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FINAL
NAVAL AIR STATION ALAMEDA RESTORATION ADVISORY BOARD MEETING SUMMARY

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Building 1, Suite 140, Community Conference Center
Alameda Point
Alameda, California

May 3, 2007

The following participants attended the meeting:

Co-Chairs:

Neil Coe	Restoration Advisory Board (RAB) Assistant Community Co-chair
Thomas Macchiarella	Base Realignment and Closure (BRAC) Program Management Office (PMO) West, BRAC Environmental Coordinator (BEC), Navy Co-chair

Attendees:

Jim Barse	Community member
Doug Biggs	Alameda Point Collaborative (APC) Representative
Anna-Marie Cook	U.S. Environmental Protection Agency (EPA)
Tommie Jean Damrel	Tetra Tech EM Inc. (TtEMI)
Alona Davis	Sullivan International Group (Sullivan)
Pete Everds	Tetra Tech EC Inc. (TtECI)
Joan Konrad	RAB
John Kowalczyk	BRAC PMO West Remedial Project Manager (RPM)
Gretchen Lipow	Community member
Dot Lofstrom	California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC)
Patrick Lynch	Community member
Bert Morgan	RAB
John McMillan	Shaw Environmental and Infrastructure, Inc. (Shaw)
Mary Parker	BRAC PMO West RPM
Kurt Peterson	RAB
Peter Russell	Russell Resources/City of Alameda
Erich Simon	Regional Water Quality Control Board (Water Board)
Dale Smith	RAB/Golden Gate Audubon Society
Cathie Stumpenhaus	Bechtel

Jean Sweeney	RAB
Jim Sweeney	RAB
Michael John Torrey	RAB/Housing Authority of the City

The meeting agenda is provided in Attachment A.

MEETING SUMMARY

I. Approval of Minutes

Mr. Coe called the meeting to order at 6:30 p.m. He noted that Mr. George Humphreys was unable to attend the meeting.

Mr. Torrey provided the following comment:

- Page 11 of 12, second paragraph, sixth line, "Baypoint" should be changed to "Bayport."

Ms. Smith provided the following comment:

- Page 5 of 12, last paragraph, second to last sentence will be revised to "Ms. Konrad asked about the reference and ambient locations."

Mr. Coe provided the following comments on behalf of Mr. Humphreys:

- Page 11 of 12, last paragraph, first sentence, the word "underground" will be removed.
- Page 11 of 12, last paragraph, eleventh line, the phrase "in the groundwater" will be removed.

Ms. Smith said that a comment made by Ms. Sweeney during the April 2007 RAB was not included in the minutes. Mr. Macchiarella said that the comment would be added.

The minutes were approved as amended.

II. Co-Chair Announcements

Mr. Coe distributed the list of documents and correspondence received during April 2007. The handout is included as Attachment B-1.

Mr. Macchiarella announced that he has altered his schedule which will allow him to attend the June 2007 RAB meeting. The Navy will present a summary of its response to the comments of Mr. Peter Strauss, the Technical Assistance for Public Participation (TAPP) grant contractor, on the Site 1 proposed plan (PP) and draft Site 2 feasibility study (FS). He also reminded the RAB that there would be no RAB meeting in July 2007.

Mr. Macchiarella introduced Mr. Kowalczyk as the new Navy Lead RPM for Alameda, replacing Mr. Greg Lorton.

III. Operable Unit (OU) 5 Upcoming Field-work Presentation

Ms. Parker began a presentation on the upcoming field-work at OU-5. The handout of the presentation is included as Attachment B-2. The presentation included the following topics: site location and introduction, background information, the selected remedy for groundwater, the pre-design investigation and pilot test, and the schedule. Slide 3 showed a site location map. Ms. Parker identified Fleet and

Industrial Supply Center Oakland, Alameda Facility/Alameda Annex (FISCA) Installation Restoration (IR) Site 02 (IR02), and Alameda Point OU-5 Sites 25, 30, and 31 on the map.

The objective of the upcoming field work is to refine the understanding of site conditions and perform pilot tests to support the remedial design for groundwater. Evaluations show there is no immediate or short-term risk to children, residents, or others. There are no drinking water wells in the area and water service to the homes and other buildings is provided by the East Bay Municipal Utility District (EBMUD).

The groundwater treatment system will address potential long-term risks, including possible future use of groundwater. Pre-design field work will occur from May through December 2007 and will include various sampling activities and 6-month operation of a pilot-scale biosparging and soil vapor extraction (SVE) system.

A manufactured gas plant and oil refinery were located in the area of OU-5 in the late 1800s and early 1900s. Alameda Point became farmland in the early 1900s and then an industrial and transit center. The Navy acquired the main portion of Alameda Point in the 1930s, and some property east of Main Street was acquired in the 1950s to 1960s. Marshlands were filled, trapping historical discharged petroleum products; the layer now called the Marsh Crust. The Navy operated Naval Air Station Alameda until 1997. Numerous soil and groundwater investigations were conducted since 1989.

The PP for the groundwater remedy of the OU-5/IR02 plume was issued to the public for review in March 2006. A public meeting was held on March 15, 2006. The remedy was based on numerous studies and is described in the record of decision (ROD), which is currently being finalized with the regulatory agencies. The next step is the pre-design field work, which is scheduled to begin in May 2007.

Slide 8 showed a map of the plume of benzene in groundwater. The darker portions of the plume represent the higher concentrations of benzene. Ms. Sweeney commented that the plume seemed much larger than on maps she had seen previously. Mr. Peterson asked if the area at the bottom of the map was the new housing development or the college. Mr. Macchiarella replied that the Bayport housing is at the bottom of the map. Mr. Peterson commented that houses are located across from the track. Ms. Parker said that the map has been updated based on information provided by the developer. Ms. Sweeney asked if the dotted line on the left of the plume is a new feature. Mr. Macchiarella responded that the dotted line in that area is not a new feature. Ms. Konrad asked about plans in the area of dotted lines near the college. Ms. Parker replied that she would discuss that issue later in the presentation. Mr. Peterson commented that he did not recall that the plume extends so far into the housing area. Ms. Smith said that the annual groundwater report does not show the plume extending as far into the housing area. Ms. Parker commented that this plume definition incorporates the data that are also used in the annual groundwater monitoring report, as well as Hydropunch data and any data that have been provided by developers. Mr. Peterson asked if the darker colors are higher concentrations of benzene. Ms. Parker replied that the darker colors show higher concentrations and that the darkest circle represents 5,000 micrograms per liter (μg/L) and the lightest area is 1 to 10 μg/L. The dashes represent areas where the plume boundary is inferred. The highest concentration occurs in only one area, which is the unoccupied housing. Ms. Sweeney asked where the 39-unit housing area was located. Ms. Parker identified the area in the central right portion of the map.

Mr. Peterson asked why the plume map has changed since the last time the map was provided to the RAB. Ms. Parker stated that this map was assembled using all available data, including Hydropunch data, which are not the same as data for samples from wells in the Annual Report. Hydropunch data cover a smaller, deeper screened interval and are collected through various investigations during different years. The Navy will use the map to identify areas where more investigation is needed to support the

remedial design. If data for only monitoring wells were used, the plume area would be smaller and the concentrations would be lower. Mr. Torrey asked about the location of Ruby Bridges School on the map. Mr. Macchiarella commented that the school is located below the edge of the map. Ms. Smith asked about the depth of the Hydropunch pushes. Ms. Parker said the Hydropunch samples shown on the map are the deeper interval, to 20 feet below ground surface (bgs), where the higher concentrations of benzene would be found. Ms. Smith asked if this was the second water-bearing zone. Ms. Parker said that these Hydropunch data are for the lower FWBZ. Much of the previous Hydropunch data were from as far back as 2001. The new Hydropunch data will be both shallow and deep to better define the current plume and support the design. Mr. Peterson asked if the plume could have moved since the previous data were collected. Ms. Parker said that current data do not indicate this, but the data to be collected this summer will provide more information on whether the plume has moved.

The slides that followed show the data that will be collected and the sampling locations. Mr. Torrey commented that he had walked the OU-5 area and noticed bags of straw lined up around the College of Alameda playing field. Mr. Macchiarella commented that the bags are not related to Navy work and may be for storm water control. Ms. Konrad said they might be for erosion control.

Benzene and naphthalene in groundwater are planned to be treated by enhancing natural aerobic microbiological processes. The remedy for OU-5/IR02 involves a combination of technologies. The selected remedy will add oxygen and is called biosparging. The remedy also includes SVE to capture potential fugitive vapors.

The pre-design field work includes the following six components: a tidal study, Gore-Sorber modules, direct-push groundwater and soil sampling, monitoring well groundwater sampling, surface soil sampling, and a pilot test. The stakeholders and the regulatory agencies review the work plan and health and safety plan (HASP). Slide 11 included a list of site control and safety measures that will be implemented in the field to protect workers and the public.

The purpose of the tidal study is to evaluate the effect of tide cycles on the direction of groundwater flow. Water levels will be measured at 25 wells during maximum tide fluctuation. Locations of new pilot test piezometers and wells will be optimized based on refined information on the direction of groundwater flow. Slide 13 showed a map of the tidal study well locations.

The Gore-Sorber modules provide screening-level soil gas data to guide direct-push sampling locations. A 1- to 1.5-inch hole is drilled to 2 to 3 feet bgs. The module is pushed into the hole, and the hole is plugged and left with a retrieval cord at the surface. The module is removed 2 to 4 weeks later and the surface soil is restored. The module is unintrusive and will collect soil vapors but not water vapor. Approximately 100 modules will be installed. Ms. Parker distributed a sample Gore-Sorber module. Mr. Peterson asked why the depth of the modules is not more accurate than 2 to 3 feet bgs. Ms. Parker replied that the depth would not cause much variability. Mr. Everds said that the module should be below the surface far enough to avoid influence of rain or other environmental factors. Mr. Macchiarella commented that these samples will not provide a precise measurement, but will help identify subsequent Hydropunch locations. Ms. Parker added that the results are qualitative, providing maps of various concentration ranges. Research has shown that this method is good in fine-grain soils to use for determining sampling locations and verifying plume areas for the pre-design work. Ms. Smith asked if the module is sealed after it is removed from the ground or if it is exposed to the air before it is analyzed. Mr. Everds replied that the module is returned to its original container and sealed after it is withdrawn from the ground.

Slide 15 showed a map of Gore-Sorber module locations. Ms. Smith asked how many acres the 100 modules cover. Ms. Parker said she did not know the number of acres covered, but pointed out the

various sample locations on the map. These samples would indicate soil gas concentrations and would help identify groundwater sampling locations. The purpose of the work is to obtain data to support a good remedial design to clean up the groundwater. Ms. Smith again asked how many acres the 100 modules cover. Ms. Parker said the modules covered various locations throughout the entire plume, as shown on the map, but she was not sure how many acres the plume covered. Ms. Smith said that she wanted to know only how much area was covered in acres and that Ms. Parker and the consultant did not know how many acres the 100 modules would cover. Ms. Parker said that the placement of the modules was not set up on a grid, but locations were chosen where there was a lack of previous data. Mr. Peterson commented that these samples should be collected in areas that differed from where the plume was believed to be. He also commented that the plume extends farther west and south than before and that little sampling has occurred in those areas. He added that the data should be obtained in areas where the boundaries of the plume appear to have changed. Ms. Parker commented that these samples will not yield numerical data but will help to decide where to gather new Hydropunch data. Mr. Peterson said there are many Gore-Sorber modules in areas where data are already plentiful. Ms. Parker explained that there will be active remediation occurring in plume centers, so the design needs data in those areas. Mr. Everds stated that the contours shown in bold are the areas where it is anticipated that the remedial system will be installed. The design needs to have accurate plume center boundaries for the system. The distance between modules at the plume centers is about 100 feet. The Gore-Sorber modules are not being used to define the outer boundaries because other groundwater samples will be used in the areas, as will be shown later in the presentation.

Direct-push groundwater sampling locations will be selected based on the results of the Gore-Sorber modules. A 4-inch diameter hole is drilled to 20 feet bgs. Groundwater samples are collected using the Hydropunch. The boring is then backfilled with cement-bentonite slurry and the surface is restored to its pre-boring condition. Approximately 120 sampling locations are planned. Slide 17 showed a photo of a direct-push rig. Slide 18 showed a map of direct-push sampling locations. Ms. Sweeney asked if the vapors rise during direct push sampling. Ms. Parker said that vapors do not typically rise and that monitoring is constantly used as a health and safety precaution. Some of the points are at the edge of the plume and some are in the plume centers. The plume centerpoints are to provide new, accurate data for the design. Ms. Lofstrom said that it is noted on Slide 16 that the groundwater sampling locations are based on the results of the Gore-Sorber modules. She asked if the locations are in addition to the direct-push locations. Ms. Parker said that the Gore-Sorber would help to place the direct-push locations. Not all direct-push locations will correspond to a Gore-Sorber because it may already be known that there is contamination in some areas. Ms. Lofstrom asked if no direct-push sample will be planned if the Gore-Sorber does not detect benzene or naphthalene at a certain location. Mr. Macchiarella responded that the proposed direct-push sampling locations may change based on Gore-Sorber data. Mr. Everds said that if the Gore-Sorbers show there is no contamination near the college track, a few direct-push locations would still be located there to confirm the results.

Mr. Peterson asked if the Navy could provide a full-page printout at the next meeting of the map of the plume and sampling locations. He added that he cannot read the maps at this meeting. Ms. Parker commented that in 1 month field work would be under way and the sampling locations may change. Ms. Smith said that the RAB's issue is that the maps presented are not readable. Mr. Macchiarella said the maps would be either mailed or e-mailed, depending on their size. Ms. Smith requested the maps be in PDF format. Ms. Sweeney asked if the maps could be posted on line. Mr. Macchiarella said that the referenced maps will be provided to the RAB either electronically or in hard copy.

Ms. Cook said that she was not aware that the Navy would rely on the Gore-Sorber data to locate the direct-push samples, but thought that it would be used more as confirmation sampling. The concern at this site is the groundwater concentrations in the deeper reaches of the aquifer as opposed to the shallower depths. If the shallower depths contained the higher concentrations, then there may be concern for soil

gas. She said that she would expect the Gore-Sorbers would not provide much information. If direct-push locations are then based on Gore-Sorber data, it will be unclear where to site the locations. Ms. Parker said that direct-push samples may still be located as provided on the map, even if contamination in soil gas is not detected, but Gore-Sorber data may guide the location of the groundwater samples. Mr. Macchiarella said that if all of the Gore-Sorbers find no soil gas, then they cannot be relied on to select direct-push locations. Ms. Parker said if that should be the case, then the Navy will sample at the direct push locations shown on the map (same map as the work plan map), with the exception of the College of Alameda area, where the groundwater sampling locations will "step-out" from the known plume boundary on Navy property, as explained in the work plan. This approach is specified in the work plan. Mr. Everds said that direct-push locations could be selected only on prior groundwater data, but he believes the Gore-Sorber data will be useful. Ms. Cook said that she expects the Gore-Sorbers will provide little information, and was concerned if the Gore-Sorbers are the criterion used to delineate the plume and close the boundaries. Mr. Everds said that literature provides data that show that the Gore-Sorbers have been effective for these concentrations at these depths. Ms. Cook said that there is probably not much data in the literature for this unusual case of distinct stratification where the higher concentrations are at lower depths. Mr. Macchiarella said that the Navy is not proposing to close plume boundaries with the Gore-Sorber data.

Mr. Everds noted that the map shows 40 direct-push boring locations and that the estimated 120 locations include possible step-out samples to further define the boundaries. Ms. Smith stated that her complaint is that there are colored dots on the map, but she is unable to tell what the dots mean because it is difficult to read the notations. She added that the EPA informed the RAB last month that soil gas was not being investigated at this site, but only groundwater. She asked why soil gas was now being investigated for groundwater contamination. Mr. Everds replied that soil gas is a useful tool to help optimize groundwater data collection. Ms. Smith said that the contamination is not volatilizing. Mr. Everds said that some is likely volatilizing. Mr. Macchiarella said that the soil gas data are being collected as a screening tool to better locate groundwater sampling points.

Some of the direct-push groundwater samples will be used to locate groundwater monitoring wells. New wells will be sampled after they are installed, quarterly for 1 year, and as needed in subsequent years. Eight new wells will be installed, for a total of 22 monitoring wells in the area. Slide 20 showed a photograph of a typical drill rig that will be used to install the monitoring wells.

Surface and near-surface soil samples will be collected to investigate whether there are sources in soil for the benzene and naphthalene in groundwater associated with the dark areas on the historical aerial photograph. Soil samples from 0.5 to 1 feet and 2.5 to 3 feet at 17 locations will be analyzed for benzene and naphthalene. If results exceed EPA residential preliminary remediation goals (PRGs), then further investigation may be necessary. This sampling pattern has a 95 percent degree of certainty that it will identify a release with a 21-foot or larger radius. Slide 22 showed a photograph of field staff collecting soil samples by hand augering. Slide 23 showed a map of the surface soil locations in a triangular grid pattern over the Site 25 dark-color area identified in a historical aerial photo.

The pilot test is a scaled-down version of the planned remediation system that will be used to determine the parameters for the full-scale design. The system includes surface equipment and a well field. Low-pressure and low-volume air is injected into the groundwater to promote biological degradation. A vacuum is applied to the soil above the groundwater to ensure that vapor is collected before it migrates to the surface. The planned duration of the test is 6 months but may vary. Slide 25 showed a diagram of the biosparge/SVE system. Slide 26 showed a photograph of the system equipment. Slide 27 showed a map of the pilot test. The pilot test will be set up in the Kollman Circle area and will be fenced and locked.

The pilot test system is scheduled to be installed in May and June 2007 and will operate until the end of the year. The Gore-Sorbers will be installed in May 2007 and removed in June 2007. Direct-push sampling and monitoring well installation are planned for July and August 2007. Surface soil sampling will occur in September 2007. The scheduled milestones for 2008 are issuing the draft remedial design (RD) and remedial action work plan in March 2008 and beginning remediation work in August 2008.

Ms. Smith asked if air quality has been monitored in the housing in the past, given that the Navy is worried about release of soil gas. Ms. Parker said that air quality has been monitored and noted that the Marina Village housing was built in the early 1990s with vapor barriers. The Coast Guard housing has been tested and there were no indications of concern. Those results have been summarized in previous reports. The testing with the SVE is to collect vapors associated with remediation. Ms. Smith said that she wanted to make sure the housing had been tested if the Navy believes there may be current release of soil gas and is using the Gore-Sorber to detect contamination in soil.

Ms. Sweeney asked why the pilot test is not being performed in the area of the historical stain that is shown on the map on Slide 23. Mr. Macchiarella said the green clover shapes on the pilot test map on Slide 27 are associated with the groundwater treatment system. The soil sampling map on Slide 23 showed sampling locations at the nodes of the triangular grid within the stain area. Ms. Parker said the pilot test is collecting data to design the full-scale remediation system. Ms. Smith asked how the pilot test location relates to the darkest purple (highest concentration) areas of the plume map shown on Slide 8. Ms. Parker said that the pilot test is being performed in the plume center but not directly over the darkest spot on the plume map. Ms. Smith said that the pilot test then is not being conducted in the most contaminated area. Mr. Macchiarella said that is correct and that it is not necessary to conduct pilot tests at a single point of highest concentration. The pilot test will be installed in the plume center, in a location that is convenient. Ms. Smith said that the stain area is directly above the highest concentration of the groundwater plume, but the Navy is not willing to locate the pilot test there.

Ms. Parker said that the Navy wants to collect soil samples at Kollman Circle, so the pilot test needs to run simultaneously at a nearby location with high contaminant concentrations. The soil data will be used to help define the full-scale system. The pilot test is run in a convenient location where noise control will not be a problem and the system will cause little disturbance in the area. The full-scale system will cover the area beneath Kollman Circle; the pilot test is in the plume center. Ms. Smith asked why only soil samples will be collected at Kollman Circle. Mr. Macchiarella said that soil samples will be collected to evaluate whether there is a contaminant source in that area. Ms. Sweeney asked if there has been historical drilling and sampling at the area of highest concentration of the plume, which is also in the center of the stain. Ms. Parker said that some data have been collected there, but that additional data for soil would also be useful.

Mr. Everds said that it also is important to run the pilot test in an area representative of the ground coverage, such as sidewalks and housing, for the full-scale system. The selected location in the plume center in the Kollman Circle area enables this to be done. Ms. Smith asked Mr. Everds which company he represents. Mr. Everds replied that he represents Tetra Tech ECI. Ms. Smith said that Shaw has been running a pilot test on Treasure Island without concern for the ground cover. Shaw set up the pilot test in the area believed to be the active source of the plume. Mr. Everds said that the planned pilot test is within the area of high concentrations, and the OU-5/IR-02 site-specific conditions were considered when selecting the pilot test area so that the best data can be collected to enable a good full-scale design. He added that the current plume map is based on sampling at different depths over a number of years using various techniques. The darkest purple spot on the plume map is based on a single well, and the contours of the plume may move and will be more accurate when the new data are obtained. He also commented that there are differences in how the system operates, depending on the ground cover. Mr. Torrey asked if

the stain area poses a high risk so that the contractor does not want to work in the area. Ms. Parker said that this is not a concern.

Mr. Peterson said that it would be important to know exactly the location of the plume if this study is intended to determine the best design of the remedial system. He asked Ms. Parker to clarify how the plume map was created and the difference between the plume map in the basewide annual groundwater report. Ms. Parker said that the basewide map is based on few existing monitoring wells and is based on few data compared with the plume map on Slide 8. This plume map is based on the wells, which cover the shallow aquifer, and on Hydropunch data collected over a number of years, which are from the deeper part of the shallow aquifer. The lower part of the plume reached by Hydropunch is where higher concentrations are found. Mr. Peterson said that previously it was unknown that the plume extends beneath homes, so it should now be important to focus efforts on this area to gather more data. He added that the residents probably do not know that the plume extends beneath their homes. Mr. Macchiarella said that the remedial investigations and feasibility studies in the past used the data from the plume as it was known at the time. The concentrations have not extended in new areas based on these new maps. The previous area extended under homes as well. Mr. Peterson said that he was concerned that higher concentrations are found under homes, regardless of how the data were collected.

IV. OU-2C Field-work Presentation

Ms. Parker began a presentation on field work at OU-2C. The handout of the presentation is included as Attachment B-3. The presentation included the following topics: site location and description, study areas, project objectives, the proposed sampling program, field activities, and schedule.

OU-2C includes soil and groundwater at IR Sites 5, 10 and 12, located in the central portion of Alameda Point. IR Site 5 is the former aircraft rework facility, Building 5. IR Site 10 is the former missile rework facility, Building 400. IR Site 12 is the former power plant, Building 10. Site history includes a combination of various industrial activities to support naval operations and aircraft maintenance and repair. A plume of chlorinated solvents exists under Building 5. Radioluminescence painting operations used paint with radium-226 in Building 5. Lead-acid and nickel-cadmium batteries were serviced in a battery storage area. Slide 4 showed a site location map for OU-2C. Ms. Parker identified IR Sites 5, 10 and 12 on the map.

There are six evaluation areas (EAs) at the site. These include:

- EA1 – OU-2C groundwater contaminated by volatile organic carbons (VOCs), metals, cyanide, and potentially radium
- EA2 – soil and groundwater in Building 2 (former dry cleaning operations)
- EA3 – soil at the southern portions of Building 5 (plating shop and foundry)
- EA4 – soil at the northern portion of Building 5 (aircraft maintenance line)
- EA5 – soil south of Building 5
- EA6 – soil east of Building 5

Slide 6 showed a map of the evaluation areas. Ms. Parker identified the six areas on the map.

The project has the following four objectives: collect supplemental RI samples to assess potential risk to human health and the environment; fill data gaps and complete the characterization of the nature and extent of contamination in soil and groundwater; assess groundwater levels and determine the direction of groundwater flow; and assess the tidal influence between Seaplane Lagoon and OU-2C.

The proposed sampling plan includes 218 direct-push borings, including step-out locations, from 15 to 30 feet bgs. Fifteen new monitoring wells will be installed and sampled and 14 existing monitoring wells

will be sampled. There will be a total of 16 piezometers at eight paired locations. The tidal study will include 27 measurement locations. There will be 100 soil gas sampling locations.

Slide 9 showed a list of the field activities planned, and Slides 10 through 23 showed photographs of field work and sampling techniques. Ms. Sweeney asked if work in Building 5 is taking place next to the six-phase heating system for dense nonaqueous phase liquid (DNAPL). Ms. Parker said that some of the field work is near the DNAPL removal. Mr. Schilling said that several soil sample locations and two groundwater locations overlap the six-phase heating system.

Slide 24 showed the start dates for 2007 field activities. Some of the field activities overlap. Utility clearance, concrete coring, and land surveying are ongoing. Soil gas sampling, aquifer testing, and the tidal influence study will begin in May 2007. All other activities began in March or April.

Ms. Sweeney said that a chlorinated solvent plume is under one of the buildings and asked if a figure shows this plume in the presentation. Mr. Macchiarella said that many field work investigations are under way at OU-2C in addition to the work on the chlorinated solvent plume. Ms. Parker added that drilling is being conducted outside of the six-phase heating area, in addition to other soil, soil gas, and groundwater sampling. Ms. Sweeney asked if radioactivity will be assessed. Ms. Parker said that testing will occur within Building 5, including a few select groundwater locations. Ms. Smith and Mr. Peterson asked if this testing includes Building 400 or if the testing is only at Building 5. Mr. Macchiarella said that radium was associated with Building 5. The primary issue at Site 5 is the historical shops that used radium-226 paint for dials and aircraft. Ms. Smith said that the historical radiological report (HRA) indicates Building 5 is the applied instruments building. Ms. Parker said there might be other radiological surveying at other buildings at Alameda Point. Ms. Smith said that she is concerned with Building 400, which is located within OU-2C. She asked if this program is investigating Building 400.
Mr. Macchiarella said this program is investigating Building 400, which is part of Site 10 in OU-2C.
Ms. Smith asked if a radiological investigation is planned at Building 400. Mr. Macchiarella said no investigation is planned. Ms. Cook said that in 1998 and 1999, the Navy as part of a radiological removal action excavated a large portion beneath Building 5 and removed the sewer in the middle of the building and the lateral line west of Building 5. Building 400 was also cleared in addition to Building 5, and then the funding ran out on that project. The interior of Building 400 and Building 5 were cleared and will not be investigated further. The lateral line off Building 5 into Site 26 is still uninvestigated and the lateral line to Seaplane Lagoon is known to be contaminated. That removal action should start by the end of the year. Mr. Peterson asked about the tenants in Building 400. Mr. Macchiarella said that portions of the building are occupied but he was uncertain of the tenant. Mr. Peterson asked if those portions would be investigated. Ms. Cook replied that only the exterior of Building 5 will be investigated.
Ms. Stumpenhaus said that a large boat was being refurbished in the hangar portion of Building 400.
Ms. Smith said that the HRA notes the ventilation and exhaust systems were never investigated and that the third floor was not surveyed. Mr. Macchiarella said that some areas still needed to be investigated.
Ms. Cook said that the removal action focused on soil, groundwater, storm sewers, and drain pipes.
Ms. Smith said that the HRA indicates no contamination in Building 5, but drain pipes at Building 400 were not investigated. Ms. Cook said that the drain pipes are a data gap for Building 400.

Ms. Smith asked if contamination was found in the dry cleaning area. Ms. Cook said that the dry cleaning area will be investigated.

V. BCT Activities

Mr. Simon reported that the agencies have been receiving a number of draft final documents from the Navy and have been reviewing the response to comments (RTCs). The agencies are reviewing the RTCs

for the draft final FS for Site 2. The RTCs for the draft final ROD for OU-1 and the OU-5/IR02 ROD are also being reviewed.

The agencies will complete the review of the Western Bayside and Breakwater Beach site investigation soon. The comments on the draft ROD for Site 28 are due soon as well. The review is nearly complete for the RI for Sites 20 and 24, the offshore sites at Oakland Inner Harbor and Seaplane Lagoon.

The Water Board has been meeting with the Navy on progress on the total petroleum hydrocarbon (TPH) program. The Navy has submitted work plans for corrective action areas (CAAs) and is making progress with that program.

VI. Community and RAB Comment Period

Ms. Sweeney commented that Mr. Jeff Mitchell at the *Alameda Journal* said there had been a press release about dredging off Seaplane Lagoon. She asked who is responsible for dredging. Mr. Macchiarella said that the press release may have related to the Site 17 Seaplane Lagoon ROD. Work plans and remedial design would be associated with any dredging. Mr. Biggs commented that he thought the press release involved the dredged material that was to be spread on the runway. Mr. Macchiarella said the Navy plans to use a portion of the runway taxiway north of the lagoon to continue the radiological removal action and possibly the Site 17 dredging. Ms. Smith asked if the taxiway is adjacent to the lagoon and not Site 2. Mr. Macchiarella said that it is adjacent to the lagoon. Mr. Biggs asked if the work would disrupt the operations of Alameda Point tenants. Mr. Macchiarella said the Navy is discussing plans with the city and the property manager because the Navy will need space for the removal.

Mr. Lynch said that one of the areas planned for surface sampling has been heavily disturbed by construction equipment. He added that the boundaries of the investigation did not make sense because 15 years ago contamination was detected on the College of Alameda campus at what is now the baseball field. The Navy conducted the investigation and it seems that the groundwater plume would extend at least as far as the baseball field. Mr. Lynch said that his main concern involved Site 25. When the contaminated surface soil was removed, the decision was made to excavate to 2 feet. Orange plastic was then installed at 2 feet below the clean fill material as a warning. Mr. Lynch asked if the Navy or the agencies had ever received a phone call from a citizen who had unearthed the plastic. A tree has been removed in that area of Site 25 and now orange plastic is littered around the location. Mr. Macchiarella commented that he was unaware that a tree was removed. Mr. Lynch said that the tree was removed 6 months ago and so the orange plastic put in place did not effectively provide a warning. He commented that orange plastic does not provide safety. Ms. Smith asked if the tree was removed by a professional company. Mr. Lynch said that it was probably removed by the landscaper hired by the Coast Guard. He added that contaminated soil was not investigated around the tree, so removal of the roots probably was extensive to reach areas of orange plastic. Ms. Smith said that it strikes her as strange that the professional company would not understand the issues associated with Alameda Point sites. Mr. Lynch commented that the contractor should have been alarmed in a housing area that is vacant and not safe for people to live. Mr. Macchiarella responded that the housing is not vacant because it is not safe to live there. Mr. Lynch asked why then does no one live there if the Navy spent millions of dollars on remediation and the Coast Guard spent millions of dollars renovating the housing. He added that he would not consider that area safe for humans.

Mr. Torrey announced that he has distributed a Hazards Mitigation and Preparedness Questionnaire. The questionnaire is designed to help the City of Alameda Disaster Mitigation Committee by identifying the community's concerns about natural and human-caused hazards and to better understand community needs in reducing risk and loss from such hazards. Mr. Torrey requested that the form be returned to the

City of Alameda Fire Department. The survey will help the committee design an emergency plan for Alameda.

Mr. Torrey also announced that the City Council will honor members of its boards, commissions, and committees with a buffet at 8:30 a.m. on May 31, 2007. RAB members should respond by May 10 to attend.

The meeting adjourned at 8:20 p.m.

ATTACHMENT A

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING AGENDA
April 5, 2007

(One Page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

MAY 3, 2007, 6:30 – 8:30 PM

ALAMEDA POINT – BUILDING 1 – SUITE 140
COMMUNITY CONFERENCE ROOM
(FROM PARKING LOT ON W MIDWAY AVE, ENTER THROUGH MIDDLE WING)

TIME	SUBJECT	PRESENTER
6:30 - 6:45	Approval of Minutes	Mr. George Humphreys
6:45 - 7:00	Co-Chair Announcements	Co-Chairs
7:00 – 7:30	Presentation on the Upcoming Field-work at Operable Unit 5 (OU-5)[1]	Ms. Mary Parker
7:30 – 8:00	Presentation on Field-work at Operable Unit 2C (OU-2C)[2]	Ms. Mary Parker
8:00 – 8:10	BCT Activities	Mr. Erich Simon
8:15 – 8:30	Community & RAB Comment Period	Community & RAB
8:30	RAB Meeting Adjournment	

1: OU-5 is groundwater in the area of North Village Housing, Bayport Housing, and FISCA. (Please note that groundwater is not used for tap water at Alameda Point, FISCA or anywhere in Alameda, as tap water is provided by East Bay Municipal Utility District.)

2: OU-2C is soil and groundwater at Sites 5, 10, and 12, which are located in the central portion of Alameda Point. Site 5 is the former Aircraft Rework Facility (Bldg 5), Site 10 is the former Missile Rework Facility (Bldg 400) and Site 12 is the former Power Plant (Bldg 10).

ATTACHMENT B

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING HANDOUT MATERIALS

B-1 List of Reports and Correspondence Received during April 2007, distributed by Neil Coe on behalf of George Humphreys, RAB Community Co-Chair (2 pages)

B-2 Presentation on the Upcoming Field Work at OU-5, presented by Mary Parker, BRAC PMO West (15 pages)

B-3 Presentation on Field Work at OU-2C, presented by Mary Parker, BRAC PMO West (13 pages)

ATTACHMENT B-1

LIST OF REPORTS AND CORRESPONDENCE RECEIVED APRIL 2007

(Two Pages)

Restoration Advisory Board
Documents and Correspondence
Received during April 2007

Documents

1. April 4, 2007, "Draft Final Feasibility Study Report, IR Site 2, West Beach Landfill and Wetlands, Alameda Point, California", prepared by Battelle and BBL, Inc. for BRAC Program Management Office West.
2. April 4, 2007, "Final Remedial Investigation for Site 32, Alameda Point, Alameda, California", prepared by Bechtel Environmental, Inc. for BRAC Program Management Office West.
3. April 23, 2007, "Final Remedial Investigation/Feasibility Study for Site 35, Alameda Point, Alameda, California", (five volumes) compact disk, replacement pages, covers and spine inserts, prepared by Bechtel Environmental Inc. for BRAC Program Management Office West.
4. April 26, 2007, "Final Remedial Investigation Report, IR Site 32, Northwestern Ordnance Storage Area, Alameda Point, Alameda, California", compact disk, prepared by Bechtel Environmental, Inc. for BRAC Program Management West.
5. April 26, 2007, "Draft Final Site Investigation Report, Data Gap Sampling, Installation Restoration Site 26, Alameda Point, Alameda, California", prepared by Innovative Technical Solutions, Inc. for BRAC Program Management Office West.

Correspondence

1. March 28, 2007 (received April 4, 2007), "Review of Draft Site Investigation Report, Transfer Parcel EDC-17, Alameda Point, Alameda County", letter from Ms. Susan F. Goss, PG, CHG, Department of Toxic Substances Control (DTSC) to Mr. Thomas L. Macchiarella, BRAC Program Management Office West.
2. April 2, 2007, "Review of the Draft Final Remedial Investigation Report, IR Site 32, Alameda Point, Alameda, California, March 2007", letter from Xuan-Mai Tran, U. S. EPA, Region IX, to Mr. Thomas Macchiarella, BRAC Program Management Office West.
3. April 2, 2007, comments on "Draft Work Plan for Data Gap Sampling Investigation Installation Restoration Site 28, Alameda Point", letter from Ms. Anna-Marie Cook, U. S. EPA, Region IX, to Mr. Thomas Macchiarella, BRAC Program Management Office West.
4. April 12, 2007, "Approval of Draft Final Remedial Investigation Report, IR Site 32, Alameda Point, Alameda, California", letter from Mr. Daniel Ward, P. E., to Mr. Thomas L. Macchiarella, BRAC Program Management Office West.
5. April 18, 2007, "RE: Draft Record of Decision for Site 25 Soil, Alameda Point", comments from Ms. Anna-Marie Cook, U. S. EPA, Region IX, to Mr. Thomas Macchiarella, BRAC Program Management Office West.

6. April 17, 2007, "Review of Draft Soil Remedial Investigation (RI) Report-Revision 1, Installation Restoration (IR) Site 31, Marina Village Housing, Alameda Point, Alameda County", letter from Ms. Dot Lofstrom, P. G., DTSC, to Mr. Thomas L. Macchiarella, BRAC Program Management Office West.

ATTACHMENT B-2

UPCOMING FIELD WORK AT OU-5

(15 Pages)

BRAC
PMO

Upcoming Field Work at Operable Unit 5 Alameda Point Alameda, California Restoration Advisory Board

May 3, 2007

Mary Parker
Project Manager – BRAC PMO

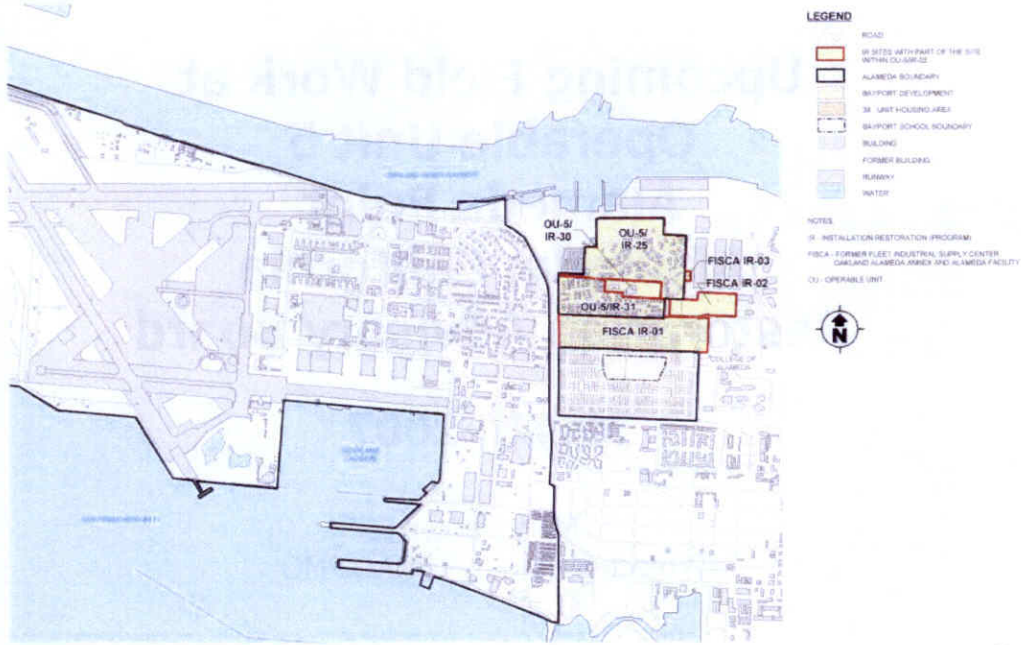
BRAC
PMO

Agenda

- Site Location and Introduction
- Background
- Selected Groundwater Remedy
- Pre-Design Investigation and Pilot Test
- Schedule

Site Location Map

BRAC PMO



Introduction

BRAC PMO

- Objective of upcoming field work is to refine understanding of site conditions and perform pilot test to support groundwater remedial design
- Evaluations show there is no immediate or short-term risk to children, residents, or others.
- There are no drinking water wells in this area, and water service to the homes and other buildings is provided by the East Bay Municipal Utility District

Introduction

BRAC PMO

- The groundwater treatment system will address potential long-term risks, including if the groundwater were to be used in the future
- Pre-design field work will be performed from May-December 2007, and will include various sampling activities and 6-month operation of a pilot-scale biosparging/SVE system

Background

BRAC PMO

- Late 1800s / early 1900s a manufactured gas plant and oil refinery were located in vicinity
- Early 1900s Alameda Point became farmland, then an industrial and transit center
- The Navy acquired the main portion of Alameda Point in the 1930s, and some property east of Main Street was acquired in the 1950s to 1960s
- Marshlands were filled, trapping historic discharged petroleum products – now called the Marsh Crust
- Navy operated Naval Air Station Alameda until 1997
- Numerous soil and groundwater investigations were conducted since 1989

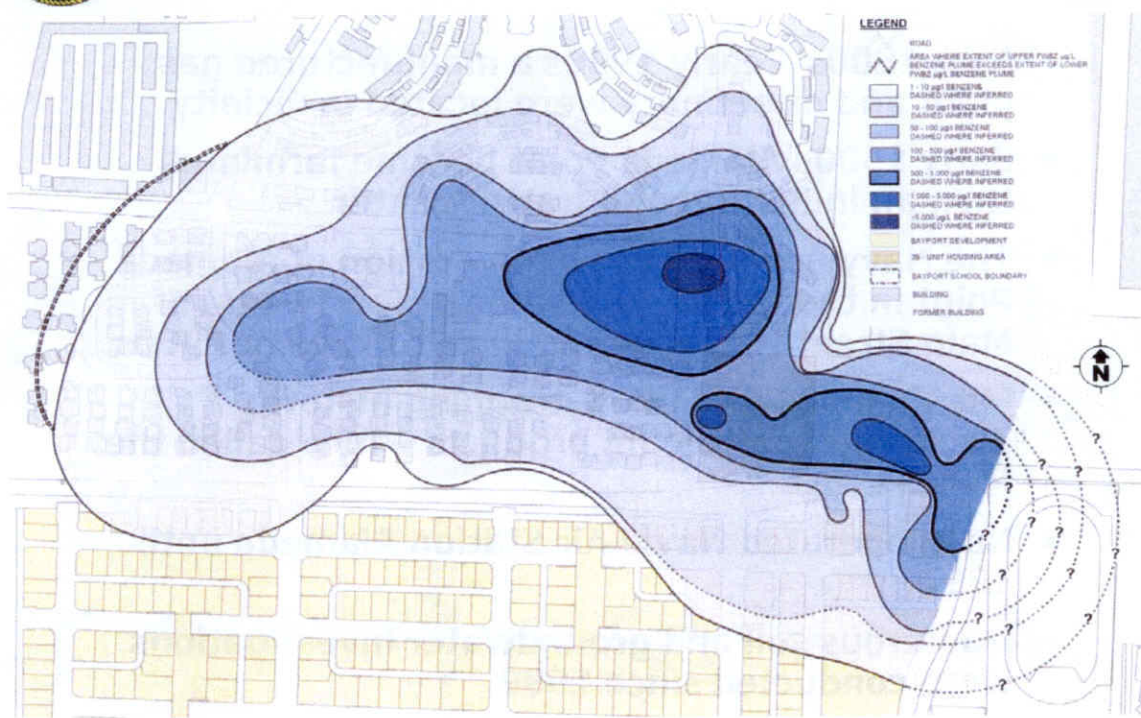
Selection of Groundwater Remedy

BRAC PMO

- The Proposed Plan groundwater remedy for Operable Unit 5 (OU-5)/IR-02 plume was issued to the public for review in March 2006
- A public meeting was held on March 15, 2006
- Remedy based on numerous studies, and described in legally-binding Record of Decision (ROD). The ROD is currently being finalized with the regulatory agencies
- The next step is pre-design field work, which is scheduled to begin in May 2007

Benzene Groundwater Plume

BRAC PMO



Selected Groundwater Remedy

BRAC PMO

- Benzene and naphthalene in groundwater are typically cleaned up by enhancing natural aerobic microbiological processes
- The OU-5/IR-02 remedy involves a combination of technologies
- The selected remedy will add air (oxygen) - Biosparging
- To capture fugitive vapors , if generated, the remedy will include Soil Vapor Extraction (SVE)

Pre-Design Field Work

BRAC PMO

Investigation Techniques

- Tidal study
- Gore-Sorber modules
- Direct push groundwater and soil sampling
- Monitoring well groundwater sampling
- Surface soil sampling
- Pilot test

Pre-Fieldwork Planning & Safety

BRAC PMO

- Workplan and Health and Safety Plan reviewed by stakeholders and regulatory agencies
- Implementation of Site Control and Safety measures protect workers and public:
  - Underground utilities located and marked prior to intrusive activities
  - Work areas controlled with cones and caution tape
  - Pilot test area fenced with locked gate
  - Air in work area monitored for vapors during drilling and sampling activities
  - Daily safety meetings and onsite safety technician ensure compliance with safe work practices
  - No equipment or wastes left onsite after work hours

Tidal Study

BRAC PMO

- Purpose is to determine effect of tide cycles on groundwater flow direction
- Water levels measured in approximately 25 wells during maximum tide fluctuation
- Locations of new piezometers and wells will be optimized based on refined groundwater flow direction

Tidal Study Well Locations

BRAC PMO

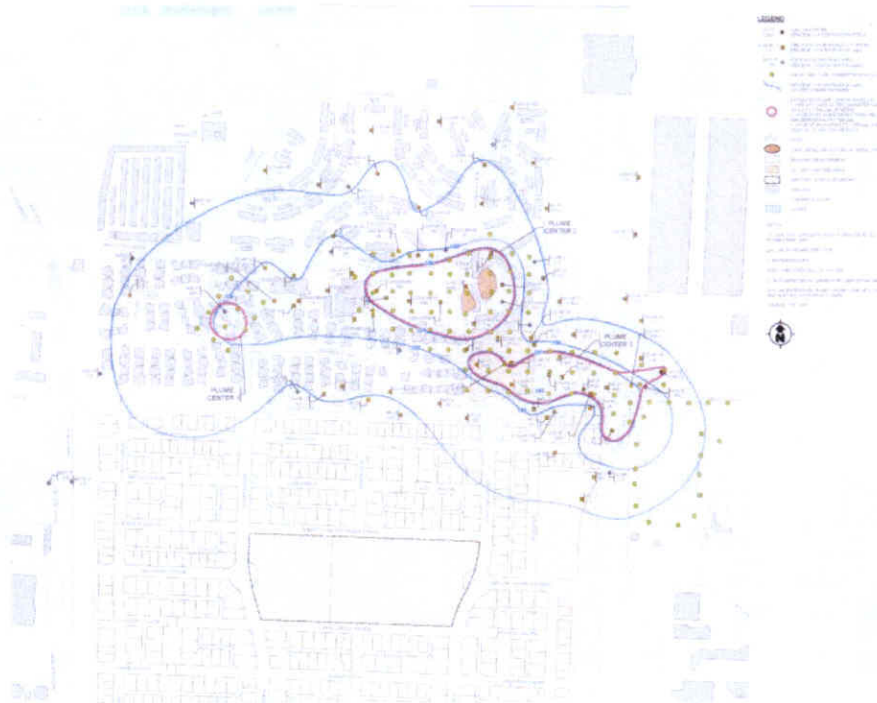
Gore-Sorber Modules

BRAC PMO

- Gore-Sorbers provide screening-level soil gas data to guide direct push sampling
- Drill 1 to 1½ inch diameter pilot hole using power drill to 2 to 3 feet bgs (no heavy equipment)
- Rod used to push Gore-Sorber Module into hole
- Hole plugged and left with only a retrieval cord at surface
- Left in place for 2 to 4 weeks
- Module pulled & surface restored to original condition
- Approximately 100 modules will be installed

Gore-Sorber Module Locations

BRAC PMO



Direct Push Sampling

BRAC PMO

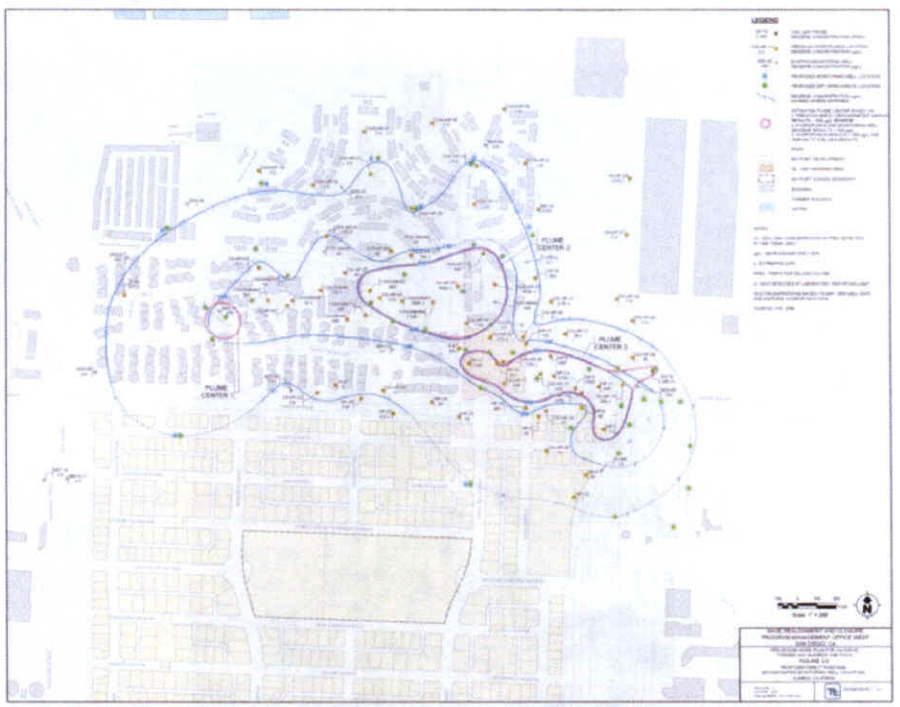
- Groundwater sampling locations based on the Gore-Sorber® Module results
- The rig makes 4" diameter hole to a depth of approximately 20 feet
- Groundwater samples are collected using hydropunch
- Boring backfilled with cement-bentonite slurry, surface restored to pre-boring conditions
- Approximately 120 sampling locations are planned

Direct Push Equipment

BRAC PMO

Direct Push Sampling Locations

BRAC PMO



Monitoring Well Groundwater Sampling

BRAC PMO

- Purpose is to evaluate the benzene (1 ug/L)/ naphthalene (100 ug/L) plume boundary
- Direct push groundwater samples will be used to locate the wells
- New wells will be sampled after installation, quarterly for 1 year, and as needed in subsequent years
- 8 new wells will be installed for a total of 22 monitoring wells in the area

Monitoring Well Drill Rig

BRAC PMO

Surface Soil Sampling

BRAC PMO

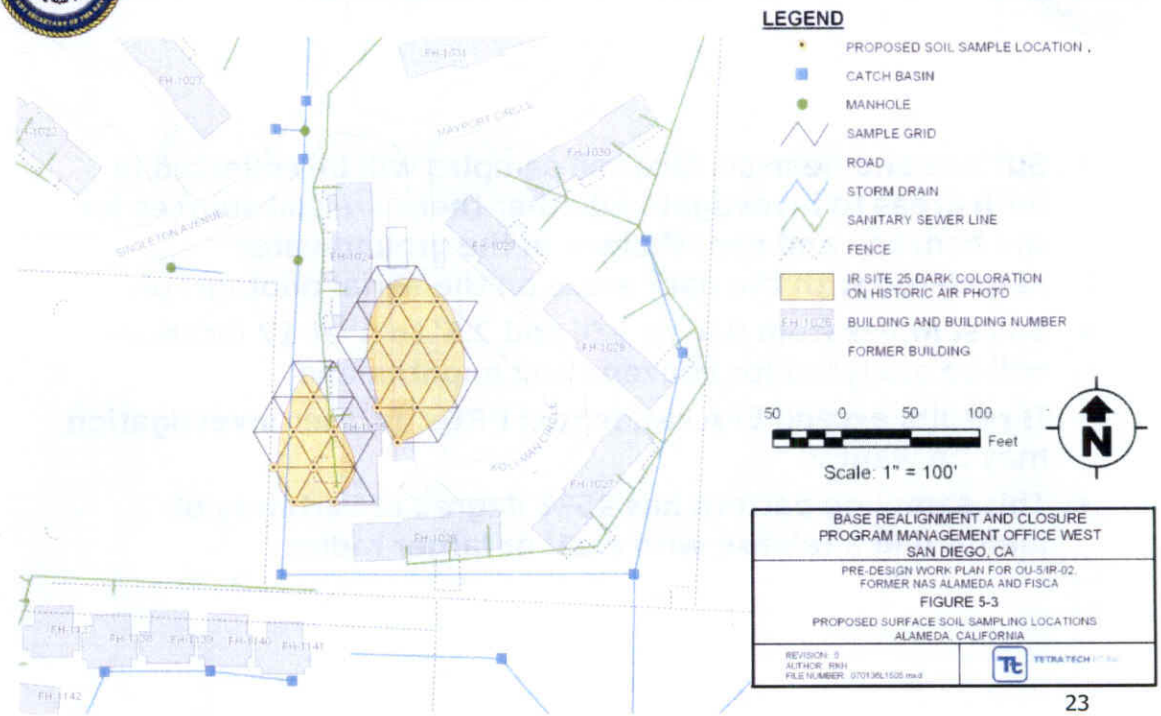
- Surface and near-surface soil samples will be collected in both areas to investigate whether there are soil sources for the benzene and naphthalene in the groundwater associated with the dark areas on the aerial photograph
- Soil samples from 0.5′ to 1.0′ and 2.5′ to 3′ at 17 locations will be analyzed for benzene and naphthalene
- If results exceed EPA residential PRGs, further investigation may be wanted
- This sampling pattern has 95% degree of certainty of identifying a release with a 21′ or larger radius

Surface Soil Sampling

BRAC PMO

Surface Soil Sampling Locations

BRAC PMO



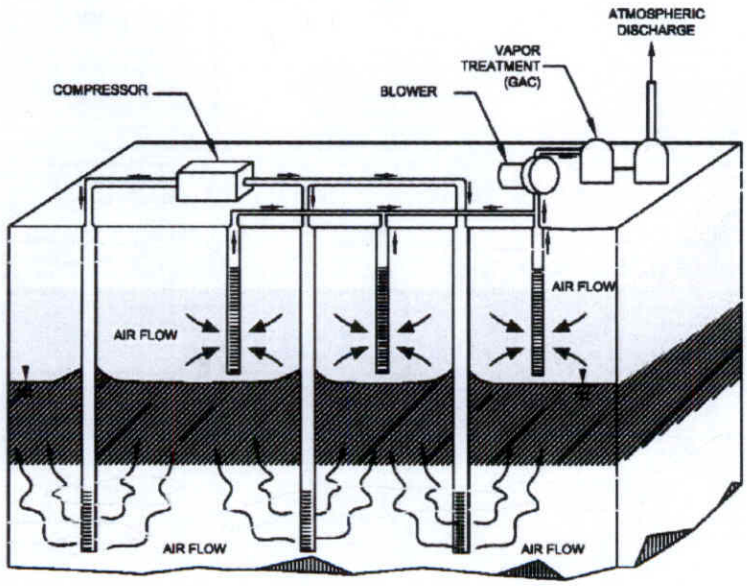
Pilot Test

BRAC PMO

- Purpose is to use results from scaled-down version of remediation system to determine parameters for full-scale design
- System includes surface equipment and wellfield
- Air at low volume and pressure is injected into groundwater to promote biological degradation
- Vacuum is applied to soil above groundwater to ensure that vapor is collected before migrating to the surface
- Planned test duration is 6 months, but may vary based on progress monitoring results

BioSparge/SVE System

BRAC PMO



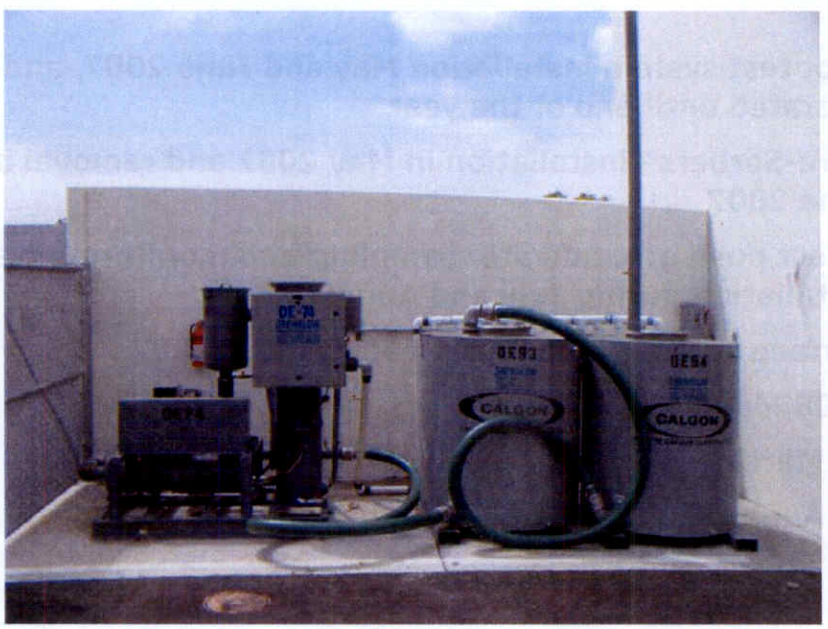
LEGEND:

- ADSORBED PHASE
- DISSOLVED PHASE
- WATER TABLE
- FLOW DIRECTION
- VAPOR MIGRATION PATHWAY

NOTES:
GAC - GRANULATED ACTIVATED CARBON

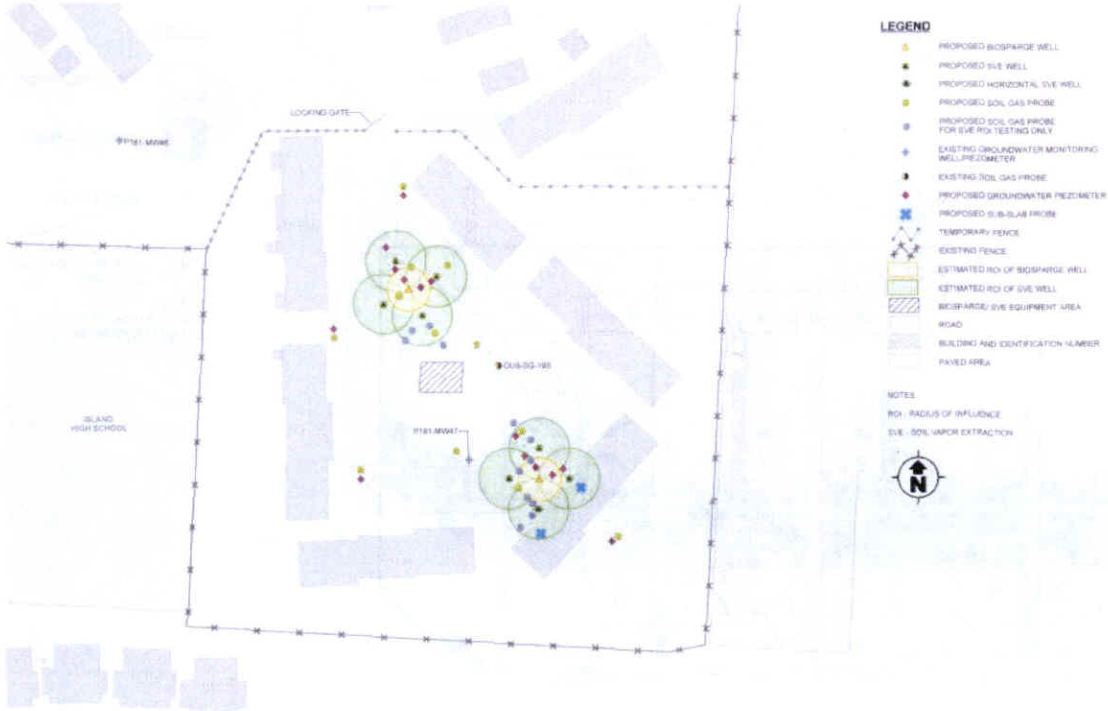
SVE/Biosparging Surface Equipment

BRAC PMO



Pilot Test Map

BRAC PMO



Planned Schedule

BRAC PMO

- **Pilot test system installation May and June 2007, and operated until end of the year**
- **Gore-Sorbers® installation in May 2007 and removal in June 2007**
- **Direct push groundwater sampling and monitoring well installation during July and August 2007**
- **Surface soil sampling during September 2007**
- **2008 Milestones:**
  - **March 2008 Draft Remedial Design & Work Plan**
  - **August 2008 Remediation begins**

Pre-Design Field Work

BRAC
PMO

Questions?

ATTACHMENT B-3

FIELD WORK AT OU-2C

(13 Pages)

BRAC
PMO

Fieldwork at Operable Unit 2C (OU-2C) for a Supplemental Remedial Investigation Alameda Point Alameda, California

RAB Meeting
May 3, 2007

Mary Parker
Navy Project Manager

BRAC
PMO

List of Topics/Agenda

- Site Location and Description
- Study Areas
- Project Objectives
- Proposed Sampling Program
- Field Activities (*with selected photos*)
- Field Schedule

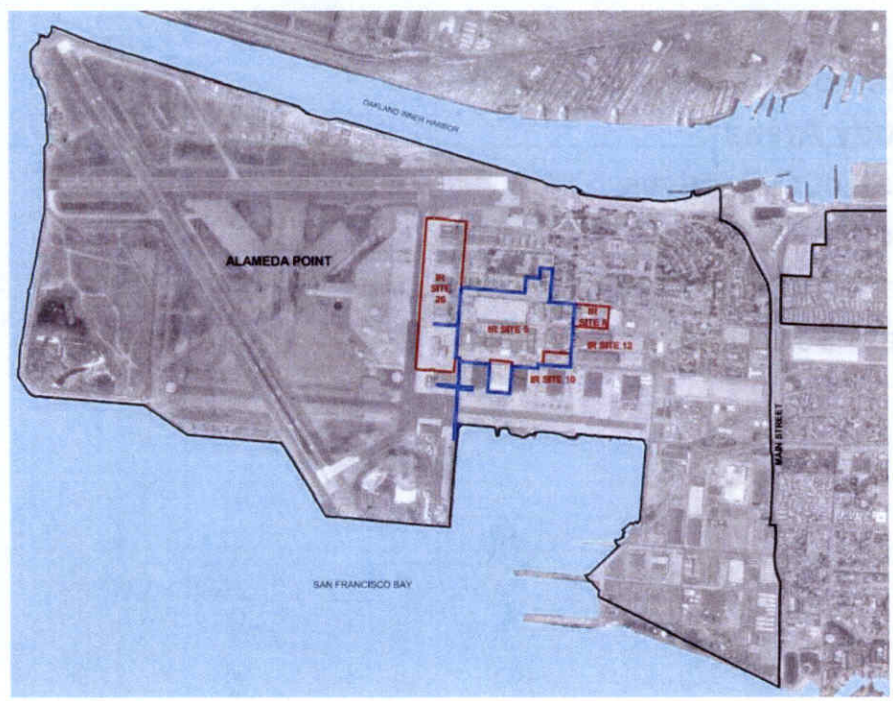
Site Location and Description

BRAC PMO

- OU-2C includes soil and groundwater at three IR sites (Sites 5, 10, and 12) located in the central portion of Alameda Point.
  - IR Site 5 - Former Aircraft Rework Facility (Bldg. 5),
  - IR Site 10 - Former Missile Rework Facility (Bldg. 400),
  - IR Site 12 - Former Power Plant (Bldg. 10).
- Site history includes a combination of various industrial activities to support naval operations and aircraft maintenance and repair.
- A chlorinated solvent plume exists under Building 5.
- Radioluminescence painting operations used paint with radium-226 in Building 5.
- Lead-acid and nickel-cadmium batteries were serviced in a battery storage area.

OU-2C IR Site Locations

BRAC PMO



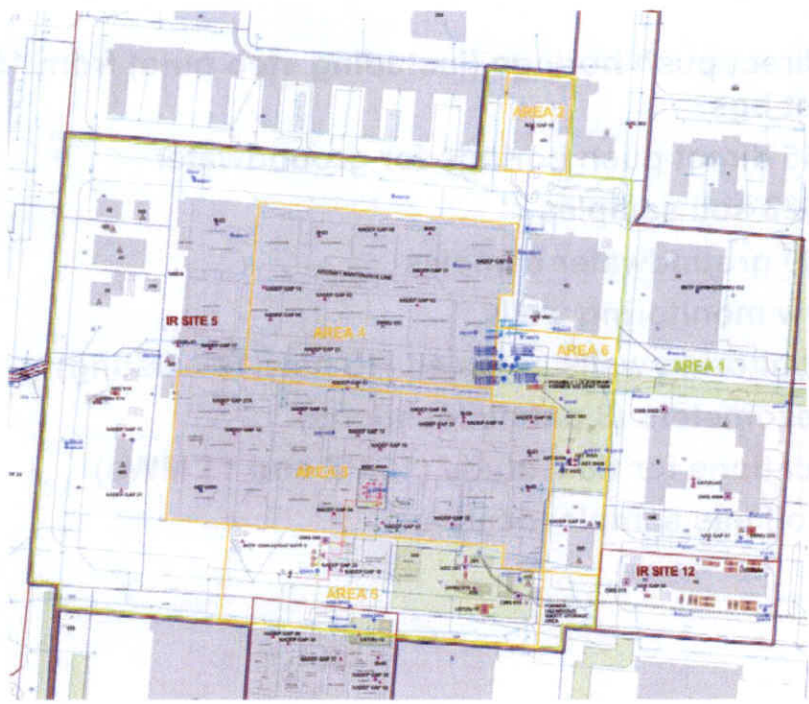
Study Areas at IR Sites

BRAC PMO

- 6 Evaluation areas, including various data gaps
  - EA1 – OU-2C groundwater impacted by VOCs, metals, cyanide, and potentially radium
  - EA2 – soil and groundwater at Bldg. 2 (former dry cleaning operation)
  - EA3 – soil at southern portions of Bldg. 5 (plating shop, foundry, etc.)
  - EA4 – soil at northern portion of Bldg. 5 (aircraft maintenance line)
  - EA5 – soil south of Bldg. 5
  - EA6 – soil east of Bldg. 5

Evaluation Areas

BRAC PMO



Project Objectives

BRAC PMO

- Conduct supplemental remedial investigation (RI) sampling to assess potential risk to human health and the environment
- Fill data gaps and complete the characterization of the nature and extent of contamination in soil and groundwater
- Assess groundwater levels and determine the direction of groundwater flow
- Assess the tidal influence between Seaplane Lagoon and OU-2C

Proposed Sampling Program

BRAC PMO

- 218 direct push borings (including step outs) from 15 to 30 feet bgs
  - 55 direct push borings for groundwater
  - 523 soil samples
  - 99 groundwater samples
- 15 new monitoring wells
- 29 monitoring wells sampled (15 new/14 existing)
- 16 piezometers (8 paired locations)
- 27 locations for tidal study (16 PZ and 11 MWs)
- 100 soil gas sample locations

Field Activities

BRAC PMO

- Land survey
- Utility clearance (geophysics)
- Concrete cutting and coring
- Direct push drilling
- Soil and groundwater sampling
- Monitoring well installation (upper and lower portions of the FWBZ using hollow stem auger drilling and the SWBZ using mud rotary drilling)
- Well development and sampling
- Aquifer testing (slug tests)
- Soil gas survey
- Water level/tidal monitoring study
- IDW management and disposal

Concrete Cutting

BRAC PMO

Direct Push Drilling with Limited Access Rig

BRAC PMO

Soil Cores (10 to 30 feet bgs)

BRAC PMO

VOC Soil Sampling Device

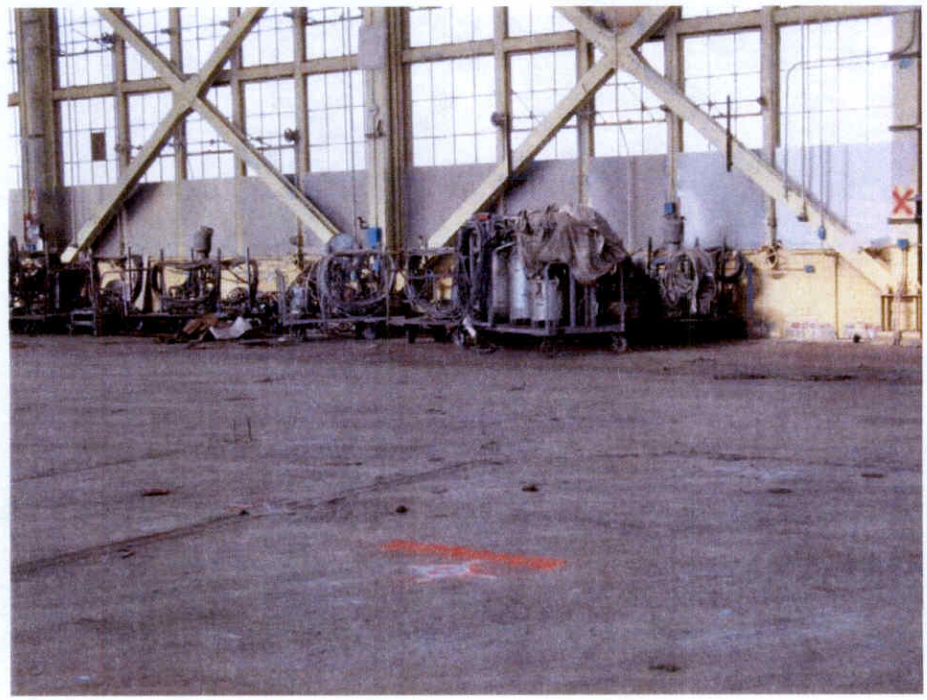
BRAC PMO

Soil Samples

BRAC PMO

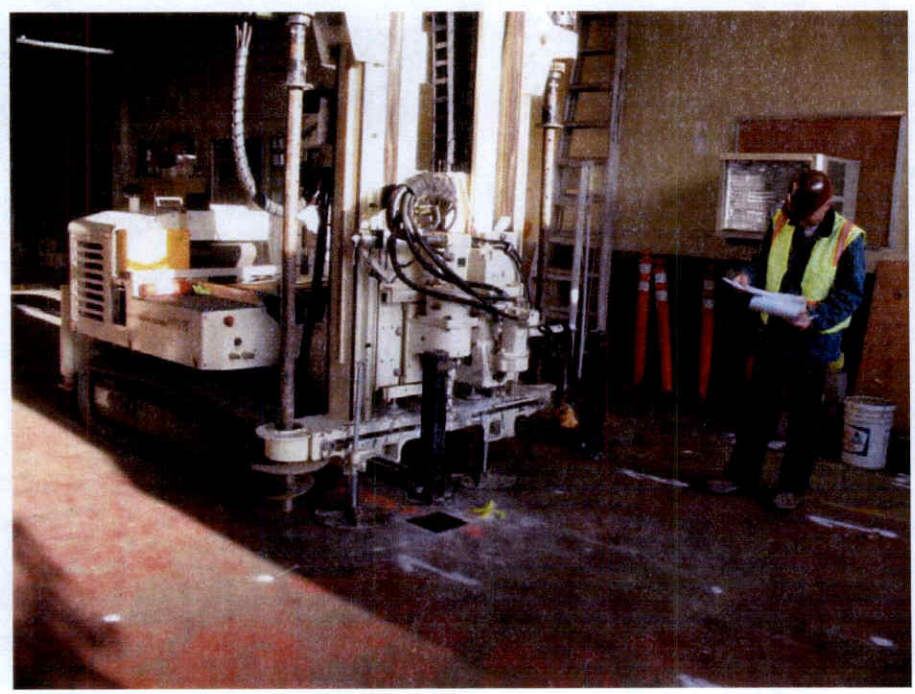
Inside Building 5

BRAC PMO



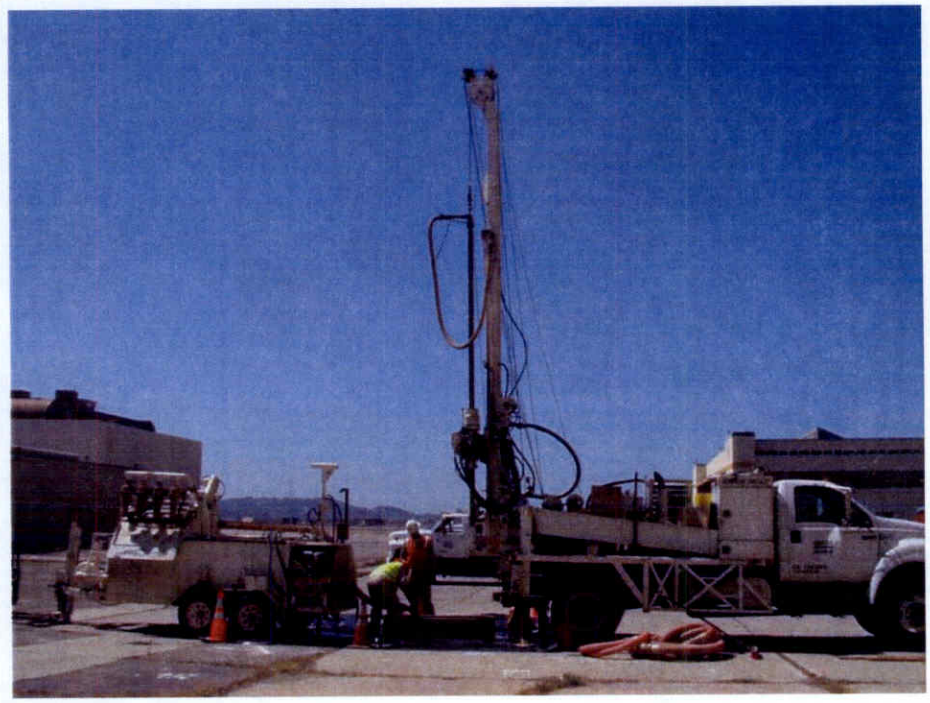
Limited Access Drilling Inside Building

BRAC PMO



Mud Rotary Drill Rig

BRAC PMO



Mud Rotary Drilling

BRAC PMO

Setting the Surface Casing on Monitoring Well

BRAC PMO

Hollow Stem Auger Drilling

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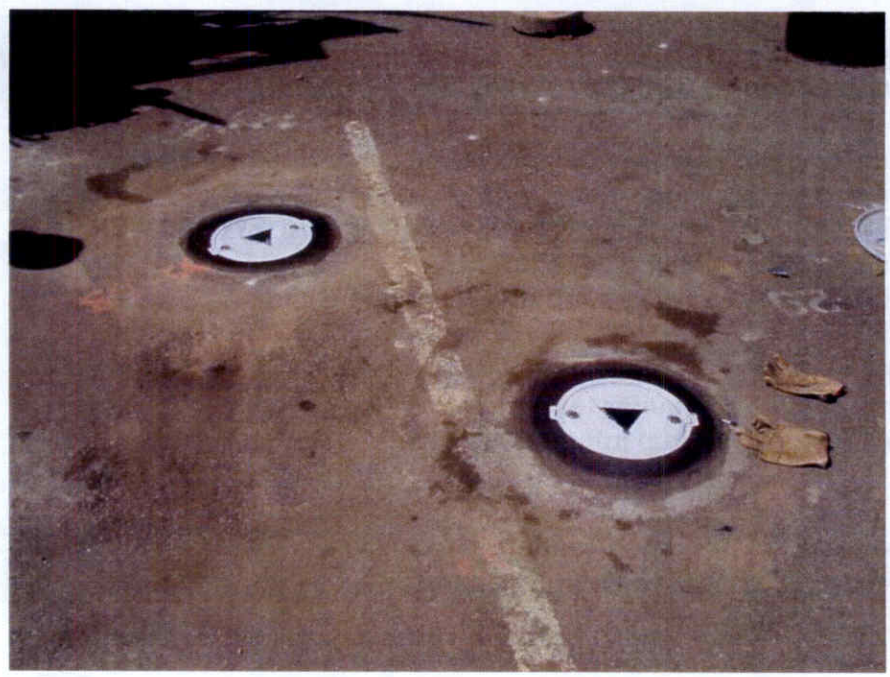
Well Installation Using Hollow Stem Auger Drilling

BRAC PMO

Well Surface Completion

BRAC PMO



Groundwater Sampling

BRAC PMO

Field Schedule - 2007

BRAC PMO

All dates below are start dates; field activities overlap; utility clearance, concrete coring, and land surveying are ongoing:

March 22	**Direct push drilling outside Building 5**
April 9	**Mud rotary drilling set surface casing**
April 12	**Hollow stem auger drilling and MW installation**
April 16	**Well development**
April 23	**Direct push drilling inside Building 5**
April 30	**Monitoring well sampling**
May 7	**Soil gas sampling**
May 8	**Aquifer testing**
May 11	**Tidal influence study**
June 2007	**Demobilization**
February 2008	**Issue Draft RI Report**

SulTech *A Joint Venture of Sullivan Consulting Group and Tetra Tech EM Inc.*
1230 Columbia Street, Suite 1080 ♦ San Diego, California 92101 ♦ (619) 525-7188 ♦ FAX (619) 525-7186

June 29, 2007

Thomas Macchiarella
BRAC Environmental Coordinator
BRAC Program Management Office-West
1455 Frazee Road, Suite 900
San Diego, California 92108

Subject: **Final RAB Monthly Meeting Summary Report**
Alameda Point, Alameda, California
Contract Number N68711-03-D-5104, Delivery Order 130

Mr. Macchiarella,

Please find enclosed the Restoration Advisory Board (RAB) final meeting summary report for the month of May 2007. As requested, your copy of the report has been submitted on compact disc.

The final RAB meeting summary reports for June through December 2007 will be submitted as they become available.

If you have any questions, please call me at (916) 853-4557.

Sincerely,

Lona Pearson

Lona Pearson
Project Administrator

cc: Diane Silva (3 hard copies, 1 CD)
Joyce Howell-Payne
Nars Ancog
Craig Hunter
Alona Davis
File

May – SULT.5104.0130.0002

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TRANSMITTAL/DELIVERABLE RECEIPT

Contract No. N68711-03-D-5104 Document Control No. SULT.5104.0130.0002

TO: Contracting Officer
Karen Rooney, Code 02RE
Naval Facilities Engineering Command
Southwest Division
1230 Columbia Street, Suite 870
San Diego, CA 92101-8517

DATE: 06/27/07
CTO: 0130
LOCATION: Alameda Point, Alameda, California

FROM:

Steven Bradley, Contract Manager

DOCUMENT TITLE AND DATE:

Final May 4, 2007, Restoration Advisory Board Monthly Meeting Summary

TYPE: ☐ Contractual Deliverable ☐ Technical Deliverable (DS) ☒ Other (TC)

VERSION: Final (e.g., Draft, Draft Final, Final) REVISION #: NA

ADMIN RECORD: Yes ☒ No ☐ CATEGORY: Confidential ☐

SCHEDULED DELIVERY DATE: 07/02/07 ACTUAL DELIVERY DATE: 07/02/07

NUMBER OF COPIES SUBMITTED TO NAVY: O/5C/3E/2D

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O/1D	1C/1D (w/QC)	
J. Howell-Payne (BPMOW.JH)	Craig Hunter	
1C + letter only	1C/1E	
Nars Ancog (03EN.NA)	Lona Pearson	
1C + letter only	1C/1E	**Date/Time Received**
Diane Silva *(EVR.DS)	Alona Davis	
3C/3E/1D	1C/1E	

*Admin Record Recipient

rev 10/01/03