated the Navy is currently in the field laying the pipe for the wells and doing general mobilization. Mr. Anderson stated the Navy plans to begin the second phase at Site 21 within the next two weeks after this RAB meeting.

Mr. Anderson also provided a brief update about Site 25. He explained Site 25 is a former petroleum area. The Navy will collect confirmation soil samples to confirm the treatment system used there previously was successful, and that there is no rebound of contamination in the soil. Mr. Sullivan added that the goal of this information gathering is to present data that Site 25 should be officially closed.

Site 21 Focused Feasibility Study
Mr. Sullivan introduced Scott Anderson (Navy) to give an update on the Site 21 Focused Feasibility Study (FFS). (Attachment F) Mr. Anderson stated the Draft FFS would be issued in the first or second week of November 2008, so the Navy is giving a presentation to aid the RAB in their review of the document.

Mr. Anderson reviewed the CERCLA process briefly, noting the FS is the stage where all of the information gathered in the previous phases is reviewed and various cleanup alternatives are evaluated. Mr. Anderson showed a map of Site 21, noting it is 2 acres, primarily asphalt and concrete. The site includes the Sailing Center and Building 3, and in the 1996 reuse plan was designated as a film production/conference center. Mr. Anderson stated TIDA has been using Building 3 and adjacent lots for public events, and the site will likely continue to be used for public events.

Mr. Anderson stated the Navy did not find any chemicals of concern in the soils at Site 21. However, they did find chlorinated solvents in the groundwater, including tetrachloroethene (PCE), trichloroethene (TCE), dichloroethene (DCE), and vinyl chloride. Mr. Anderson explained the source of the contaminants is a former parts-washing sink where they used solvents in the corner of Building 3.

Mr. Anderson stated that, in conjunction with the RI, the Navy instituted a treatability study to determine the effectiveness of in situ bioremediation and to evaluate the direct-injection technology, as reviewed in his previous presentation. That treatability study ran from August 2005 through February

2006. During the study, the Navy had approximately 45 injection points for the direct injection, and six permeable reactive barriers. The purpose of the barriers was to prevent migration into the bay. The results from the study indicate that the contamination was reduced to ethene, and the bioremediation works very well in that area. However, Mr. Anderson noted there are some areas that did not get sufficient substrate injection during the first phase, so the Navy is going to do a second phase.

Mr. Anderson moved on to the RAOs from the FS. He noted the RAOs are based on the anticipated reuse, which is commercial/industrial. Mr. Anderson also noted the site is close to the bay, and Building 3 is an historical building. The RAO is to prevent an inhalation exposure pathway for future commercial/industrial workers by preventing vapor intrusion of VOCs from groundwater at concentrations above remedial goals.

Mr. Anderson stated that all of the cleanup alternatives are evaluated against seven of the nine National Contingency Plan (NCP) criteria, as reviewed by Mr. Perry in his PP presentation. The other two criteria, state and community acceptance, are evaluated after comments are received on the FFS and the PP documents.

Mr. Anderson stated the FFS evaluates three alternatives: 1) no action; 2) institutional controls, and 3) enhanced anaerobic in situ bioremediation of groundwater, along with groundwater monitoring. Mr. Anderson explained Alternative 2 scored the highest in the comparative analysis of alternatives. Mr. Anderson noted that the RI and FS were based on data collected prior to the treatability study. So under Alternative 3, the Navy needed to evaluate doing full-scale treatment.

Mr. Anderson explained the closure strategy for Site 21 is to complete the next phase of the treatability study. That includes injecting SDC-9 (the microorganisms) to help degrade the VOCs to ethene. The Navy expects to complete that by the end of 2009. Then the Navy will prepare a PP, a ROD, and ultimately implement the selected alternative. Mr. Anderson stated the Draft FFS will be issued in November 2008, and comments will be due in December 2008. The Navy plans to issue the final FFS report at the end of January 2009.

Mr. Brennan asked whether the FFS would include the treatability study. Mr. Anderson replied it will not. Because the CERCLA phases and the treatability study were running parallel, the Navy had to decide at some point what data to use for the CERCLA steps. The Navy worked with the BCT to determine that the pre-treatability study data would be used to prepare the risk assessment. However, the treatment being assessed in the study was evaluated as one of the cleanup alternatives.

Ms. Smith stated that NAVSTA TI is not the only installation that investigates in this manner. She added that proposing a plan when the Navy does not have all of the data runs rough shod over scientific investigations, and she does not support this methodology. Ms. Smith stated she would prefer the Navy follow through with the treatability study and review the results before preparing reports. Ms. Smith noted that it makes the best choice when reviewing alternatives, as a reviewer, to select the option to fully clean everything, since there is not full data to review to lead to another conclusion.

Mr. Anderson stated the Navy could have completed the CERCLA steps through the FS and implemented the treatability study later, after the remedial design. However, because this is a new technology, the Navy decided to try it while still preparing the CERCLA documents to determine whether it would work. Mr. Anderson added that the results from the study are good, and there is a chance that further work will not have to be done at the site.

Ms. Smith stated that it appears the treatability study will be done before the final CERCLA documents are done. Ms. Smith stated that, at other sites, the responsible party claims they did what they said they would do, and although it did not work, they consider the project done, and walk away from it.

Mr. Anderson explained that, in the FFS that will soon be issued, Ms. Smith will see that the Navy currently meets the remedial goals for commercial and industrial reuse. However, although the goals are met, the Navy would like to continue the treatability study to reach the areas that did not get sufficient substrate during the first phase. Mr. Anderson reiterated that, based on the risk assessment and the FFS, the levels are currently meeting goals.

Ms. Smith noted that the site is right by the bay. She stated the importance of preventing contamination from reaching the bay, and stated that if the Navy does not completely remediate the site, then they will have to monitor it. Mr. Anderson stated the Navy would allow for monitoring through ICs, a monitoring program, mandatory five-years reviews, or other such means. Mr. Perry added that the RI and FS phases were already underway when the Navy decided to try the current technology. Rather than let the chlorinated solvents remain at the site without treatment while the reports were being prepared, the Navy decided to try the treatability study to see if it could work.

Ms. Smith stated the treatability study will be done in January 2009; it is not dragging out for years and perhaps the Navy could have waited for final results in order to prepare the RI and FFS. Mr. Perry stated the Navy has been working on the RI and FFS documents for several years now, and felt they made the right judgment when they decided to move forward with the documents and the treatability study at the same time.

Site 33 RI Report
Mr. Sullivan introduced Kevin Hoch (Tetra Tech) to give an update on the Site 33 RI Report. (Attachment G) Mr. Hoch stated he would be brief since the meeting was running late. He indicated the location of Site 33 on the map, on the south side of TI, near Site 24. Mr. Hoch explained Site 33 was identified in the same way Sites 30 and 31 were identified: through a note about a trash dump on a drawing.

Mr. Hoch described the site, noting there are three buildings on the site, all of which are currently unoccupied. The buildings were previously used as barracks, classrooms, and office space. Based on the information in the drawings, the Navy excavated several trenches where trash or debris may have been buried. When screening the soil for contaminants, levels exceeding screening criteria included semi-volatile organic compounds (SVOC), dioxins, lead, and arsenic. There were a number of phases of step-out sampling to determine the extent of the contamination.

Mr. Hoch explained that there were not many detections above the screening criteria. However, the areas where there were exceedences are in four discreet areas that were former trenches. Mr. Hoch pointed out the areas on a map. The Navy installed four monitoring wells, and sampled those as well as two existing wells from adjacent sites. That sampling provided full coverage of the source area, as well as areas upgradient and downgradient from the source area. The groundwater samples were tested for the chemicals found in the soil, and nothing exceeded the NAVSTA TI screening criteria.

Mr. Hoch explained that much of TI was investigated for ecological risk in a Phase I Screening Level Ecological Risk Assessment (SLERA) in 1997. Mr. Hoch stated Site 33 did not exist at the time and was not part of the assessment. In 2007 the Navy conducted a Tier I SLERA which included several sites, including Site 33. Mr. Hoch noted that Site 33 is primarily buildings, asphalt, and one open, grassy field. It was determined a poor habitat for terrestrial ecological receptors and no further action was warranted for such receptors. The data from the monitoring wells was then used to determine risk to aquatic receptors in the bay. There were no detections of contaminants exceeding the criteria for those receptors.

Mr. Hoch stated a Human Health Risk Assessment (HHRA) was also conducted. Mr. Hoch noted there are two ways to conduct an HHRA, using U.S. EPA and DTSC criteria. The Navy uses both methods, which gives them two sets of numbers. They can look at the numbers for both HHRAs and evaluate differences between the two to help determine what should ultimately be done at the site. Mr. Hoch explained the cancer risk and total hazard index numbers that resulted from each of the methods. As an example, a risk of 10^{-6} means one

additional cancer risk out of one million exposed receptors. The Navy is looking to see whether there is any risk greater than the risk management range, which is $1x10^{-6}$ to $1x10^{-4}$. Mr. Hoch stated there was only one instance where the cancer risk exceeded the risk management range. He noted that exceedence was only with method two of HHRA calculations.

For hazards that are non-cancer related, a hazard index is used. Anything with a hazard index greater than one needs to be reviewed. Mr. Hoch noted that, using the method two HHRA calculations, there was a hazard index above 1 for a construction worker and for two residential categories. Mr. Hoch noted arsenic is the risk driver.

Mr. Hoch explained that, for lead, there is a different means of determining risk. Blood-lead modeling must be done. The model indicates what a hypothetical child and then a hypothetical adult might get into their bloodstream over time, based on lead concentrations in soil. Anything above 10 micrograms per deciliter (µg/dL) is in the risk range. For a child, the concentrations were above the 10 µg/dL level.

Mr. Hoch reviewed the conclusions of the RI report. Conclusions: Site 33 has been fully characterized; no further action is needed for ecological receptors according to the SLERA; cancer risks are within the management range for all receptors except a resident exposed to combined surface and subsurface soil under method 2; and non-cancer risks exceeded a hazard index of 1 for construction workers and residents under method 2. In addition, it was concluded that arsenic is the primary cancer risk driver.

The recommendation from the RI is that an FS be performed to mitigate risk from arsenic and lead in the northwestern portion of the site, which is within the debris area of the water line trench. Mr. Hoch reviewed the schedule, noting the draft RI was issued on 17 October 2008. Mr. Hoch stated comments on the RI are due by 17 November 2008. The Navy expects to issue the Final RI in December 2008.

Upcoming Documents and Field Schedule

Documents

Mr. Sullivan noted the meeting was running 30 minutes behind. The RAB agreed to review the handouts for the upcoming documents and field schedule on their own. (Attachments H and I)

August 2008 RAB Meeting Minutes

Ms. Smith proposed providing comments on the August 2008 RAB minutes at the December 2008 meeting, since this October meeting was running late. The

RAB members and Mr. Sullivan agreed. The RAB will provide comments on the August 2008 meeting minutes at the December 2008 RAB meeting.

Co-Chair Announcements
Mr. Sullivan stated the Navy would host a booth at the TI Community Picnic on Saturday, 25 October 2008 from 11:00 a.m. to 3:00 p.m.. Ms. Pilram stated she brought a poster for the picnic event for anyone who was interested. Mr. Sullivan noted the event would be on the Great Lawn on TI, and the Navy would have RAB applications and would hope to sign up some additional RAB members.

Other Public Comments and Announcement
Mr. Brennan provided a brief update on the Citizen's Advisory Board (CAB). He stated the CAB met on 7 October 2008. He noted that two pieces of legislation regarding NAVSTA TI had passed. One is the Transportation Management Act, which will allow congestion pricing as part of the transportation management plan for future development. The second is a redevelopment law that requires residents be represented during development. In order to do so, TIDA will hold elections on NAVSTA TI to elect four new members, NAVSTA TI residents, to the CAB. Mr. Brennan noted the next CAB meeting will be moved because it is on election night. He invited attendees to review the TIDA website to get an updated schedule for CAB meetings.

Future Meeting Agenda Items
Mr. Sullivan stated that the next meeting is scheduled for Tuesday, 16 December at the Casa de la Vista. Ms. Pilram noted that the annual holiday potluck was scheduled once again for the hour prior to the RAB meeting, at 6:00 p.m. Mr. Sullivan said the next RAB conference call is scheduled for the first Wednesday in December.

October 2008 RAB Meeting Handouts
- Attachment A: TI RAB Meeting No. 138 Agenda, 21 October 2008
- Attachment B: Treasure Island Update presented by Mirian Saez
- Attachment C: Field Efforts, Site 12 (TI Housing) SWDA Update
- Attachment D: Sites 30 and 31 PPs/Draft RAPs
- Attachment E: Site 24 In-Situ Anaerobic Bioremediation Study, Phase 2
- Attachment F: Sites 21 Focused Feasibility Study
- Attachment G: Site 33 Remedial Investigation Report
- Attachment H: Document Tracking Sheet, 21 October 2008
- Attachment I: Field Schedule, 21 October 2008

NAVAL STATION TREASURE ISLAND
ENVIRONMENTAL RESTORATION ADVISORY BOARD MEETING
Tuesday, 21 October 2008
7:00 PM.
Casa de la Vista (Building 271)
Treasure Island

MEETING NO. 138

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 **Update on Treasure Island Priorities**
Lead: Mirian Saez, Director of Island Operations, Treasure Island Development Authority (TIDA)

7:25 - 7:40 **Site 12 (TI Housing) Removal Action and Access Update**
Lead: Pete Bourgeois, Shaw Environmental & Infrastructure

7:40 – 7:55 **Site 30 (Daycare Center) and 31 (Former South Storage Yard) Proposed Plans/Draft Remedial Action Plans**
(Issued 23 September 2008, Comments due 23 October 2008)
(Documents are on the Navy BRAC website www.bracpmo.navy.mil)
Lead: Charles Perry, Navy Lead Remedial Project Manager

7:55 – 8:00 **Field Update: Site 21 and Site 24 Treatability Studies, and Site 25**
Lead: Scott Anderson, Navy Remedial Project Manager

8:00 - 8:05 **Site 21 Draft Feasibility Study Preview**
Lead: Scott Anderson, Navy Remedial Project Manager
(Planned Issue November 2008, Comments due December 2008)

8:05 - 8:10 **Site 33 Draft Remedial Investigation Report Preview**
Lead: Kevin Hoch, Tetra Tech EMI
(Planned Issue October 2008, Comments due November 2008)

8:10 – 8:15 **Upcoming Documents and Field Schedule**
Lead: Kevin Hoch, Tetra Tech EMI

8:15 – 8:20 **August 2008 RAB Meeting Minutes**
Lead: James Sullivan, Navy Co-Chair

8:20 – 8:25 **Co-Chair Announcements**
Lead: Alice Pilram, Community Co-Chair
- Information Booth at the Oct. 25th Community Picnic

8:25 – 8:30 **BRAC Cleanup Team Update**
Lead: James Sullivan, Navy Co-Chair

8:30 – 8:35 **Other Public Comment and Announcements**
Lead: James Sullivan, Navy Co-Chair

8:35– 8:40 **Future Meeting Agenda Items**
Lead: Navy and Community Co-Chairs

8:40 - 8:45 **Closing Remarks/End of Meeting**
Break/Informal Discussion for 30 minutes after the meeting
This is an opportunity to informally discuss issues

Next Regular Meetings: No November 2008 Meeting

7 :00 pm Tuesday, 16 December 2008
Casa de la Vista, Treasure Island

No January 2009 Meeting

7 :00 pm Tuesday, 17 February 2009
Casa de la Vista, Treasure Island

Next Treasure Island Citizen's Advisory Board (CAB): See the web site for latest dates and times for future meetings: http://www.sfgov.org/treasureisland

Next Interim RAB Community Member Conference Call: **(1st Weds of RAB month)**

Wednesday, 3 December 2008, 7:00 pm.

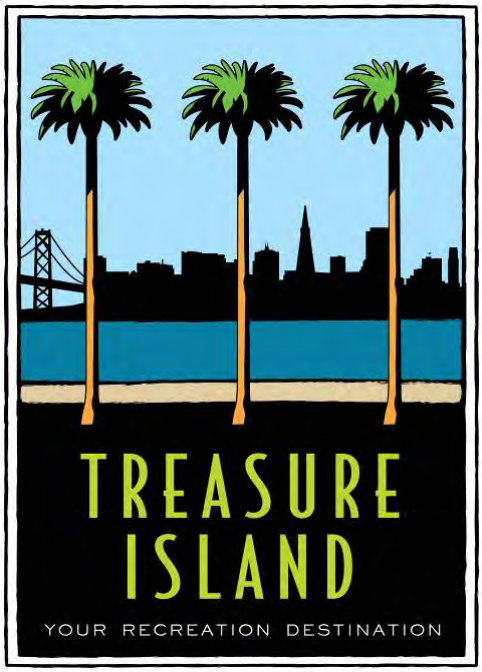
Call-In Number: 1- 800-779-6170

Participant Code: 63399

Next BCT/RPM/Project Team Meeting: 10:00 am. **Wednesday**, 4 November 2008, Tetra Tech EMI, San Francisco CA

Navy BRAC Web Site: http://www.bracpmo.navy.mil (click on map for Treasure Island)

Navy San Diego Office Address:
JAMES B. SULLIVAN
DEPARTMENT OF THE NAVY
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
1455 FRAZEE ROAD, SUITE 900
SAN DIEGO, CA 92108-4310



Our History

In 1936 the construction of Treasure Island began.

The soil to create the island came from the delta. Engineers thought that there could be gold in the soil, and thus it was named Treasure Island.

History

Originally built to be San Francisco International Airport. However, to celebrate the completion of two bridges it was chosen to be the site of the 1939Golden Gate International Exposition.

1939 Golden Gate International Exposition

The Arch

Pacifica

The Tower of the Sun

To Promote the Golden Gate International Exposition the organizers hired Zoe Dell Lantis, The Pirate Girl

While the 1939 Golden Gate International Exposition produced many fine works of art and was well attended, the most popular attraction was Sally Rand and her Nude Ranch.

Two of the more famous artists to participate in the Exposition were Miguel Covarrubias and Diego Rivera.

1939 Mystery Solved

Believed to have mysteriously disappeared, the Golden Key of the 1939 GGIE was in fact being held at the Fine Arts Museum of San Francisco. Valued at $1,200,000, the key is being stored at an undisclosed location.

The Navy

The Navy took over Treasure Island at the close of the Exposition in 1940, and gave the city additional space at Mills Field. From 1940 to 1997, Treasure Island was home to the U.S. Navy and played an integral role in World War II, Korea and Vietnam.

In 1997 the City of San Francisco became the Caretaker for Treasure Island.

Today, while the island awaits redevelopment, it has become a recreation destination.

Treasure Island Sailing Center

Rugby and Athletic Fields

Net Ball

More Recreation

San Francisco Little League

Treasure Isle Marina

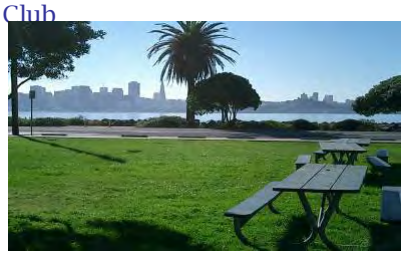
Clipper Cove

Treasure Island Yacht Club

More recreation

Treasure Island Boys and Girls Club

Athletic Fields



Fog Watch Picnic Area

Perimeter Path

Coming Soon
More Athletic Fields

Annual Special Events

The Dragon Boat Festival

The Treasure Island Triathlon

The Alzheimer's Memory Walk

Annual Special Events

The Treasure Island Music Festival

Recent Special Events

V M Ware

2Hip BMX

Oracle

Girls Scout Camporee

Past Media Events

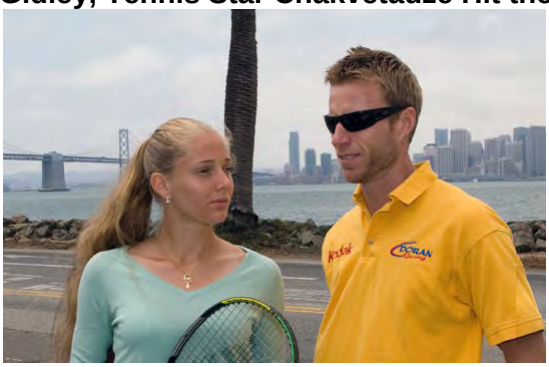
Operation Golden Guardian

Mayor Gavin Newsom, Celebrating Muni's Clean Air Diesel Program

Governor Schwarzenegger signing AB32: reduction in Green House gasses.

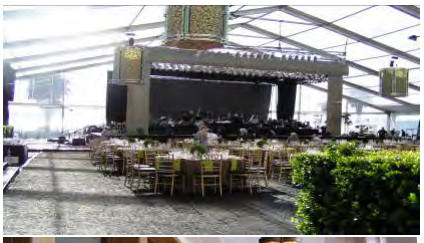
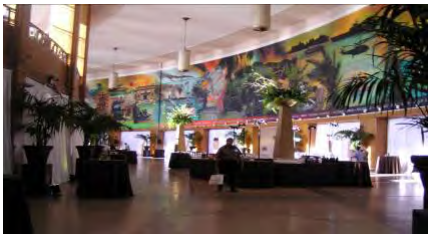
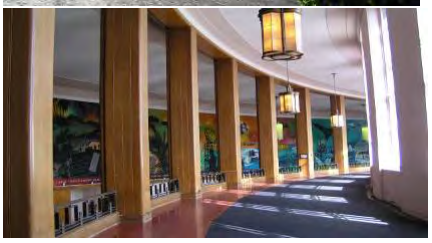
Media Promotion for Infineon Raceway and Bank of the West Classic Title

- **Gidley, Tennis Star Chakvetadze Hit the Court at Treasure Island**



Special Event Venues

Building One

Building One

- Originally built to be the terminal for San Francisco International Airport.
- Art Deco in style
- 10,000 square feet
- Ample parking, or arrive by coach or ferry service via Pier One
- 500 Seated and 900 Standing

Casa de la Vista




Casa de la Vista

- Originally built as the Officers' Club
- Breathtaking views of the city
- Parking
- Immediately adjacent to the chapel
- 7,000 square feet
- 180 Seated, 300 Standing
- Full kitchen

The Chapel

The Chapel

- Built in 1943, it is a non-denominational chapel
- High gabled ceilings and rich walnut walls
- Beautiful stained glass window
- 9,800 Square feet
- Seats 250
- Ample parking

The Great Lawn

The Great Lawn

- Breathtaking views of San Francisco
- Easily tented for large and small events
- 126,500 square feet of open space
- Ample Parking

Hanger Three




Hanger Three

- During the 1939 Exposition it was the Fine and Decorative Arts Building.
- Close to 100,000 square feet in total
- The Center Space is an open and clear span of 70,000 square feet.
- Located directly next to Pier One, which makes it desirable for large events with ferry service.

The Nimitz Mansion

The Nimitz Mansion

- Located on a Yerba Buena Island The Nimitz mansion is ideal to host a small intimate party.
- Built in the late 1890's it is a classic colonial mansion.
- Once the residents of Admiral Nimitz.
- Beautiful hardwood floors and details throughout.

Treasure Island Library

Treasure Island Library

- Beautiful lush open gardens
- 200 Guests seated
- Working fireplace
- Ample parking

Coming Soon
The Pavilion by the Bay

Pier One & Barges

- Pier One was built to house the Missouri.
- It is available for leasing as are our barges.

Commercial Leasing

Commercial Leasing

- From light industrial to office space, Treasure Island has a wide variety of commercial leasing opportunities.
- To Lease Commercial Space Contact Rich Rovetti (415) 274-3365

The Residents

Treasure Island is home to 2151 Residents.

750 Individuals live in the Treasure Island Homeless Development Initiative housing.

1401 Individuals live in market rate housing.

There are 512 Children living on the Island.

Renting Housing on T.I. and Yerba Buena

- To rent a home on Treasure Island, contact our management company, John Stewart at (415) 834-0211
- There are a variety of units from two to four bedrooms
- Ample parking
- City access with the 108 bus line

Housing Demographics

- The John Stewart Company
  - 80 Units on Yerba Buena Island
  - 498 Units On Treasure Island
  - 23 Units are offline for remediation
  - 1401 Total Residents
  - 161 On Yerba Buena Island
  - 1240 On treasure Island
  - Children
  - 7 On Yerba Buena Island
  - 162 On Treasure Island
- TIHDI
  - 250 Units in their portfolio
  - 750 Total Residents
  - 400 Adults
  - 350 Children

The Treasure Island Homeless Development Initiative

- The Treasure Island Homeless Development Initiative is the umbrella organization for homeless service providers. Services are provided to formerly homeless families, through agencies such as:
  - Catholic Charities: housing, supportive services, and job development
  - Community Housing Partnership: housing and supportive services
  - Swords to Plowshares: housing, supportive services and job development
  - Haight Ashbury Free Clinic: housing and supportive services
  - Walden House: housing, supportive services, and recovery program
  - Delancey Street: housing, and supportive services
  - Rubicon: housing and job training
  - ToolWorks: job training

Schools/Training Centers

- Job Corps: a federally funded job training program with 682 students.
- Life Learning Academy: Delancey Street's Charter School has 38 Students.
- Kidango: an early child development center has 64 students.
- Glide Memorial: 30 students, hard trades.
- San Francisco Fire Department Academy: has 36 students.
- San Francisco Sheriff's Department Five Keys Charter School: serving TIHDI women who have been incarcerated.

Cornerstones of Development Plan

SUSTAINABILITY
Triple Bottom Line

PARKS AND RECREATION
A Regional Destination

HOUSING
A New San Francisco Neighborhood

COMMUNITY BENEFITS
Jobs and Economic Development

Development Program

- 6,000 Homes
- Up to 500 Hotel Rooms
- Up to 270,000 S.F. Retail
- 300 Acres Open Space
- Up to 325,000 S.F. of Commercial Space through Historic Adaptive Re-use
- Jobs and Community Benefits

Sustainability Framework

Sustainable Master Planning I Building Green I Renewable Energy

Master Plan — **Committed to LEED ND Gold Certification**
(Good Faith Efforts to Achieve Platinum Level)

Buildings — **Treasure Island Green Building Specifications**

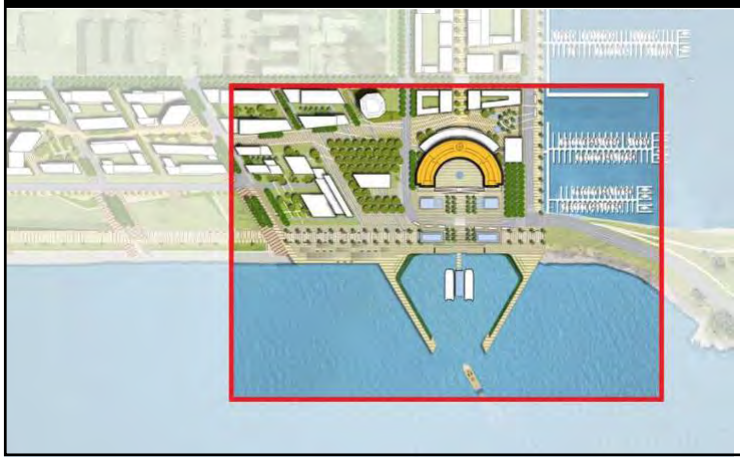
- **Applies to All New Buildings**
- **Condition of Approval for Building Permits**
- **Derived from LEED NC Standards**
- **Developed with SF Environment**

Energy — **Maximize on-site Renewable Energy Production**

A Transit-First Community

Compact and Walkable I 90-100 Homes per Acre I Convenient Transit Options

New Intermodal Transit Hub

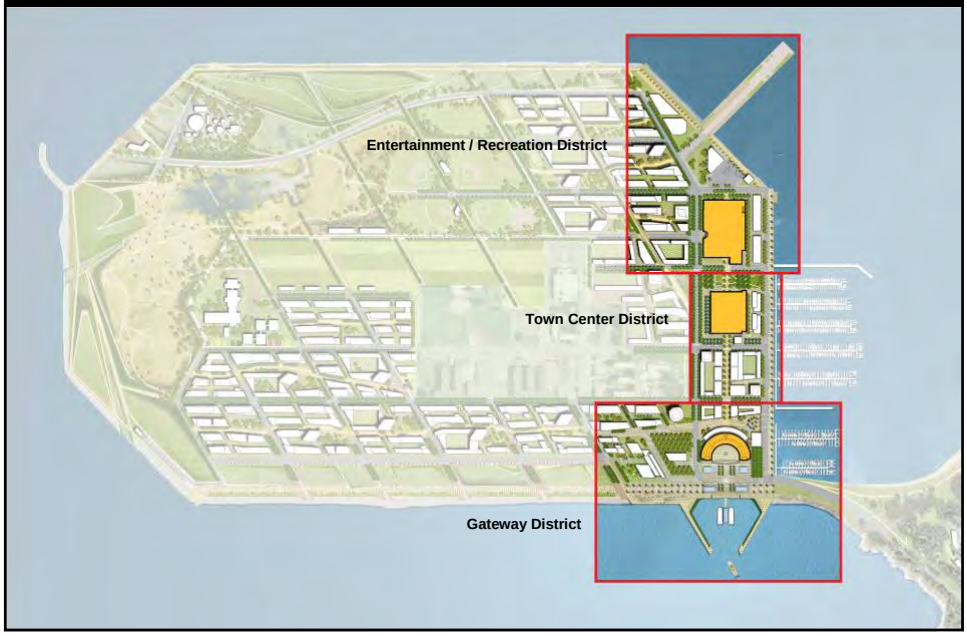


Ferry **Bus** **Shuttle**

Open Space

Treasure Island - Mixed Use Urban Core

Gateway | Town Center | Entertainment/Recreation



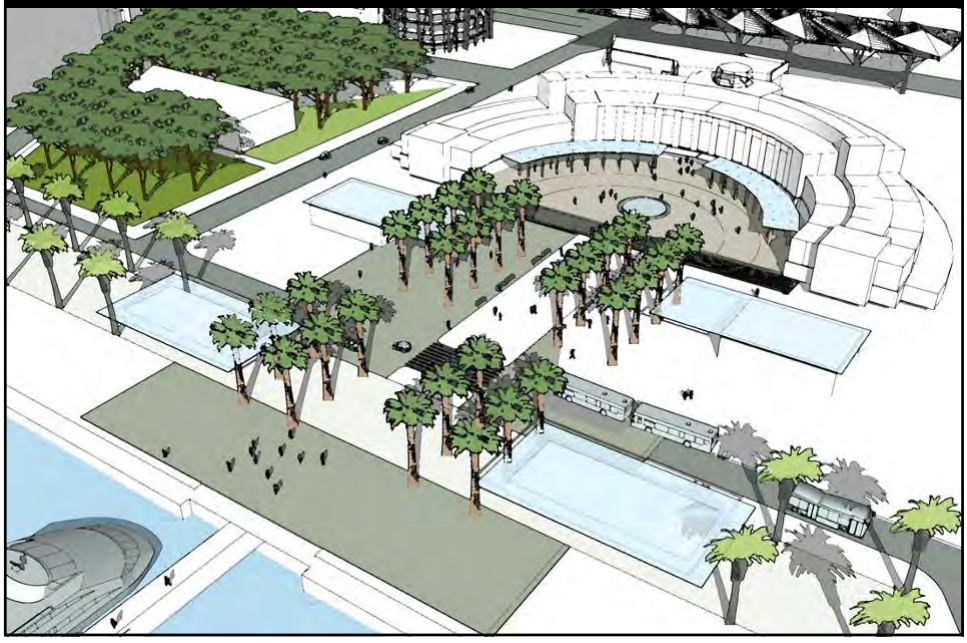
Historic Building 1

Arrival / Civic / Retail Gateway

Cultural Park with Pavilion and Hotel

Cultural Park

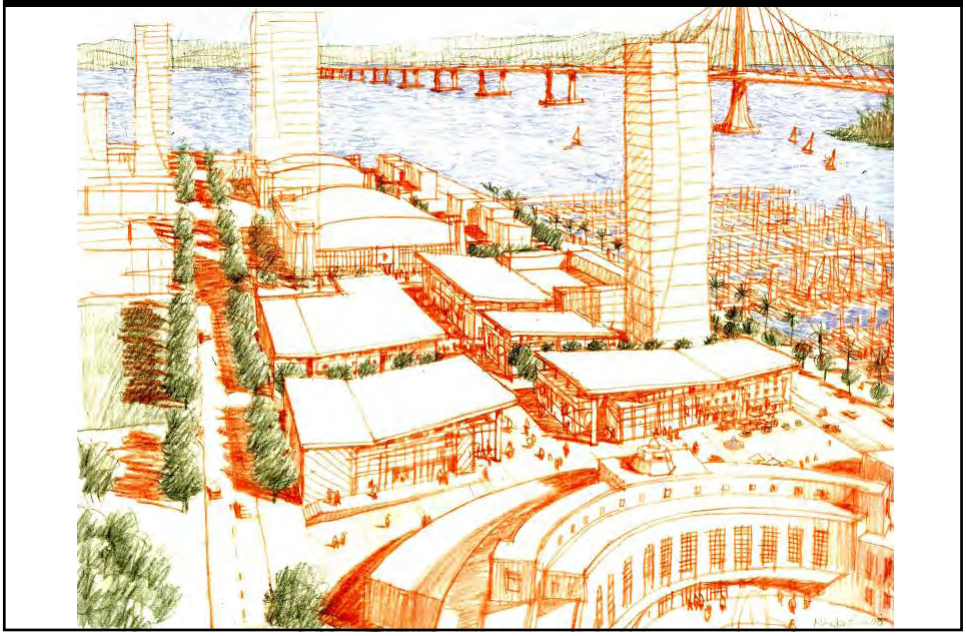
Gateway District



Town Center District

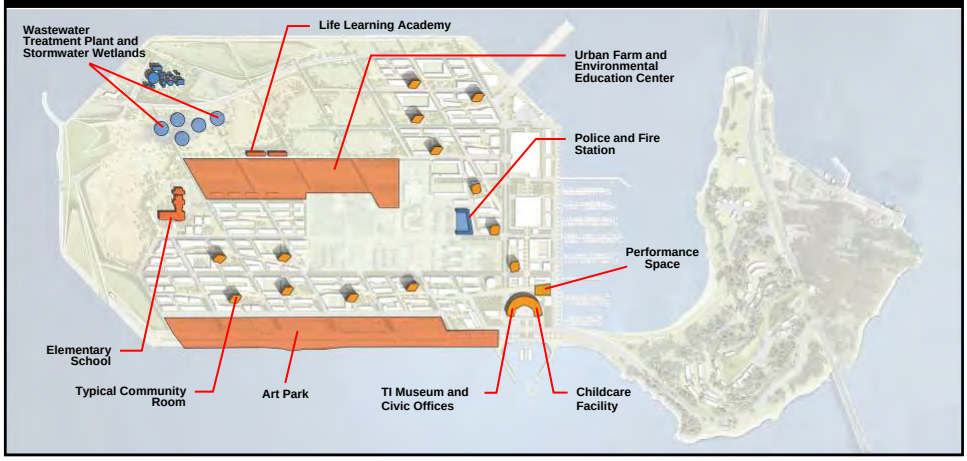
Main Street | Historic Building 2 | Clipper Cove

Town Center District



Housing Program

Community Facilities



Phasing

Phase One | 2010 - 2013

Geotech Stabilization | Ferry Quay | Infrastructure Backbone

Phase Two | 2012 - 2014

Cityside and Clipper Cove Neighborhoods | Historic Adaptive Re-use School | Wetlands | YBI West and Open Space | Urban Core | WWTP

Phase Three | 2014 - 2016

Eastside Neighborhood | Ballfields | YBI East | YBI Historical

Phase Four | 2016 - 2018

Cityside Neighborhood | Core Towers | Urban Farm | Remainder of Great Park

Field Efforts
Solid Waste Disposal Areas

October 21, 2008
NAVSTA Treasure Island
RAB Meeting

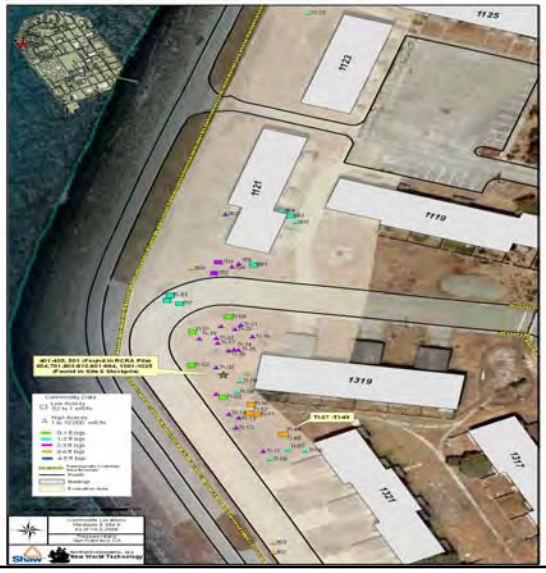
Work at SWDA's

- **Excavation efforts at SWDA A&B on hold till completion and approval of a "Field Work Variance".**
- **Work continues at Site 6 with the loading of Bins from the Low Level RAD stockpile.**
- **TIDA has requested Shaw Stop the Maintenance of Hydro-seed and Sod**

Excavation Status at SWDA A&B

Radium Containing Item at SWDA A&B

- Please Look At Pull out Figure Attached



Disposal of Soil Not impacted by Low Level RAD

In Class I Cal-Haz Waste Soil, Roughly 10,138 Tons has been Disposed Of Off-site at an Approved Landfill. Currently stockpiled for disposal there is 450 tons of soil.

In Class II Non-Cal-Haz Waste Soil, Roughly 10,800 Tons has been Disposed Of Off-site at an Approved Landfill. Currently stockpiled for disposal there is 840 tons of soil.

Disposal of RAD Impacted Soil

To Date at Site 6:
EMS Has Removed 397 Bins for Disposal

EMS has roughly 92 Bin's on Site, 23 have been filled with soil the other 69 remain empty awaiting loading.

Total Soil Stored = Roughly 407 Tons in Bins Stockpiled Soil with Low Level RAD Waste = Roughly 1,328 tons

- **Each Bin contains roughly 17.7 tons of Low Level Radiological Waste**
- **Bins are Currently Being Weighed and Sampled by EMS**

SWDA Restoration

Project Duration: Updated Current Forecast:

Excavation Work at SWDA A&B Started on September 25, 2007
with an Estimated Completion Date of February 2009
Completion of soil disposal / demobilization: April 2009

Next Navy RAB Meeting:
The Casa De la Vista
Tuesday, December 16th at 7:00 PM
James.b.sullivan2@navy.mil

Navy Web Site:
www.bracpmo.navy.mil

PROPOSED PLANS/DRAFT REMEDIAL ACTION PLANS

INSTALLATION RESTORATION
SITE 30 – DAYCARE CENTER AND
SITE 31 - FORMER SOUTH STORAGE YARD

FORMER NAVAL STATION TREASURE ISLAND
SAN FRANCISCO, CALIFORNIA

RAB Meeting
October 21, 2008

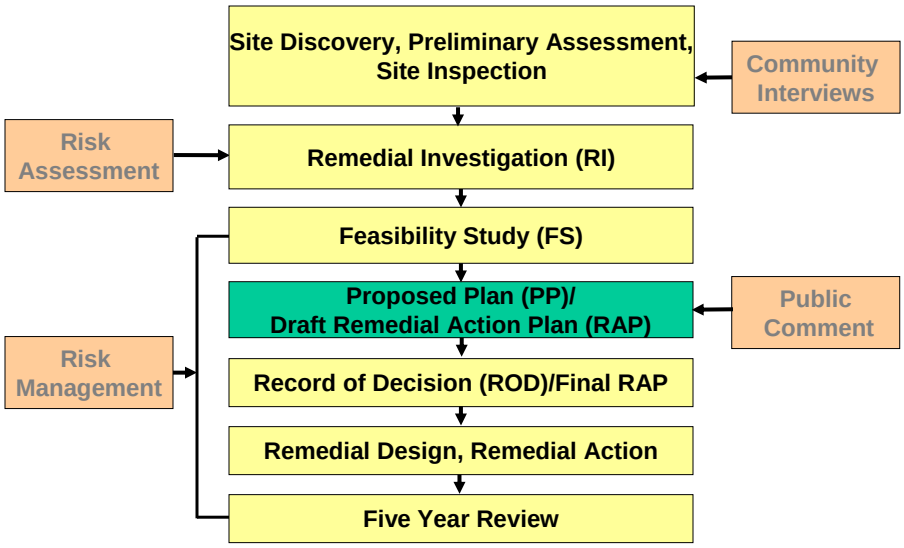
1

Presentation Overview

- Background
- Proposed Plan Summaries
  - Site 30 Daycare Center
  - Site 31 Former South Storage Yard
  - Schedule
- State of California CEQA
- Where to Submit Comments

2

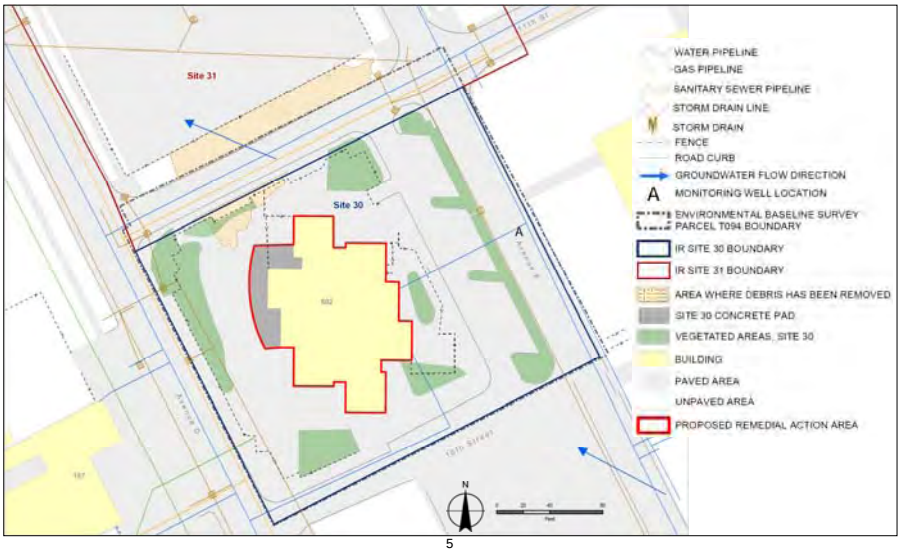
CERCLA Process



3

Sites 30 and 31 Locations

Site 30, Daycare Center



5

Site 30 Background Summary

- Daycare Center
  - Constructed in 1985 by the Navy
  - Closed in 1997
  - Leased to TIDA and reopened in 2003
- IR Site Identification
  - Discovery of an as-built drawing in 2002 documenting a “trash dump” near a utility line along 11th Street
- CERCLA Activities
  - 2002 - Trench Investigation Sampling
  - 2002/2003 - Time-Critical Removal Action
  - 2004 - Groundwater Investigation
  - 2006 - Final Remedial Investigation Report and Feasibility Study

6

Site 30 Remedial Action Objectives

- **Daycare center receptors:**
  - Prevent ingestion of and direct contact with soils containing unknown concentrations of dioxin beneath Building 502
- **Commercial/industrial and residential receptors:**
  - Prevent ingestion and direct contact with soils containing dioxin above the previously established ambient dioxin concentration from both soil containing unknown concentrations of dioxin beneath Building 502 and known concentrations under the Site 30 Concrete Pad

7

Site 30 Remedial Alternatives

Alternative 1: No Action

Alternative 2: Engineering Controls Combined with Institutional Controls

- *Engineering controls:* Maintain the building foundation slab to prevent contact with potential dioxin contamination beneath the slab.

- *Institutional controls:* Covenants and deed notices to notify the public of potential contamination and restrict actions that may disturb affected soil.

Alternative 3: Building Demolition, Excavation, and Off-Site Disposal at a Permitted Landfill

8

Nine EPA Evaluation Criteria

A. Threshold Criteria

1. Overall Protection of Human-Health and the Environment
2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

B. Primary Balancing Criteria

3. Long-Term Effectiveness and Permanence
4. Reduction of Toxicity, Mobility, or Volume
5. Short-Term Effectiveness
6. Implementability
7. Cost

C. Modifying Criteria

8. State/Regulatory Acceptance
9. Community Acceptance

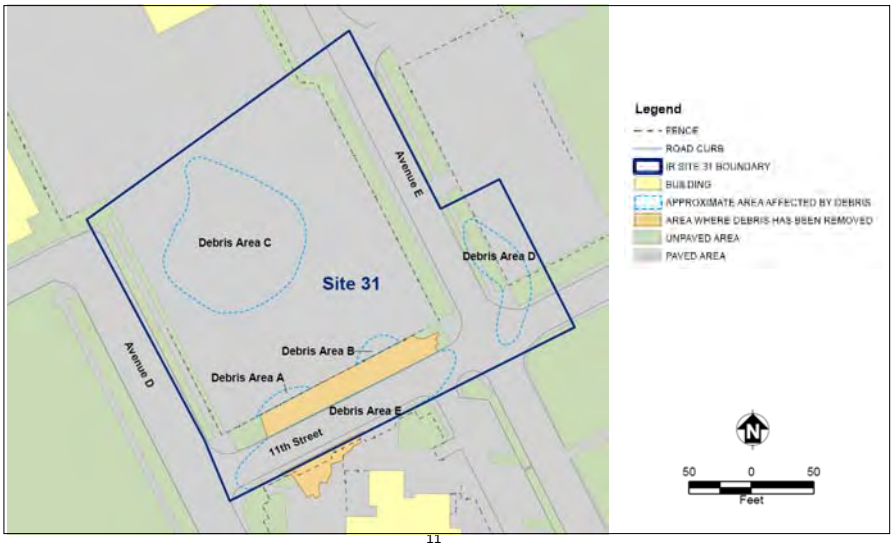
9

Site 30 Preferred Remedial Alternative

- **Alternative 2 - Engineering Controls Combined with Institutional Controls**
  - Meets the remedial action objectives by:
    - Protecting daycare children/adults by preventing contact with soil containing unknown concentrations of dioxin beneath Building 502 by maintaining the building slab
    - Protecting potential future construction and industrial/commercial workers and residents by implementing deed restrictions and covenants
  - Controls would include:
    - Monitoring the integrity of the building slab
    - Restrictions on future commercial/industrial and residential use
    - Yearly reporting and five-year reviews

10

Site 31, Former South Storage Yard



11

Site 31 Site Background Summary

- Site 31 was used by the Navy as a storage yard during the early 1970's
- In the late 1970s, Site 31 was paved over and developed as an elementary school yard
- An as-built drawing discovered in 2002 documented a "trash dump" near a utility line along 11th Street
- IR Site 31 was established at the former South Storage Yard in September 2003

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Site 31 Site Background Summary, Cont.

- CERCLA Activities
  - 2002 - Former South Storage Yard Investigation
  - 2002 - Trench Investigation Sampling
  - 2002/2003 – Time-critical Removal Action in Portion of Site
  - 2004 - Groundwater Investigation
  - 2006 - Final Remedial Investigation Report and Feasibility Study

13

Site 31 Remedial Action Objectives

- **Elementary school child and staff receptor:**
  - Prevent direct contact with and ingestion of shallow soils containing:
    - benzo(a)pyrene concentrations in excess of 0.62 mg/kg and
    - dioxin concentrations that exceed the NAVSTA TI ambient level of 12 nanograms per kilogram (ng/kg).
- **Construction worker:**
  - Prevent direct contact with and ingestion of soils containing:
    - lead at concentrations that exceed 800 mg/kg.
- **Recreational visitor:**
  - Prevent direct contact with and ingestion of soils located in the southeastern quadrant containing:
    - dioxin concentrations that exceed 12 ng/kg and
    - B(a)P concentrations that exceed 0.62 mg/kg.

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Remedial Action Objectives, Continued

- **Commercial/industrial worker:**
  - Prevent direct contact to and ingestion of soils containing:
    - B(a)P concentrations that exceed 0.62 mg/kg,
    - dioxins concentrations that exceed 12 ng/kg, and
    - lead at concentrations that exceed 800 mg/kg.
- **Residential receptor:**
  - Prevent inhalation of naphthalene vapors in indoor air, and
  - Prevent direct contact with and ingestion of soil containing:
    - B(a)P concentrations that exceed 0.62 mg/kg,
    - dioxin concentrations that exceed 12 ng/kg, and
    - lead at concentrations that exceed 400 mg/kg.

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Site 31 Remedial Alternatives

Alternative 1: No Action

Alternative 2: Engineering Controls Combined With Institutional Controls (ICs)

Alternative 3: Engineering Controls, ICs, and Hot Spot Excavation (Debris Area E) and Off-Site Disposal

Alternative 4: Engineering Controls, ICs, and Hot Spot Excavation (Debris Area C and D Excluding Street) and Off-Site Disposal

Alternative 5: Complete Removal of Debris Area A, B, C, D, and E, and Off-Site Disposal

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Site 31 – Preferred Remedial Alternative

Alternative 5: Complete Removal of Debris Area A, B, C, D, and E, and Off-Site Disposal

- Exposure to contaminated soils would be eliminated.
- Would allow unrestricted use of the site.
- Confirmation samples would confirm that remediation goals are met.
- Provides the highest degree of protection to potential human receptors at the site.
- Would require approximately one year for implementation.

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Site 30 and 31 Schedule

- Proposed Plan/Remedial Action Plan
  - ✓ Notice Published in the San Francisco Chronicle 9/23/08
  - ✓ PP/Draft RAP Public Comment Period – 9/23/08 - 10/23/08
  - ✓ Public Meeting – 10/7/08
  - ✓ Prepare Responsiveness Summary – October 2008
- Record of Decision/Final Remedial Action Plan – 2008
- Remedial Design/Remedial Action Work Plan - 2008
- Remedial Action - 2009

18

California Environmental Quality Act (CEQA)

Current Activities

- Initial Study and draft Negative Declaration CEQA documents

Related Environmental Laws and Regulations

- Federal and State Endangered Species Acts
- Clean Water Act

19

CEQA Impact Analysis

Includes, but not limited to:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology & Soils
- Hazards & Hazardous Materials
- Hydrology & Water Quality

20

Comments

WHERE TO SUBMIT COMMENTS

Proposed Plan/Draft RAP

- You may submit your comments on the Proposed Plan/Draft RAP via fax, email, or mail to the Navy contacts below.

Mr. Charles Perry
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310
(619) 532-0911, (619) 532-0983 (fax)
charles.L.perry@navy.mil

Mr. James Sullivan
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310
(619) 532-0966, (619) 532-0983 (fax)
james.b.sullivan2@navy.mil

Proposed Negative Declaration

- You may submit your comments on the proposed Negative Declaration via mail or email to the DTSC contact below.

Mr. Ryan Miya
700 Heinz Avenue
Berkeley, CA 94710-2721
(510) 540-3775
rmiya@dtsc.ca.gov

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Naval Station Treasure Island

Site 24 In-Situ Anaerobic Bioremediation Study, Phase 2

DNAPL Investigation and Temporary Wells Installation

September-October, 2008

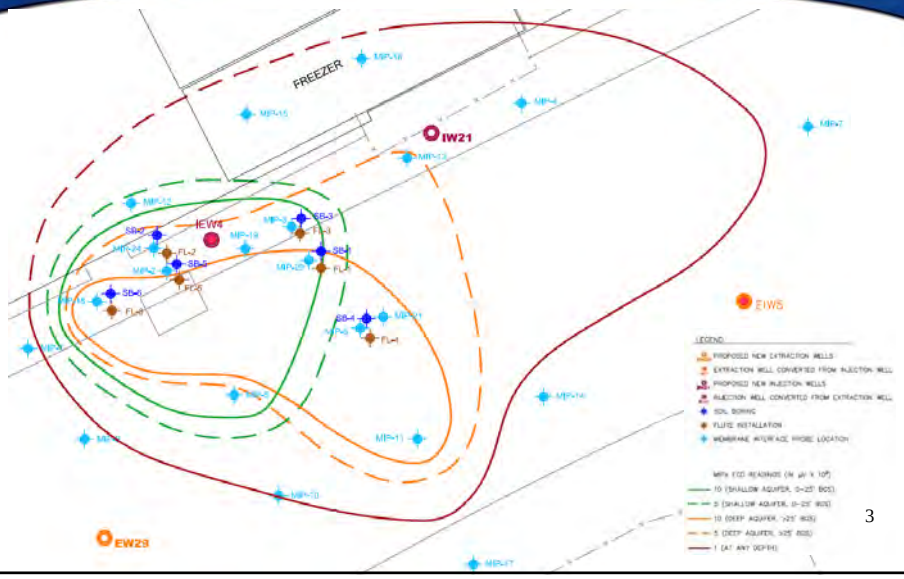
1

DNAPL Investigation

- Membrane Interface Probe (MIP) Investigation
- Flexible Liner Underground Technologies (FLUTe™) Investigation
- Chemical Analysis of Soil Samples

2

DNAPL Investigation – MIP, FLUTe and Soil Boring Locations



3

DNAPL Investigation - MIP

4

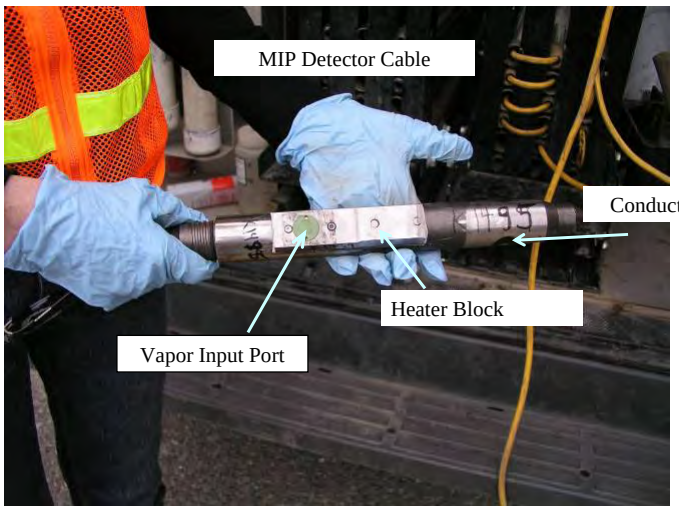
DNAPL Investingation - MIP

Geoprobe® Rig

MIP Output on Screen in Support Truck

5

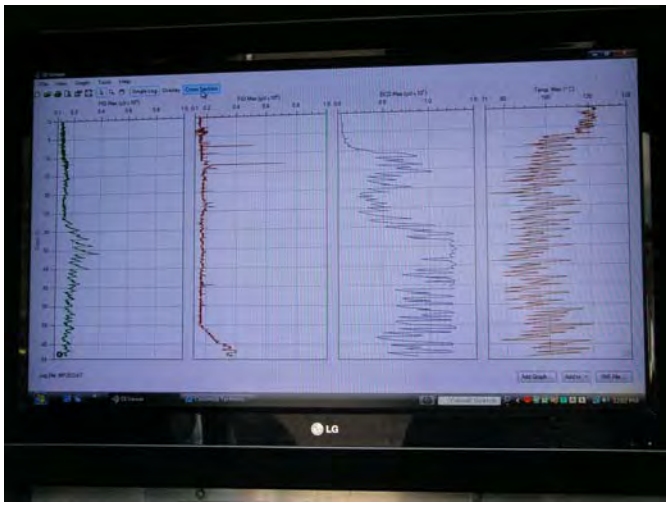
DNAPL Investingation - MIP



Membrane Interface Probe Detector

6

DNAPL Investigation - MIP



MIP Output in the Field of MIP-20 Boring

7

FLUTe™ Liner Installation

FLUTe™ Liners
as Delivered

FLUTe™ Liner Installation

8

FLUTe™ Liner Retrieval

9

DNAPL Investigation – Soil Borings

Soil Core Removal

Soil Sampling

Soil Core Removal

Soil Logging [10]

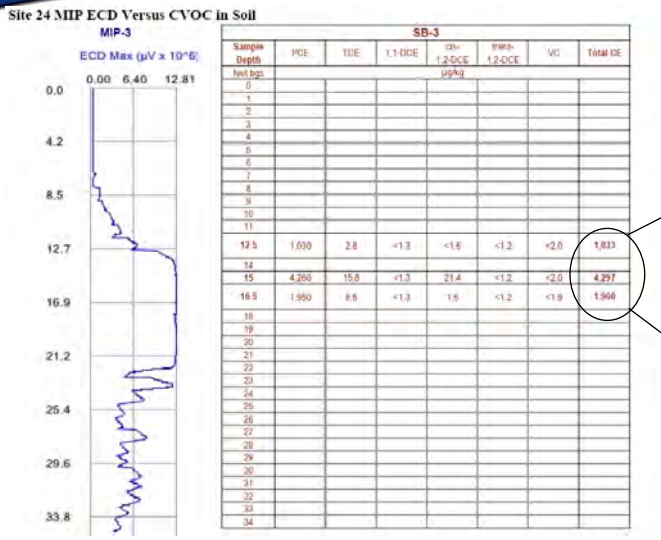
Sampling Soil

No Stains Visible on FLUTe™ Liner

Soil Sampled at Depth with the Highest ECD Readings

11

Results of Soil Sampling MIP-3/SB-3



Total CE
(µg/kg)

1,033

4,297

1,960

Correlation between MIP ECD tool and soil VOC Chemistry

12

Results of Soil Sampling MIP-2/SB-5

Site 24 MIP ECD Versus CVOC in Soil

SB-5

Sample Depth (feet bgs)	PCE	TCE	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	VC	Total CE
	µg/kg						
14	17,000	15	<1.3	7.5	<1.2	<2.0	17,023
22	7,660	60.2	<1.3	8.7	<1.2	<2.0	7,669
30	118	66.6	<1.2	14.5	<1.2	<1.9	199

Total CE
(µg/kg)

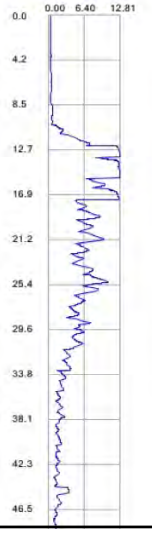
17,023

7,669

13

Results of Soil Sampling MIP-24/SB-2

Site 24 MIP ECD Versus CVOC in Soil



SB-2

Sample Depth (feet bgs)	PCE	TCE	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	VC	Total CE
	µg/kg						
12.5	50.7	<1.4	<1.6	<1.9	<1.4	<2.4	51
14	3,780	<80	<87	<110	<80	<130	3,780
17	2,620	2.8	<1.3	2.2	<1.2	<2.0	2,625

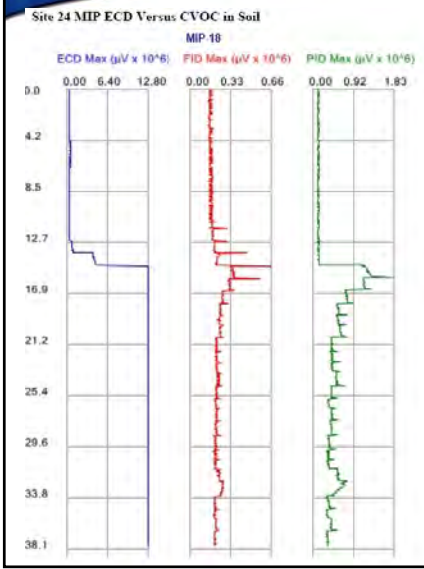
Total CE
(µg/kg)

3,780

2,625

14

Results of Soil Sampling MIP-18/SB-6



SB-6

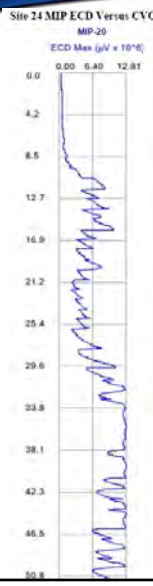
Sample Depth (feet bgs)	PCE	TCE	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	VC	Total CE
	µg/kg						
14	77,000	167	<1.3	60	<1.2	<2.0	77,923
33	20.2	<1.5	<1.6	<2.0	<3.5	<2.5	20

Total CE (µg/kg)

77,923

15

Results of Soil Sampling MIP-20/SB-1



SB-1

Sample Depth (feet bgs)	PCE	TCE	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	VC	Total CE
	µg/kg						
31.5	355	32,700	166 J	1,410	333	47.3	34,512
34.5	10,000	6,730	30.9	16,400	49.6	7.5	58,218

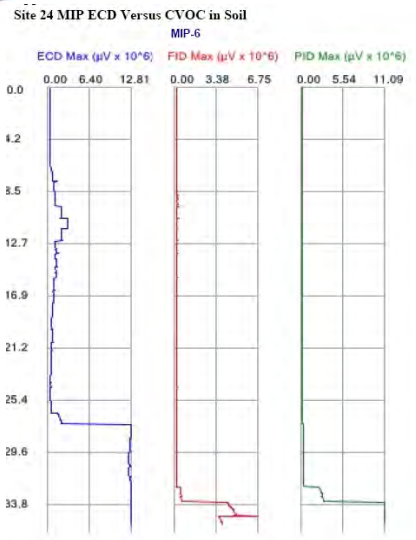
Total CE (µg/kg)

34,512

58,218

16

Results of Soil Sampling MIP-6/SB-4



SB-4

Sample Depth	PCE	TCE	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	VC	Total CE
feet bgs	µg/kg						
0							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30	2,050	15.1	<1.3	101 J	<1.2	<1.9	2,166
31							
32							
33	11,800	15,200	24.2	8,140	19.1	4.4 J	35,188
34	<72	<72	8.0	5,570	16.8	4.4 J	5,599

Total CE (µg/kg)

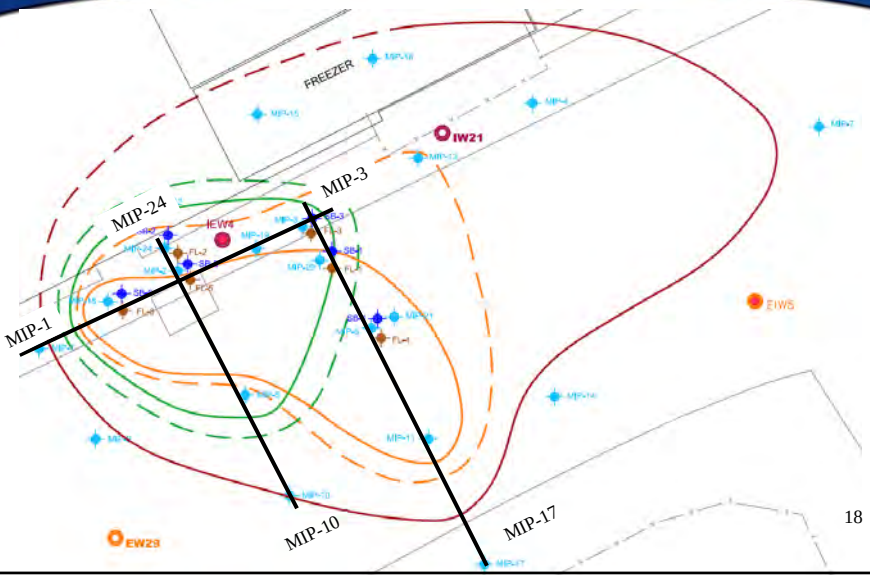
2,166

35,188

5,599

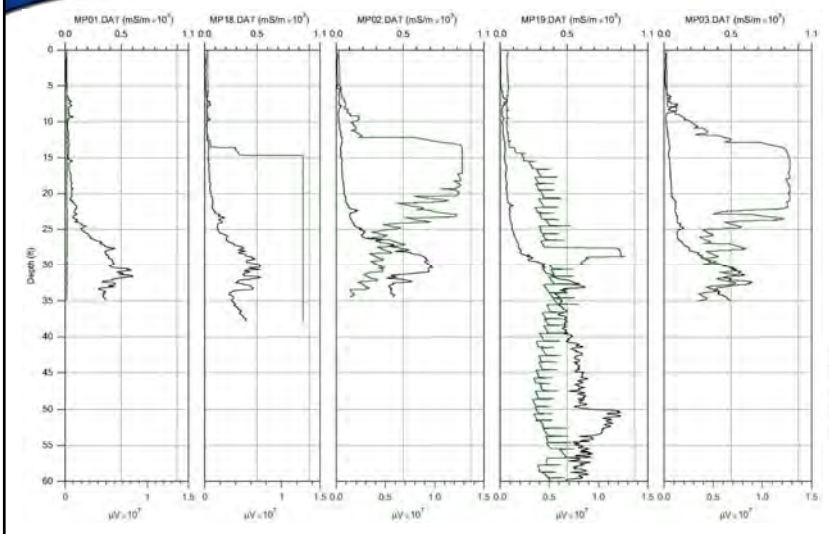
17

DNAPL Investigation – MIP Cross Sections



18

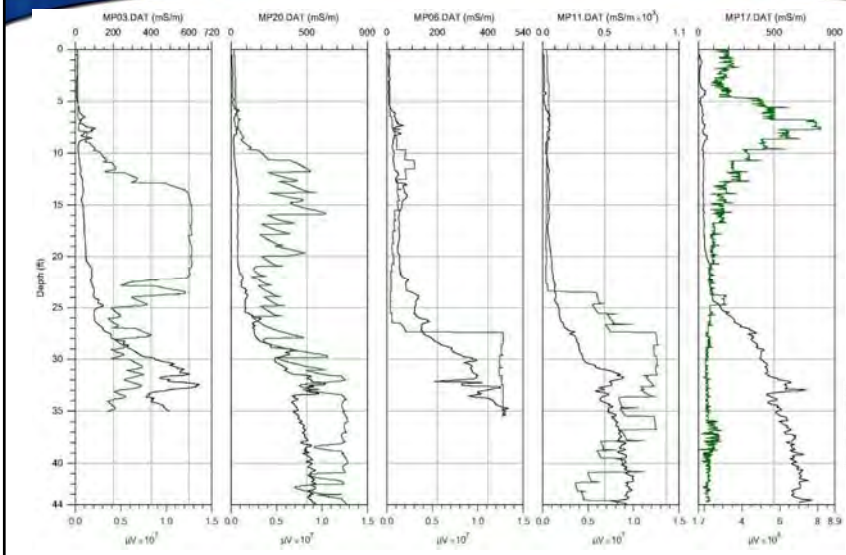
Cross Section of MIP-01 to MIP-03



MP01.DAT 7/31/2008
MP18.DAT 8/7/2008
MP02.DAT 7/31/2008
MP19.DAT 8/7/2008
MP03.DAT 7/31/2008

19

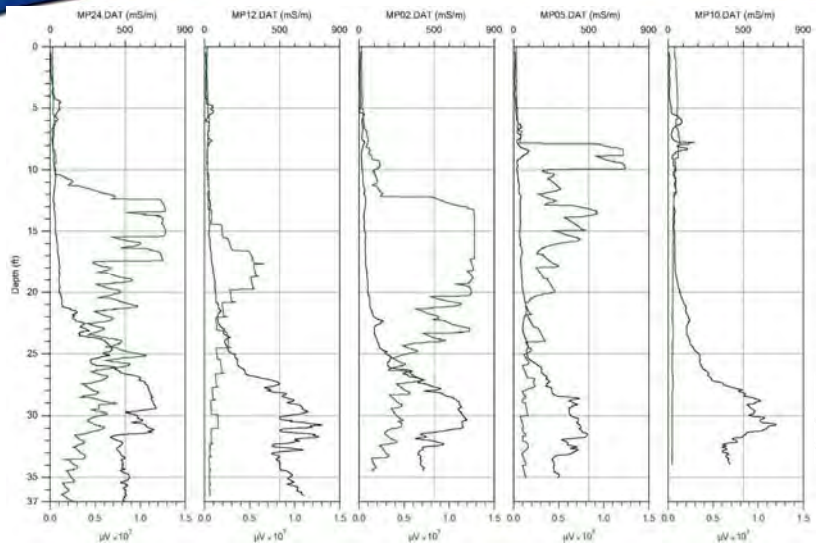
Cross Section of MIP-03 to MIP-17



MP03.DAT 7/31/2008
MP20.DAT 8/11/2008
MP06.DAT 8/4/2008
MP11.DAT 8/4/2008
MP17.DAT 8/7/2008

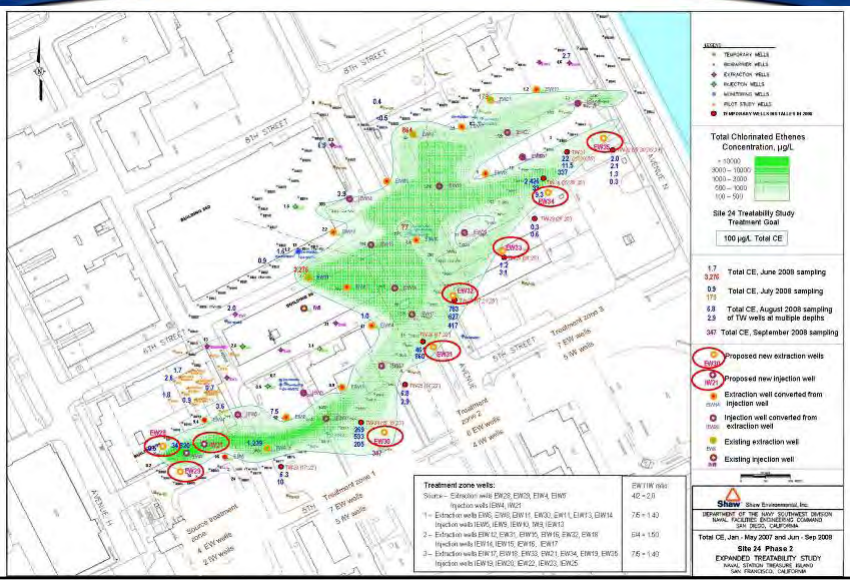
20

Cross Section of MIP-24 to MIP-10



21

Location of New Temporary, Extraction, and Injection Wells



22

Additional Temporary Wells to Further Delineate Dissolved Phase Plume

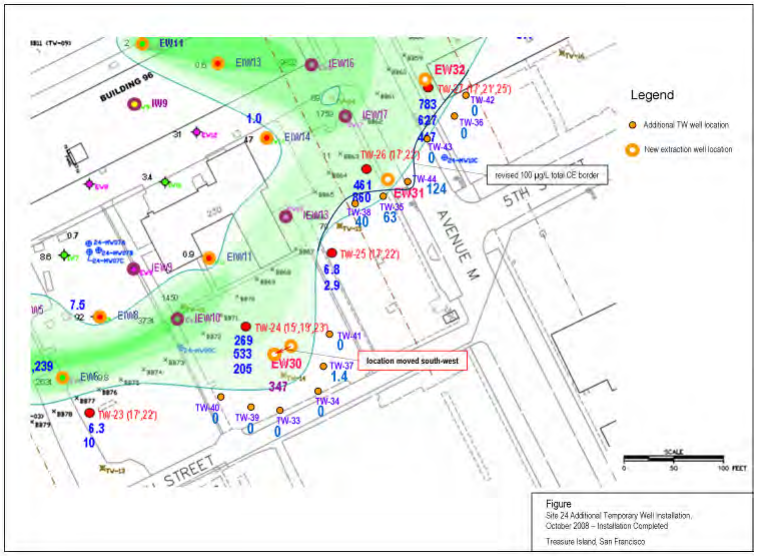


Figure
Site 24 Additional Temporary Well Installation,
October 2008 – Installation Completed
Treasure Island, San Francisco

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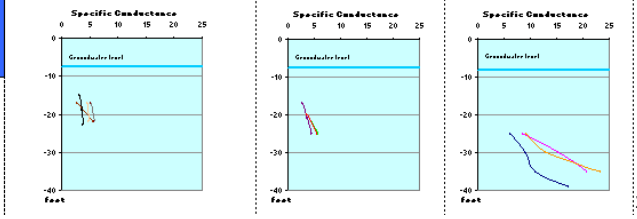
Groundwater Conductivity at Different Depth

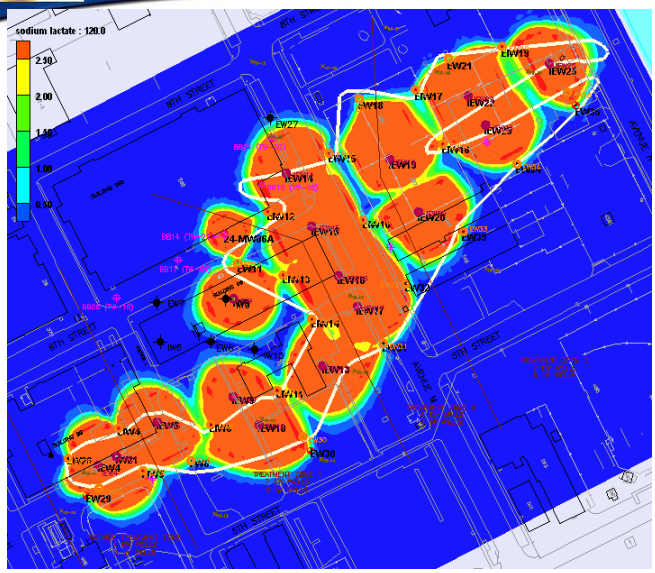
Well ID	TW-23	TW-24	TW-25	TW-26	TW-27	TW-28	TW-29	TW-30	TW-31	TW-32
Sample Date	8/6/2008	8/5/2008	8/5/2008	8/5/2008	7/31/2008	8/6/2008	8/6/2008	7/31/2008	8/11/2008	7/31/2008
Sample depth, feet bgs	Groundwater Specific Conductance, mS/cm									
14										
15		3.339								
16										
17	2.839		4.59	5.380	2.933					
18										
19		3.668								
20						3.688	3.660			
21					3.779					
22	5.643		4.826	5.939						
23		3.919								
24										
25					4.570	5.886	5.591	8.644	9.279	6.281
26										
27										
28										
29										
30								15.36	13.03	9.113
31										
32										
33										
34										
35								20.82	23.47	11.04
36										
37										
38										
39										17.35

Bay water specific conductance - ~35-40 mS/cm



24

Site 24 Model Results (MODFLOW MT3D)



Substrate Injection Results After 120 Days for Layer 2.

Total Chlorinated Ethenes 100 µg/L Plume Boundary Also Shown.

25

Questions?

26

IR Site 21 Focused Feasibility Study (FFS)
Vessel Waste Oil Recovery Area
Naval Station Treasure Island
San Francisco, CA

Scott Anderson, Navy RPM
October 21, 2008

Site 21 Current and Future Land Use

- 2.2 acres consisting of a concrete and asphalt parking lot, and a recreational sailing and boat storage facility
- Reuse of the area is designated as a “Film Production/Conference Center”
- Area includes land that could be used for “Publicly Oriented Recreation/Cultural/Entertainment,” and specifically as a film and events district

Site Contaminants

- No COCs identified for soil
- Chemicals identified in groundwater:
  - Tetrachloroethene (PCE)
  - Trichloroethene (TCE)
  - cis-1,2-Dichloroethene (cis-1,2-DCE)
  - trans-1,2-Dichloroethene (trans-1,2-DCE)
  - Vinyl chloride

3

Phase 1 of the Treatability Study

- Purpose: To evaluate the effectiveness of in situ bioremediation treatment technologies in reducing chlorinated volatile organic compounds (VOC) to ethene in groundwater
- Duration: August 2005 to February 2006
- Action: Installed 6 permeable reactive barrier wells along the shoreline and 45 injection well points within the plume
- Result: VOCs were reduced to ethene, and in situ bioremediation was proven effective
- Next step: Begin Phase 2 of the Treatability Study, in October 2008, to evaluate effectiveness of in situ bioremediation treatment technologies in reducing low-level VOCs

4

Remedial Action Objectives

- Prevent inhalation exposure pathway to future commercial/industrial workers by preventing vapor intrusion of VOCs in groundwater at concentrations above remedial goals
- Prevent dermal and inhalation exposure pathways to future construction workers in a construction trench by preventing inhalation of and dermal contact with VOCs in groundwater at concentrations above remedial goals

5

Remedial Alternatives Evaluation

The Site 21 FFS evaluates remedial alternatives against seven of the nine National Contingency Plan criteria:

- Overall Protection of Human Health and the Environment
- Compliance with Applicable or Relevant and Appropriate Requirements
- Long-Term Effectiveness and Permanence
- Reduction of Toxicity, Mobility, or Volume through Treatment
- Short-Term Effectiveness
- Implementability
- Cost

State Acceptance and Community Acceptance will be evaluated after comments are received on the FFS report and the proposed plan.

6

Remedial Alternatives

- **Alternatives evaluated:**
  - **Alternative 1: No Action**
  - **Alternative 2: Institutional Controls (IC)**
    - ICs to prevent future residential use and prohibit groundwater extraction
  - **Alternative 3: Enhanced Anaerobic In Situ Bioremediation (ISB) of Groundwater and Groundwater Monitoring**
    - Unrestricted use scenario
    - Two rounds of enhanced anaerobic ISB consisting of subsurface treatment of groundwater through injection of anaerobic microbes and treatment chemicals
    - Groundwater monitoring
- Alternative 2 scored highest in the comparative analysis of alternatives

7

Site 21 Closure Strategy

- Complete Phase 2 of the Treatability Study
  - Inject SDC-9 and sodium lactate substrate to degrade residual VOCs to ethene
  - Expected completion by end of 2009
- Prepare Proposed Plan and Record of Decision
- Implement preferred alternative

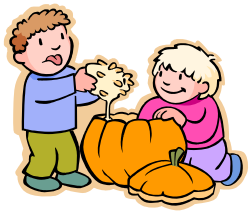
8

Site 21 FFS Schedule

11/07/08: Draft FFS Report Issued for Review

12/07/08: Draft FFS Report Comments Due

01/30/09: Final FFS Report Issued



9

Remedial Investigation Report; Site 33

Waterline Replacement Area

October 21, 2008
NAVSTA Treasure Island
RAB Meeting

Overview

1. Site 33 Background
2. Previous Investigations
3. Screening Level Ecological Risk Assessment (SLERA)
4. Human Health Risk Assessment
5. Conclusions/Recommendations

Site 33 Aerial Photograph

3

Site 33 Background

- **Site 33 is located on the southeast portion of Treasure Island (Portions of Parcels T056, T014, T019 and T020)**
  - **Parcel T056 (Buildings 92 and 107)**
    - **Building 92**
      - **Naval Hospital, barracks, classrooms, offices**
    - **Building 107**
      - **Police station, barracks, administrative offices**
  - **Parcel T014**
    - **Building 40**
      - **Electronics classroom and laboratory, Navy band storage**
  - **Parcel T019**
    - **Open space**
    - **Included former building 109 (barracks, office, recreation center)**
  - **Parcel T020**
    - **Open space, barracks (former Buildings), offices**

4

Site 33 Background (Continued)

- As-built drawings identified areas where construction crews recorded observations of debris in water line replacement trenches.
- An investigation of these trenches was initiated in April 2003.
- A total of 49 trenches were excavated in four investigation phases.
  - Chemicals of concern and debris were identified

5

Site 33 Investigations

- **EBS Data Gaps Investigation (April 2003)**
  - **16 trenches to 4 feet bgs bounding the areas of debris impact noted in the water line replacement as-built drawings**
  - **One sample from each trench was collected and analyzed for VOCs, SVOCs, TPH, PCBs, and metals.**
  - **Dioxins were analyzed for in 10 trenches biased towards the presence of burnt debris.**
    - **At least one dioxin sample was collected from each trench pair on either side of the water line.**
  - **Lead (in 2 samples), arsenic (in one sample), and dioxin (in 3 samples) exceeded the PRG for residential soil.**
  - **All exceedances were in samples collected in the vicinity of Avenue I and 4th Street**
- **Phases I through IV (August 2003 - November 2004)**
  - **33 trenches to 4 feet bgs**
  - **At least one soil sample was collected from each trench and analyzed for metals and dioxins.**
  - **Lead (in 4 samples), arsenic and antimony (1 sample each), and dioxin TEQ (2 samples) exceeded the PRG for residential soil.**

6

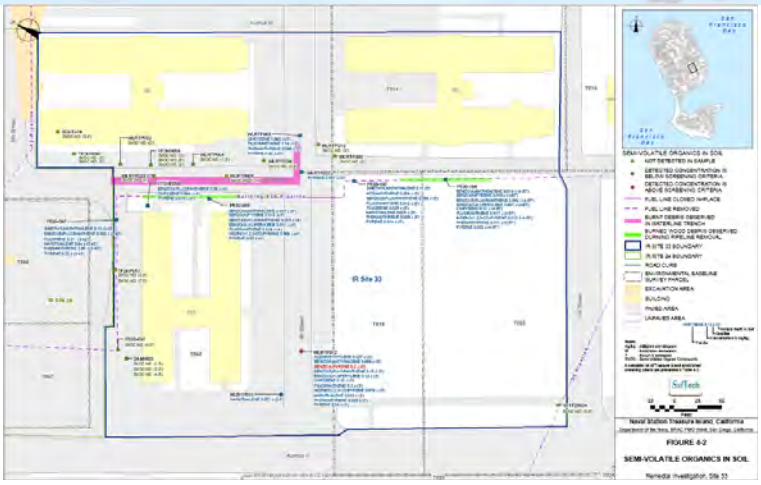
Chemicals Exceeded Screening Criteria for Soil at Site 33

- B(a)P EQ
- Arsenic
- Lead
- Dioxin

Arsenic and lead both exceed ambient concentrations and PRGs in a localized area in the northwestern portion of the site in the former waterline trench.

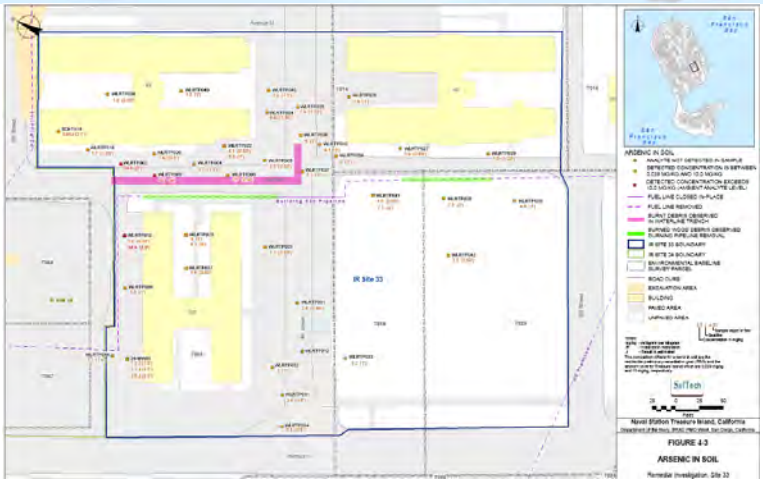
7

Site 33 SVOC (BaP) in Soil Results



8

Site 33 Arsenic in Soil Results

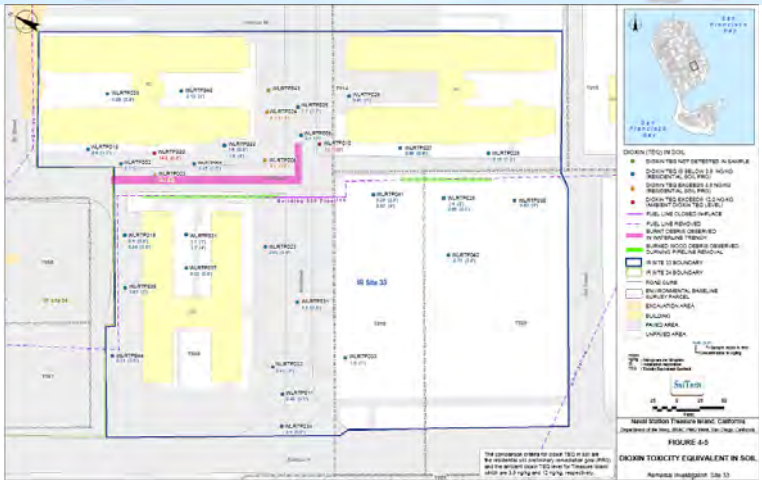


9

Site 33 Lead in Soil Results

10

Site 33 Dioxin in Soil Results



11

Site 33 Groundwater Investigation

- Five groundwater samples were collected in August 2005
  - Four new temporary monitoring wells (33MW01 through 33MW04) and two existing wells (24MW01 and 17MW01) were sampled.
  - Samples were analyzed for dioxins and metals.
    - No chemicals were detected at concentrations exceeding Naval Station Treasure Island groundwater screening criteria.

12

Screening Level Ecological Risk Assessment (SLERA)

- Because Site 33 was not included in the Phase I SCLERA (1997), ecological risk for ***terrestrial receptors*** was assessed in the Tier I Screening Level Ecological Risk Assessment for TI (IR Sites 6, 12, 21, 24, 30, 31, 32, and 33).
  - The SLERA recommended ***no further action*** at Site 33 because of the poor quality of habitat.
  - The majority of Site 33 consists of three buildings, concrete and asphalt paved areas, and a grass lawn
- No chemicals were detected in groundwater at concentrations posing an unacceptable risk to ***aquatic receptors*** in San Francisco Bay.

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Baseline Human Health Risk Assessment

- Method 1 Toxicity Criteria
  - Toxicity factors selected from EPA hierarchy (EPA 2003) following Navy guidance.
- 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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Conclusions of the Baseline Human Health Risk Assessment:
Potential Cancer Risks and Noncancer HI's

Receptor	Total Cancer Risk		Total Hazard Index	
	Method 1	Method 2	Method 1	Method 2
Commercial/Industrial Worker (0-2 feet bgs)	4×10^{-7}	4×10^{-7}	0.007	0.2
Commercial/Industrial Worker (0 feet bgs - groundwater)	8×10^{-6}	4×10^{-5}	0.05	0.2
Construction Worker (0 feet bgs - groundwater)	2×10^{-6}	1×10^{-5}	0.5	5
Resident (0-2 feet bgs)	1×10^{-6}	1×10^{-6}	0.07	2
Resident (0 feet bgs - groundwater)	3×10^{-5}	2×10^{-4}	0.5	2

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Conclusions of the Baseline Human Health Risk Assessment:
Cancer Risk Drivers Identified for Each Receptor

Receptor	Method 1		Method 2	
	Risk Driver	Cancer Risk	Risk Driver	Cancer Risk
Commercial/Industrial Worker (0 to 2 feet bgs)	None	NA	None	NA
Commercial/Industrial Worker (0 foot bgs to groundwater)	Arsenic	6.7×10^{-6}	Arsenic B(a)P	4.2×10^{-5} 1.1×10^{-6}
Construction Worker (0 feet bgs to groundwater), Groundwater	None	NA	Arsenic Chromium	6.3×10^{-6} 5.9×10^{-6}
Resident (0 to 2 feet bgs)	Dioxins	1.3×10^{-6}	Dioxins	1.1×10^{-6}
Resident (0 feet bgs to groundwater)	Arsenic B(a)P Dioxins	2.5×10^{-5} 1.8×10^{-6} 1.4×10^{-6}	Arsenic B(a)P Dioxins	1.5×10^{-4} 2.9×10^{-6} 1.2×10^{-6}

16

Conclusions of the Baseline Human Health Risk Assessment: Lead

Exposure Area	Lead EPC (mg/kg)	Predicted 99th Percentile Blood-Lead Concentration (µg/dL)	
		Adult Resident	Child Resident
Site 33 Surface Soil (0-2 feet bgs)	1,656	6.5	38.1
Site 33 Combined Surface and Subsurface Soil (0 feet bgs – groundwater)	1,828	6.9	41.8

Blood-lead modeling resulted in 99th percentile concentrations below 10 micrograms per deciliter (µg/dL) for the adult resident and exceeding 10 µg/dL for the child resident.

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Conclusions

- The nature and extent of contaminants at Site 33 have been characterized.
- The SLERA recommended no further action for COPECs at Site 33 because of the poor quality of habitat on TI.
- Cancer risks were within the EPA risk management range of 10-6 to 10-4 for all receptors except for a resident exposed to combined surface and subsurface soil (0 foot bgs to groundwater) under Method 2.
- Non-cancer risks exceeded 1 for construction workers and residents under Method 2.

18

Conclusions (Continued)

- Lead is a risk driver based on the results of blood-lead modeling.
- Arsenic is the primary cancer risk driver for the commercial/industrial worker, construction worker, residential, and recreational receptors.

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Recommendations

- A feasibility study should be performed to evaluate the mitigation of risk from arsenic and lead in the northwestern portion of Site 33, to potential commercial/industrial, construction, recreational, and residential receptors.
- This portion of Site 33 consists of the area previously identified as part of the water line trench containing debris.

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Schedule

- Draft RI was released on October 17, 2008
- Agency and RAB comments are due back on November 17, 2008
- Final RI issued December 2008

21

Naval Station Treasure Island
Environmental Cleanup Program
Document Tracking Sheet
October 2008 - March 2009

			INTERNAL DRAFT		DRAFT									RTC			INTERNAL FINAL		FINAL	
						Agency Comments														
Item	Document Title & Information	CTO/DO	Internal Draft Due to Navy	Navy Comments Due	Draft to Agencies	Date Due	DTSC	Water Board	EPA	TIDA	RAB	OTHER	Priority Level	Preliminary RTCs to Agencies	Resolve and Concur on RTCs		Internal Final to Navy	Navy Comments Due	Final to Agencies	Comments
	SulTech - Non Petroleum Related Documents																			
1	**Site 32 Remedial Investigation Report** RPM: Scott Anderson PM: Christopher Ohland	94	08/18/06	✔	09/17/06	✔	10/20/06	✔	02/14/07	✔	✔	✔	✔		✔		07/27/07	✔	NA		08/29/08	✔	09/26/08	✔	10/23/08		
2	**Site 33 Remedial Investigation Report** RPM: Scott Anderson PM: Kevin Hoch	103	09/07/06	✔	10/16/06	✔	10/17/08	✔	11/17/08								12/15/08		12/29/08		01/12/09		01/22/09		02/05/09		
3	**Sites 8, and 29 Interim RI Report** RPM: James Whitcomb PM: John Warmerdam	104	07/23/07	✔	08/10/07	✔	11/19/07	✔	12/19/07	✔	X	✔	✔				09/22/08	✔	10/22/08		11/05/08		11/19/08		12/03/08		Water Board deferred to DTSC by email 1/15/2008.
4	**Site 28 Revised Remedial Investigation Report** RPM: James Whitcomb PM: John Warmerdam	104	NA	✔	NA	✔	NA	✔	NA	✔	X	✔	✔				09/22/08	✔	10/22/08		11/05/08		11/19/08		12/03/08		Site 28 Revised RI was separated from Sites 8 and 29 Data Summary for the Internal Final and Final versions.
5	**Site 21 Feasibility Study** RPM: Scott Anderson PM: Jean Michaels	144	7/28/08* 9/30/08**	✔ ✔	9/10/08* 10/22/08**	✔	11/12/08		12/12/08								TBD		TBD		TBD		TBD		TBD		* Navy technical review ** Navy legal review
6	**Soil Gas Investigation SAP** RPM: James Whitcomb PM: John Warmerdam	117	04/11/08	✔	05/28/08	✔	06/04/08	✔	06/17/08	✔	✔	✔	✔				09/26/08	✔	10/09/08	✔	10/23/08		10/30/08		11/06/08		
7	**Site 27 Feasibility Study** RPM: Charles Perry PM: Katie Henry	43	09/24/08	✔	10/24/08		11/07/08		12/07/08								01/04/09		01/18/09		02/03/09		02/13/09		02/27/09		Navy legal and technical reviews to occur concurrently.
	Sullivan Consulting Group - Non Petroleum Related Documents																			
8	**2007 Annual Groundwater Status Report, Site 12** RPM: James Whitcomb Hannah Thompson	CLIN0002	05/30/08	✔	06/17/08	✔	07/03/08	✔	09/12/08	✔	✔	X	✔				10/10/08		NA		10/24/08		11/03/08		11/14/08		
9	**2007 Annual Groundwater Status Report, Sites 6 and 25** RPM: James Whitcomb Hannah Thompson	CLIN0002	06/20/08	✔	09/02/08	✔	09/05/08	✔	10/25/08	X		X					11/22/08		NA		12/17/08		12/27/08		01/07/09		EPA will not comment per eamil 9.16.2008 DTSC no comments 10.20.2008

Naval Station Treasure Island
Environmental Cleanup Program
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October 2008 - March 2009

			INTERNAL DRAFT		DRAFT										RTC				INTERNAL FINAL				FINAL		
						Agency Comments																			
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	Shaw Group																								
10	**Site 12 Work Plan for Arsenic in Groundwater Pilot Study** RPM: Scott Anderson PM: Pete Bourgeois	FZN1	09/27/07 ✔	10/29/07 ✔	11/15/07 ✔	12/21/07	✔	✔	X	✔				10/08/08 ✔	10/22/08	TBD	TBD	10/24/08	EPA deferred comments to DTSC/Water Board via email 1/11/2008.
11	**PCB Field Activity Report** RPM: Scott Anderson PM: Pete Bourgeois	FZN1	08/05/08 ✔	09/08/08 ✔	09/11/08 ✔	10/24/08								TBD	TBD	TBD	TBD	TBD	
12	**PCB Soil Abatement Parcel T-111/Site 32 Work Plan** RPM: Scott Anderson PM: Pete Bourgeois	FZN1	11/06/08	12/06/08	12/18/08	01/17/09								TBD	TBD	TBD	TBD	01/29/09	
	Tetra Tech EM Inc.																								
13	**Island Times Newsletter #15** RPM: Charles Perry PM: Marcie Rash	FZN6	11/21/08	12/05/08	12/15/08	01/09/08								NA	NA	01/16/08	01/23/08	01/30/08	
14	**Fact Sheet: Radiological Program Update** RPM: James Whitcomb PM: Marcie Rash	FZN6	TBD	TBD	TBD	TBD								TBD	TBD	TBD	TBD	TBD	
15	**Site 12 Radiological Risk Assessment** RPM: James Whitcomb PM: Marcie Rash	FZN6	09/24/08 ✔	10/07/08	10/10/08	10/31/08								11/14/08	11/28/08	12/05/08	12/12/08	12/26/08	
16	**Site Management Plan** RPM: Charles Perry PM: Marcie Rash	FZN6	05/30/08 ✔	06/23/08 ✔	06/27/08 ✔	08/01/08	✔	✔	X	✔				09/05/08 ✔	09/19/08 ✔	10/21/08 ✔	10/31/08	11/14/08	
	Barajas & Associates, Inc.																								
	Site 30 Proposed Plan RPM: Charles Perry PM: Margaret Berry	25	12/22/06 ✔	03/06/07 ✔	03/23/07 ✔	06/18/07	✔	✔	✔	✔	✔	✔		03/07/08 ✔	09/03/08 ✔	09/05/08 ✔	09/08/08 ✔	09/18/08 ✔	
	Site 31 Proposed Plan RPM: Charles Perry PM: Margaret Berry	25	01/19/07 ✔	03/06/07 ✔	03/23/07 ✔	06/18/07	✔	✔	✔	✔	✔	✔		02/25/08 ✔	09/03/08 ✔	09/05/08 ✔	09/08/08 ✔	09/18/08 ✔	

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	Barajas & Associates, Inc. (Continued)																		
17	**Site 30 Record of Decision** RPM: Charles Perry PM: Margaret Berry	25	04/30/08 ✔	08/18/08 ✔	10/16/08 ✔	11/15/08								12/13/08	12/20/08	01/19/09	01/26/09	02/02/09	Schedule is dependent on resolution of Proposed Plan issues.
18	**Site 31 Record of Decision** RPM: Charles Perry PM: Margaret Berry	25	04/23/08 ✔	09/11/08 ✔	10/16/08 ✔	11/15/08								12/13/08	12/20/08	01/19/09	01/26/09	02/02/09	Schedule is dependent on resolution of Proposed Plan issues.
19	**Site 11 Remedial Investigation Report** RPM: Scott Anderson PM: Margaret Berry	24	01/18/08 ✔	10/07/08 ✔	11/07/08	12/07/08								TBD	TBD	TBD	TBD	TBD	
	Tetra Tech EC, Inc.																		
20	**Final Status Survey for Building 343** RPM: James Whitcomb PM: Brian Maidrand	21	12/26/07 ✔	03/13/08 ✔	04/07/08 ✔	05/07/08	✔	X	X	✔		✔		05/21/08	✔ 10/24/08	11/07/08	11/17/08	12/01/08	EPA deferred comments to DTSC/CDPH, 7/15/2008 Comments on RTCs rec'd from CDPH
21	**Final Status Survey for Building 344** RPM: James Whitcomb PM: Brian Maidrand	21	01/02/08 ✔	01/31/08 ✔	05/07/08 ✔	07/11/08	✔	X	X	✔		✔		07/10/08	✔ 10/24/08	11/07/08	11/17/08	12/01/08	5/28/2008 Water Board emailed they will not provide comments. 7/10/2008 Comments on RTCs rec'd from CDPH
22	**Scoping Survey Report for Building 233** RPM: James Whitcomb PM: Brian Maidrand	21	01/04/08 ✔	03/13/08 ✔	05/07/08 ✔	07/11/08	✔	X	✔	✔		✔		09/23/08	✔ 10/24/08	11/07/08	11/17/08	12/01/08	5/28/2008 Water Board emailed they will not provide comments.
	Trevet, Inc.																		
	Basewide (Sites 6 and 12) Groundwater Monitoring SAP RPM: Jim Whitcomb PM: Greg Alyankian	N62473-08-C-9002	07/14/08 ✔	09/11/08 ✔	09/18/08 ✔	10/02/08	X	X						NA	NA	NA	NA	10/07/08 ✔	Water Board emailed on 10/3/2008 no comments on the SAP. DTSC emailed no comments on 10/6/08.

Naval Station Treasure Island
Environmental Cleanup Program
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October 2008 - March 2009

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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

✔ Production or review of document is complete.

X Received notification of no comments or comments deferred to other agency.

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
October 2008-December 2008

Item	Activity & Investigation Area	DTR #	Field Dates		Navy RPM	CTO/DO	PM	FTL	Complete
Shaw									
1	Site 24 Treatability Study Phase II *Site 24*	Doc N/A	Start: Finish:	07/21/08 TBD	Scott Anderson (619) 532-0938	FZN1	Peter Bourgeois (415) 277-6983	David Cacciatore (925) 288-2299	
2	Site 21 Pilot Treatability Study *Site 21*	Doc N/A	Start: Finish:	10/06/08 TBD	Scott Anderson (619) 532-0938	FZN1	Peter Bourgeois (415) 277-6983	Dan Leigh (925) 288-2193	
3	Non-Time Critical Removal Action *Site 12*	Doc N/A	Start: Finish:	02/26/07 02/28/09	Jim Whitcomb (619) 532-0936	10	Peter Bourgeois (415) 277-6983	Peter Bourgeois (415) 277-6983	
4	Arsenic in Groundwater Pliot Study *Site 12*	Doc 10	Start: Finish:	10/27/08 TBD	Scott Anderson (619) 532-0938	FZN1	Peter Bourgeois (415) 277-6983	Peter Bourgeois (415) 277-6983	
5	PCB Soil Abatement Parcel T-111/Site 32 *Site 32*	Doc 12	Start: Finish:	02/09/09 TBD	Scott Anderson (619) 532-0938	FZN1	Peter Bourgeois (415) 277-6983	Peter Bourgeois (415) 277-6983	
SulTech									
6	Soil Gas Investigation *Site 12*	Doc 6	Start: Finish:	November TBD	James Whitcomb (619) 532-0936	STAECRU	John Warmerdam (415) 222-8254	Hannah Thompson (415) 321-1786	
TREVET									
	Site 12 and 6 Groundwater Sampling *Site 12*	Doc N/A	Start: Finish:	09/29/08 10/01/08	Jim Whitcomb (619) 532-0936	CLIN	Greg Alyanakian (858) 869-3110	Greg Alyanakian (858) 869-3110	✔
7	Site 12 and 6 Groundwater Sampling *Site 12*	Doc N/A	Start: Finish:	12/08/08 12/12/08	Jim Whitcomb (619) 532-0936	CLIN	Greg Alyanakian (858) 869-3110	Greg Alyanakian (858) 869-3110	
EMS									
8	Site 12 Removal Action Soil Sampling *Site 12*	Doc N/A	Start: Finish:	12/05/07 TBD	Jim Whitcomb (619) 532-0936	NA	Dawn Roarty (916) 919-4785	Salem Attiga (925) 939-0687	

Date Last Revised: 6/9/2009

Naval Station Treasure Island
Navy Field Schedule
October 2008-December 2008

Item	Activity & Investigation Area	DTR #	Field Dates	Navy RPM	CTO/DO	PM	FTL	Complete

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.
PCB = Polychlorinated Biphenyls
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.

Date Last Revised: 6/9/2009