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FINAL
NAVAL AIR STATION ALAMEDA RESTORATION ADVISORY BOARD
MEETING SUMMARY

http://www.efdsw.navfac.navy.mil/environmental/AlamedaPoint.htm

Building 677, Mural Room, Alameda Point Collaborative
Alameda Point
Alameda, California

October 7, 2003

ATTENDEES

See attached list.

MEETING SUMMARY

I. Approval of Minutes

Bert Morgan, Community Co-chair, called the meeting to order at 6:35 p.m.

Mr. Morgan asked for comments on the September 9, 2003, Restoration Advisory Board (RAB) meeting minutes. The minutes were approved, with the following corrections:

George Humphreys, Community Co-chair made the following comments:

- On page 2 of 17, second paragraph, "Kathleen Strait…" should be revised to "Kathleen Straight…"
- On page 4 of 17, second paragraph, "…Kenneth Connor…" should be revised to "…Kenneth Conner…"

Dale Smith, RAB member, made the following comments:

- On page 7 of 17, first paragraph, eighth line, "…approving this design by allowing for some golf balls…" should be revised to "…approving this design by allowing for some golf holes…"
- On page 7 of 17, third paragraph, fifth line, "…if conventional pesticides and herbicides would be used…" should be revised to "…if conventional pesticides and insecticides would be used…"
- On page 11 of 17, first paragraph, eleventh line "…these materials, thus allowing there use as fill." Should be revised to "…these materials, thus allowing their use as fill."
- On page 14 of 17, first paragraph, third sentence, "…placed on a bermed asphalt or concrete surface so the sediment does not seep into the ground…" should be

revised to "...placed on a bermed asphalt or concrete surface so the water in the sediment does not seep into the ground..."

- On page 15 of 17, the entire fourth paragraph has been moved to the sixth paragraph on page 14 of 17 in order to keep Ms. Smith's comments within the context of the subject matter.

II. Co-chair Announcements

Mr. Morgan made the following announcements.

The RAB Community Co-chair terms are coming to an end. An election for the Co-chair positions will be held in November 2003. Current candidates for the Co-chair positions are Jean Sweeney and Jim Sweeney. Anyone else interested in being a candidate for one of the two Co-chair positions should contact either Mr. Morgan or Mr. Humphreys to be placed on the ballot.

The December 2003 RAB meeting will be short. Half of the meeting will be dedicated to official RAB business, and the remainder will be a holiday party.

Several extra copies of the current community relations plan (CRP) are available for the public. The CRP was distributed to interested community members, regulators, and the Information Repository on September 30, 2003.

Mike McClelland, Navy Co-chair, made the following announcements.

RAB members Kevin Reilly and Elizabeth Johnson, City of Alameda (City), are excused from the meeting this evening; RAB member Michael John Torrey will be arriving late.

- A town hall meeting organized by the City and the Alameda Point Advisory Committee (APAC) will be held on Saturday October 25, 2003, between 9:00 am and 12:00 pm at the Auctions by the Bay Theatre, 2700 Saratoga Avenue, Alameda Point. The accomplishments, current status, and major issues of Alameda Point redevelopment will be discussed.

- The polycyclic aromatic hydrocarbons (PAH) open house poster board session will be held on October 15, 2003, between the hours of 4:00 and 8:00 pm, in the Mural Room, Building 677, Alameda Point Collaborative (APC).

Mr. McClelland announced distribution dates and/or comment due dates for the following documents:

- Draft Groundwater Remedial Investigation (RI) / Feasibility Study (FS) Coast Guard Housing (CGH) and Alameda Annex will be distributed on October 9, 2003. Comments are due on December 9, 2003. A copy will be sent directly to the Technical Assistance Public Participation (TAPP) grant contractor, Kenneth Conner.

- The third quarter basewide groundwater-monitoring report should be distributed sometime later in the month of October.

- Comments on the Draft Chemical Oxidation Work Plan for Sites 9 and 16 are due on October 8, 2003.

- Draft Operable Unit (OU) - 5 FS, comments are due on October 15, 2003.

- Chemical Oxidation Pilot Study Work Plan Site 4-1, comments are due on October 27, 2003.

- Draft Proposed Plan Sites 14 and 15, comments are due on November 2, 2003.

- Draft FS Site 26, comments are due on November 3, 2003.

Mr. McClelland stated that Navy headquarters has approved three new Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) sites. The new CERCLA sites are described as the following:

- Site 33 – South Tarmac and Runway Wetlands has PAH contamination found during the basewide PAH investigation; the site includes all of disposal parcel FED-2B and a portion of disposal parcel FED-1A

- Site 34 – Former Northwest Shop Area has polychlorinated biphenyls (PCB) and arsenic contamination, was originally identified in the environmental baseline survey, and is located between Sites 14 and 15 within economic development conveyance (EDC) Parcel 3

- Site 35 – West Housing Area (WHA), located in EDC-5, is a PAH removal area, designated to complete the RI/FS and record of decision (ROD) process

Mr. McClelland announced the following transitions relating to staff:

- Anna-Marie Cook, U.S. Environmental Protection Agency (EPA), has returned to work from maternity leave and may attend the next RAB meeting. Mark Ripperda, EPA, will continue to work on Alameda Point in a reduced capacity.

- Ann Klimek, Navy Environmental Business Line Team Leader Alameda Point, moved from Alameda Point to the Hunters Point facility two months ago. Fiaq Aljabi, Navy, will be replacing Ms. Klimek at Alameda Point. The environmental business line team leader is responsible for ensuring that federal funding for the various cleanup projects is programmed.

- Laurie Nelson, Navy Closure Business Line Team Leader Alameda Point, is moving to the east coast. Amy Jo Wileman, Navy Real Estate Specialist, will be promoted to Ms. Nelson's position. The Navy closure business line team leader works with the City on transfer and leasing issues.

- Andrew Dick, Navy Lead Remedial Project Manager (RPM) Alameda Point, has transferred to the Long Beach/Novato Team. Greg Lorton, Navy RPM, has been promoted to replace Mr. Dick as lead RPM. The transfers will be effective at the end of October 2003.

- Rick Weissenborn, Navy RPM Alameda Point, is being promoted to lead RPM at Moffet Field effective at the end of October 2003. The Navy is looking for replacements for the two vacant RPM positions and will potentially add an additional RPM position at Alameda Point.

- Mr. McClelland stated that he would be retiring as Alameda Point's Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) on January 2, 2004. Thomas Macchiarella is the new Alameda Point BEC. Mr. Macchiarella is currently the BEC for Long Beach/Novato. Mr. Macchiarella will attend the November RAB meeting and will be taking over as BEC about mid-November.

III. Presentation on Draft OU-5 FS

Glenna Clark, Navy, introduced Kim Taylor, of Camp Dresser & McKee Inc (CDM), to provide an update on the draft OU-5 FS, and a handout was provided. Ms. Taylor stated that the draft FS was distributed on August 15, 2003; comments on the report are due October 15, 2003.

Ms. Taylor provided some background on OU-5 and stated that OU-5 consists of three parcels: 181 (divided into seven Decision Areas), 182, and 183. The OU-5 RI report was completed in 2002 and included a risk assessment for soil for all three parcels at depths of 0 to 8 feet below ground surface (bgs). Based on the results of the risk assessment, no further action (NFA) was required in Decision Areas 1 and 3 of Parcel 181, because Areas 1 and 3 meet the human health risk assessment (HHRA) target goals. Risks from PAHs in the other areas and Parcels 182 and 183 required further action. A time critical removal action (TCRA) involving removal of the top 2 feet of soil and replacement with clean fill was performed on the higher risk areas including all of Parcels 182 and 183, and in portions of Parcel 181 (Decision Areas 4, 5, and 7). Remediation of Decision Areas 2 and 6 in Parcel 181 has not been conducted yet and is the subject of this FS. At the time of the previous risk assessment Decision Areas 2 and 6 were determined to be medium risk areas, so they were excluded from the TCRA at that time. This FS also evaluates the removal areas to ensure that CERCLA protective criteria are met for the proposed reuse.

The FS goals present the RI HHRA results and a new HHRA for the parcels where the TCRA was conducted to confirm that the HHRA cancer target goals were met.

The current FS HHRA results illustrated on the handout are:

- Parcel 181 (Decision Areas 1 and 3) have benzo(a)pyrene (BaP) equivalent concentrations at or close to 1 milligram per kilogram (mg/kg), which is a low cancer risk, and have a NFA recommendation.

- Parcels 182, 183, and Parcel 181 (Decision Areas 4, 5, and 7) have a BaP equivalent concentration of less than 1.8 mg/kg, which is a low cancer risk, and have a NFA recommendation.

- Parcel 181 (Decision Areas 2 and 6), has BaP equivalent concentrations of 1 to 2.9 mg/kg, which is a medium cancer risk. The FS recommends removal of the upper 2 feet of soil in hot spot areas as was conducted during the TCRA for the other OU-5 areas.

The remedial alternatives are targeted towards Parcel 181 (Decision Areas 2 and 6). Alternative 1 is no action. Alternative 2 is institutional controls (IC), and Alternative 3 is a removal action. Alternative 3, the removal action, includes the removal of the upper 2 feet of soil in selected hot spot areas, excavation, off-site disposal, backfill with clean fill, and an IC. The IC would be imposed on all of OU-5 to ensure that soil below 2 feet would not be disturbed anytime during future land use.

Ms. Taylor stated that the remedial action objective (RAO) at OU-5 is unrestricted residential use. The recommended remedial alternative, after screening and detailed analysis of Decision Areas 2 and 6, is Alternative 3, which results in a target concentration for BaP equivalent concentrations of less than 1 mg/kg.

The proposed schedule for the FS is:

- Draft Final FS due December 15, 2003
- Draft Proposed Plan due on January 15, 2004
- Draft Record of Decision due on August 15, 2004

Ardella Dailey, RAB, asked for clarification on the areas where soil has been removed to 2 feet bgs and backfilled. Ms. Taylor replied that the soil in Parcels 181(blue areas only), 182 and 183 as illustrated on the map (see handout), have already been removed to 2 feet bgs and replaced with clean backfill. The blue areas in Parcel 181 are Decision Areas 4, 5, and 7. Contaminants are still in soil from 2 to 8 feet bgs. When the HHRA was conducted, Parcel 181 (Decision Areas 1 and 3), which are shown in brown on the map, were determined to have low enough concentrations of contaminants to warrant no action, so the soil was not removed. Ms. Taylor stated that completion of the cleanup process for OU-5 is now proposed; that process began with the earlier TCRA at the selected hot spot areas within Decision Areas 2 and 6. Soil excavation to a depth of 2 feet bgs and replacement with clean backfill is proposed for all contaminated areas of this OU.

Mr. Humphreys responded that Ms. Dailey was questioning whether the IC for soil at depths greater than 2 feet bgs, applied to the whole area. Ms. Taylor stated that the IC for soil at depths greater than 2 feet bgs would apply to the entire OU-5 area.

Mr. Humphreys inquired if 1 mg/kg is slightly more than one in 1- million chance of cancer risk. Ms. Taylor replied that it equates to 2×10^{-5}, which equals a 2 in 100,000 chance.
Mr. Humphreys replied that this also equates to a one in 50,000 chance. Mr. Humphreys stated that in one of the presentation charts there is a result of less than 1.8 mg/kg. Ms. Taylor stated that at the time the original HHRA was conducted that 1.8 mg/kg was considered the appropriate BaP equivalent removal goal, which would equate to a cancer risk of 3×10^{-5}.

Mark Ripperda, EPA, commented that 1.8 mg/kg was an appropriate goal for the removal action that would be protective of the people living there. However, for the final action, EPA requested that BaP equivalent concentrations remaining in soil be evaluated. Ms. Taylor replied that the post-removal HHRA determined that the backfill materials have a concentration of 0.18 mg/kg BaP equivalents, resulting in a risk of 3×10^{-7} for the upper 2 feet of soil. From 2 to 8 feet bgs

there are still BaP equivalent concentrations greater than 1.8 mg/kg and a cancer risk slightly greater than 2×10^{-5}. Exposure routes for soil from 2 to 8 feet bgs have been eliminated by the TCRA and the IC will be used to prevent human contact with the deeper soil.

Mr. Ripperda inquired if 100 percent of the soil at 2 feet bgs had been removed at Decision Areas 4, 5, and 7, or was soil removed only where there were high hits. Mr. Weissenborn stated that 100 percent of the top 2 feet of soil was removed in those decision areas and the backfill material has a carcinogenic risk of 3×10^{-7}.

Mr. Humphreys asked if there is a burn pit in the area identified as "approximate location of stained area" on the OU-5 site map. Ms. Taylor stated that to her understanding it is not part of OU-5. Mr. McClelland stated that it is part of OU-5. Mr. Weissenborn responded that the stained area appears to be a source for contamination of groundwater, and the PAHs in that area were not high. Mr. Humphreys inquired what the PAH levels are in the Miller Elementary School (Miller School) area. Mr. McClelland stated that Miller School is a separate site, and since the site has not yet progressed to the RI stage, the PAH levels are currently unknown. Douglas DeHaan, RAB, asked why one area, identified as Parcel 184, is isolated in the marina village. Mr. McClelland responded that he was unsure, and the parcel identifiers are from the environmental baseline survey (EBS). The parcels were separated at the time the EBS was conducted. Ms. Dailey inquired what the timeline is for Miller School. Mr. Weissenborn replied that the PAH investigation had been projected for this year, which would get the CERCLA process started. The Miller School site is currently not funded. Ms. Dailey asked if Miller School was on the same timeline as Coast Guard Housing (CGH). Mr. Weissenborn stated that CGH would be completed sooner, and Miller School will be rolled in right behind CGH. Ms. Dailey then asked what is the CGH timeline for the CERCLA process. Mr. Weissenborn stated that he believes remediation will be sometime in 2004.

Ms. Smith commented that the barriers installed at 2 feet bgs and covered with backfill are more accurately described as orange webbing. Ms. Taylor stated that her understanding is that a barrier layer was placed at the bottom of the excavation so if a person were to dig in their yard they would encounter the layer. Mr. Weissenborn replied that the webbing is a visible marker and not a barrier. Ms. Dailey asked if a person were to dig in their yard and found the orange webbing how would they know why it is there. Mr. Weissenborn replied that tenants could obtain information from their landlord or leasing office. Ms. Dailey asked if the information would be available to the tenants at move in with the lease agreements, and how would the IC restrict people from digging below the orange webbing. Mr. Weissenborn stated that the information should also be posted in public view and be part of public announcements. ICs are part of the record of decision (ROD). Once the ROD is implemented it would require disclosure of environmental conditions to tenants and potential tenants, by landlords or leasing agents.

A CGH community member inquired if there is a slide in the presentation showing where the hot spots are located in the remaining Decision Areas of OU-5. Ms. Taylor replied that there is not a slide in the presentation showing hot spots, but there are some drawings in the FS that show the hot spots. The drawings are Figures E-4 and E-5 of the Executive Summary and Figures 5-1 and 5-2 in the text body of the report.

The CGH community member inquired if there are extra copies of the FS available today, because the Coast Guard did not receive a copy. Ms. Taylor stated that the Coast Guard would be sent two copies and that they should receive them on October 9, 2003. The CGH community member asked if an estimate could be provided on the percentage of each decision area that

constitutes a hot spot area for removal. Ms. Clark replied that hot spot removal areas have not yet been determined and therefore cannot be estimated. Ms. Taylor stated that the FS is not the actual corrective action plan. The CGH community member stated that based on the results of the FS there should be an idea of what needs to be done. Ms. Taylor stated that the actual removal plan would be determined at a later stage. The FS is looking at what should be done to continue the remediation process under CERCLA, which was started with the initial TCRA, to ensure that the CERCLA cleanup criteria are protective for the proposed plan use; and there will be an actual corrective action plan.

Lea Loizos, RAB and ARC Ecology, made a formal request on behalf of the CGH community members that they should get an extension on the comment period, because they are just receiving the Draft OU-5 FS this week.

Ms. Sweeney asked what type of substance was removed from OU-5 that was bubbling in the soil. Mr. Ripperda responded that at Site 13 in OU-2A there are tar-balls that come to the surface from the tarry refinery waste. Ms. Sweeney stated that Ms. Loizos sent her an email regarding a substance at OU-5. Ms. Loizos replied she did send something to her but she believed it was Site 13. Patrick Lynch, community member, stated that OU-5 has the same phenomenon. Decomposing petroleum products are creating explosive gases underneath structures and is a significant acute health hazard if it is ignited. Ms. Loizos inquired if sampling has been conducted for methane gas. Mr. Weissenborn replied that methane testing is conducted regularly and that methane concentrations are not at explosive concentrations. Ms. Loizos responded that she remembers some groundwater testing, but questioned whether any tests have been conducted under buildings or within crawl spaces. Mr. Weissenborn stated that testing has been done in the schools and housing and soil gas levels have been below detectable limits. Ms. Dailey asked Mr. Weissenborn to clarify whether or not testing has been done within crawl spaces or under buildings. Mr. Weissenborn stated it has not been done and ongoing indoor air testing is not being conducted.

Mr. Lynch stated that the standards for cleanup used to estimate residential risk at Parcel 181 may be adequate for the current situations there, however, it is very clear that the City of Alameda has every intention of demolishing the CGH and redeveloping the area if the property is ever transferred to the City of Alameda. It is clear that more than 2 feet of soil is going to be disturbed during development anywhere on the base. As an example, see the development at East Housing. It is questionable that cleaning up the top 2 feet of soil is addressing the risk to human health and the environment, in a redevelopment area. These are not static situations, the amount of earth that is being moved around at East Housing should open up everyone's eyes that a clear characterization needs to be conducted on all areas of the base or we will just be moving the contamination around and no one will be protected.

Ms. Loizos commented that the RAO discussed earlier in the slide presentation was identified as unrestricted residential use. Unrestricted residential use cannot be accomplished with ICs. Ms. Clark responded that the slide is incorrect and should read residential use with ICs.

A community member inquired if continuation of the present residential use at CGH is the assumption in the FS. Ms. Taylor replied that it is the current assumption for this FS. Ms. Dailey stated that she also attends APAC and City reuse meetings and her understanding is that the City is not assuming the present residential use will continue in the future. Mr. Ripperda stated that if the City wants to redevelop either they would be responsible for spending their money, or the Navy will spend the money to cleanup the area for the proposed reuse. Mr. McClelland replied

that the Navy will spend money where its practical, however the Navy does not have unlimited tax money to spend. Ms. Taylor stated that the HHRA in the FS did not specify residential redevelopment or current housing. What the HHRA did specify was what would be the exposure to a resident that lived on site for 30 years. Mr. DeHaan stated that the City would be obligated thereafter to conduct any further cleanup for future residential use. Ms. Clark stated that even if there is redevelopment, human health is protected because the exposure pathways have been removed from 0 to 2 feet bgs. Mr. DeHaan stated that the footprint of existing buildings, sidewalks, and streets have not been cleaned up, and may be exposed during redevelopment. The City would be responsible to clean up those areas in the next 10 or 20 years, which means the citizens would be responsible. There should be a caveat that the City understands that they assume responsibility for future cleanup costs. Mr. Morgan stated that there would be some assumption of risk. Mr. DeHaan stated that the City's position should be to leave CGH in the federal government's hands. Mr. McClelland stated that there has been some discussion of a Fed-to-Fed transfer to the Coast Guard.

IV. Update on West Housing Area PAH Removal Action

Mr. Weissenborn provided a presentation entitled "Time Critical Removal Action (TCRA) West Housing Area (WHA)", which summarizes the PAH TCRA activities. A handout was provided. Mr. Weissenborn stated that the TCRA for PAHs in soil has been discussed over the past few months. The removal action level for PAHs was 1 part per million BaP equivalents.

The TCRA Award was funded in March 2003. Work plans and mobilization occurred in May 2003. Excavation and backfill of the soil was completed in September 2003, and the last off-site disposal of PAH soil was completed on September 17, 2003.

The WHA is located within EDC 5. Previous environmental investigations in 2000 and 2002 revealed the presence of PAHs in the soil. The PAHs primarily originated from contaminated dredged fill material from the Oakland Inner Harbor used to enlarge the land at Alameda Point and also from historical industrial activities. A detailed site inspection (SI) was conducted in 2002 to quantify and assess the health risks from the PAHs in the soil. The Navy completed SIs for PAHs at all of the fleet parcels of Alameda Point; fleet parcels are parcels that are not part of the CERCLA process. Samples were collected at depths ranging from 0- to 8-feet bgs and taken at 6 inches, 18 inches, 4 feet, and 8 feet. Based on evaluation of the data and consideration of the accepted screening level agreed to by the Navy and regulators of 0.62 mg/kg BaP equivalents, the Navy proposed an action level of 1 mg/kg at depths less than 2 feet. The most likely exposure pathways were determined to be 0 to 2 feet bgs, by direct normal exposure, accidental ingestion, or inhalation. Information acquired from the SI indicated where the concentrations of BaP equivalents were greater than 1 mg/kg and additional sampling was conducted in those areas. Samples were collected on a sample grid at 200-foot intervals, and samples were homogenized at each of the four sample depth intervals. As the data were received, a risk screening was completed.

The PAH data was received from the laboratory and 17 different PAH analytes were converted to BaP equivalents using EPA toxicity equivalents factors. Risk was estimated by comparing the results to the preliminary remediation goal (PRG) of 0.062 mg/kg, the screening level of 0.62 mg/kg, and the 1.0-mg/kg action level, which equaled a risk level of 1.6×10^{-5}.

Since PAHs were detected in the soil where people currently live, it became a current risk, and a TCRA was conducted. The removal action objective was to protect the residents by removing the

top 2 feet of soil, which removes the current exposure pathways.

After evaluation of the removal alternatives excavation and off-site disposal was selected. Advantages to excavation are the contaminated soil is permanently removed from the site (which removes the potential exposure pathway), short response time (the work can be completed fairly quickly), and a reduction in the onsite toxicity and contaminants.

The TCRA can be broken down into four principal activities: preparation, mobilization, implementation and documentation.

Preparation

- A work plan containing many different components was prepared, which includes the sampling and analysis plan (SAP). The SAP determines the removal action areas and is also an environmental protection plan, health and safety plan, air monitoring plan, storm water management plan, quality control plan, traffic control plan, waste management plan, and an environmental conditions report.
- An action memorandum was issued 60 days prior to start of work. The action memorandum explains the project to the public. The notice of availability was published on July 23, 2003 in local newspapers *Oakland Tribune* and *Alameda Star Times*. No comments were received within the 30-day review period.
- Two public meetings were held and regular updates were provided during RAB meetings to inform residents and the general public. In addition, a poster board session meeting is planned for October 15, 2003.
- Preliminary physical preparation included conducting geophysical site surveys to locate underground utilities, land surveys to establish the 58- by 58-foot sampling grids, and soil sampling for PAHs, total petroleum hydrocarbons (TPH), metals, polychlorinated biphenyls (PCB), and pesticides. The PAH results were used to delineate the areas. The TPH, metals, PCBs, and pesticides results were used for waste characterization to determine landfill disposal requirements.

Mobilization

- A staging area was set up just north of Site 7 in the east parking lot of the commissary. A decontamination pad was constructed to decontaminant the equipment. A soil containment area was set up for temporary storage of the excavated soil. Clean fill for backfill was stockpiled in a clean area. The on-site office trailer was set up with utilities and a telephone for effective job supervision, and a fence was set up around the perimeter of the staging area.
- A fixed air monitoring station was established. Baseline air quality monitoring began a week prior to excavation to determine background air quality.
- Equipment and crews were brought in to start work.

Implementation

- The top 2 feet of soil was removed and a visible marker (orange webbing) was installed. Each excavation was then backfilled with clean fill the same day it was excavated. Fifty-two 58- by 58-foot excavation grids were excavated over the course of the project equaling 5,110 cubic yards of soil. Backfill and topsoil were sampled daily, composited weekly, and analyzed for PAHs, arsenic, and PCBs.

- Dust suppression was used during all phases of the removal action. Windows were covered with plastic if a building was within 10 feet of the removal activity. The dust suppressant used was water, and dedicated sweepers were used in the excavation areas, staging area and on trucking routes.
- Air monitoring was conducted continually during all phases. Baseline air monitoring documented pre-construction air conditions to determine baseline air quality. Air monitoring was conducted with six continually run air samplers, three downwind and three in the work area, sampled for PAHs, suspended particles (PM^{10}), and total dust. Two real time dust monitors were used at the excavation sites. A meteorological station on-site provided continuous wind speed, wind direction, and temperature monitoring. None of the 440 air samples analyzed exceeded the exposure criteria.
- The backfill and topsoil were covered with either sod, *Gazania,* or wood chips. Totals used are 80,251 square feet of new sod, 316 flats of *Gazania,* and 300 cubic yards of wood chips. The type of groundcover used was determined by drainage, maintenance, and irrigation factors.
- The TCRA concluded in early July, which was ahead of schedule. Extra time and availability of the contractors enabled extra sampling of the remaining 58- by 58-foot grids to be conducted.
- Waste disposal included approximately 7,500 tons of soil taken to Altamont Landfill, a Class II landfill, and approximately 70 tons of soil identified as California hazardous waste, was disposed at Chemical Waste Management, Inc. located in Kettleman City, California.

Documentation

- Currently a closeout report is being prepared to document the TCRA activities.
- Soil sampling data will be incorporated into the RI report for Site 35.

Mr. Weissenborn stated that in summary, the top 2 feet of PAH-contaminated soil were removed from the site and subsequently the risk to human health and the environment from the surface soil has been greatly reduced.

Ms. Dailey commented on the last presentation slide stating the risk to human health and the environment from the surface soil was reduced, and asked what is the definition of reduced versus 100 percent clean. Mr. Weissenborn replied that there is some arsenic and other chemicals at very low concentrations in the backfill, so it is not 100 percent clean, and there is still potential for risk beyond 2 feet bgs. Mr. Weissenborn stated that the contaminated surficial soil, which is the most direct route of exposure, has been removed.

Ms. Sweeney asked if the chemical concentrations generally are lower at deeper depths. Mr. Weissenborn replied that generally the chemical concentrations are lower at deeper depths but that there are a couple of exceptions.

Mr. DeHaan asked if the soil at WHA is now cleaned to safe levels. Mr. Weissenborn replied for PAHs it is. Mr. DeHaan inquired if the PAHs were mostly concentrated in soil in the grids or if there was an even distribution throughout the site. Mr. Weissenborn stated that the PAHs were primarily in the northern portions of WHA, but some high PAH concentrations were also located in hot spots scattered around in other areas. Mr. DeHaan inquired if the findings support the

thoughts that the PAH came from dredged material. Mr. Weissenborn replied that they do. Mr. DeHaan inquired if the PAHs could be caused from the Marsh Crust. Mr. Weissenborn replied that the Marsh Crust is at a deeper depth.

Mr. DeHaan asked if the Marsh Crust fill area was in OU-5. Mr. Weissenborn stated that OU-5 was filled during the same time period as the fill and construction of the Mole railroad to the north. Mr. DeHaan inquired if the fill in other areas of the base has the same PAH distribution as WHA. Mr. Weissenborn stated that most other areas of the base have lower PAH concentrations, however some specific sites have higher concentrations. Site 13 and OU-5 are specific sites where the highest PAH concentrations are detected in soil. A correlation between fill history and PAH concentrations has been found during background studies. It has been discovered that lower PAH concentration are found in the newer fill. Mr. DeHaan asked if in this area any type of repair to sidewalks or roadways could cause exposure. Mr. Weissenborn stated that would be an acute exposure, which is not addressed by the normal risk assessment process. Mr. DeHaan inquired if a sidewalk or roadway needs replacement or repairs would there be an exposure. Mr. Weissenborn stated that there is a potential for exposure.

Mr. Lynch commented that contamination was uncovered during pipeline installation for a flood control project on Main Street, and a City contractor was exposed to the contamination.

Mr. Humphreys stated that on Figure 2-2 of the BRAC Cleanup Plan (BCP) it shows a light green area that was filled in 1930 through 1934, which includes Site 5, a portion of CGH, WHA, and also includes the Catellus redevelopment, and warehouses north of the redevelopment. Mr. Humphreys then inquired if PAH sampling has been conducted in the redevelopment area, and if the excavations for the new sewer lines are exposing the community to contaminants. Mr. Weissenborn replied that soil sampling was conducted to the east and north of CGH and in one particular 200-foot grid, one sample location had a concentration of 2 parts per million BaP equivalents in soil. Mr. Humphreys asked if this was at the FISC Annex. Mr. Weissenborn replied that it is at the FISC Annex north at Fifth Street. Mr. Humphreys commented that it is surprising that the results are not comparable to the nearby areas since the fill occurred in the same time period. Mr. Weissenborn replied that there is a more detailed fill map available that delineates the fill areas better. A good correlation between PAH and fill has been found as you move to the south.

Ms. Sweeney asked if there are implications for the APC greenhouse, garden digging, and growing vegetables, and if most of the concentrations exist in the northeast. Mr. Weissenborn replied that both the APC community garden and greenhouse nursery area are fine, based on the sampling results.

James Leach, RAB, stated that Mr. Weissenborn and the contractor did a great job on the PAH removal action and should be commended on their efforts. Mr. Weissenborn stated he would pass on the compliment.

Ms. Smith inquired if it is appropriate to sample the community vegetable garden or the greenhouse area on the normal grid since they are such small areas, and that she believes denser sampling should be conducted in such a sensitive area. Mr. Weissenborn responded that the size of the area is not what matters; it is the risk of exposure and sampling areas are adjusted accordingly. Mr. DeHaan inquired if sampling in the garden areas went deeper than 2 feet bgs. Mr. Weissenborn replied that it had.

Ms. Smith commented that a time sensitive removal for lead around some buildings has occurred in the past and now PAH sampling has occurred. She inquired if there are plans to conduct any more lead sampling. Mr. Weissenborn replied that lead testing has been conducted in the past, and he stated that he is not sure it would need to be conducted again for transfer. Mr. McClelland stated that prior to transferring or leasing any housing to the City, property was tested and abated, if necessary, for lead and asbestos using Housing and Urban Development (HUD) standards. It is the Navy's policy not to conduct lead sampling or abatement and removal activities in nonresidential areas. However, due to discussions between EPA and the Navy, the Navy's policy has recently changed to test industrial areas adjacent to residential areas. The water towers are a recent example. Within 12 months prior to final transfer of property, the Navy has to go back and resample for lead. Ms. Smith inquired if soil was sampled. Mr. McClelland replied that the structures including interiors, are sampled, not the soil. Ms. Smith inquired about the ground around the housing. Mr. McClelland replied that the exterior of the housing was sampled prior to the initial leasing, and that he is not sure of the protocol but the exterior may need to be resampled. Mr. DeHaan stated that 70 tons of lead contaminated soil was removed, and inquired if the Navy stockpiled the soil together from different removal actions or if the soil was removed from one area. Mr. Weissenborn replied that the water towers soil removal was a result of Department of Toxic Substances Control (DTSC) sampling for lead and Navy sampling for lead north of the water towers' previous location. The source of the lead in the soil was the paint coming off the water towers.

V. BRAC Cleanup Team Activities

Mr. Ripperda stated that prior to providing an overview of September's BCT meeting he would like to make a few comments regarding the RAB. Mr. Ripperda stated that RAB member Bill Smith commented last month that Mr. Ripperda and the other regulators do not talk enough during the RAB meetings. Mr. Ripperda stated that Mr. Smith has a good point. He stated that the RAB meetings provide RAB members with an opportunity to ask questions and that he and the other regulators do not want to take up the RAB members time during the meetings. He stated that the regulators are in contact with the Navy all week, reading documents and writing comments, and that a lot of the questions that the RAB members ask are the same questions that the regulators ask.

Mr. Ripperda stated that the PAH cleanup is a complicated issue and that EPA, Regional Water Quality Control Board (RWQCB), and DTSC have been discussing the cleanup for over a year with the Navy. Cleanup of the yards, without going under sidewalks, or under houses, is fine for a removal action. However for a long-term permanent solution the Navy will need to evaluate those areas that could not be reached during the removal action. He added that some of the questions discussed tonight would need to be worked out with the City lawyers and the Navy lawyers prior to property transfer.

Mr. Ripperda stated that the regulators conducted a site tour with Ms. Clark and her contractor Shaw, Inc. of the groundwater treatment Chem-ox study areas east of Seaplane Lagoon (SPL). The Navy will be injecting oxidizing agents into the groundwater at Sites 4, 9, and 16 to treat the solvents located in the groundwater. The EPA wanted the Navy to test for breakdown products, as the solvents break down; there is a concern that those by-products may end up being pushed around by the injectors. The Navy did not want to do the testing due to a contracting mechanism timeline, so the EPA has agreed to pay for some samples.

There is a SPL meeting coming up to discuss the hundreds of pages of comments from the

RWQCB, DTSC, and EPA. Mr. Ripperda ~~He~~ stated that everyone agrees that the SPL is contaminated, and that the two corners are the most contaminated, but the SPL is not as contaminated as people think; he noted that the SPL definitely should be cleaned up in the corners to protect the least tern and other ecological receptors. Mr. Ripperda stated that the EPA biologists want more information from the Navy's biologists but agree in concept with the general outline of the cleanup area. The EPA proposes that PCBs throughout the SPL be cleaned up to 200 parts per billion (ppb), which the RWQCB and DTSC also support. The Navy has not fully responded to the proposition yet.

Mr. Leach inquired what oxidizing agents would be used for the groundwater injections. Ms. Huang replied that it is a modified Fenton reagent, a type of hydroxyl. Mr. Ripperda stated that there are also some proprietary constituents to slow the reaction down. The oxidizing agents are injected into the groundwater by hydropunch every 40 feet on a 40-foot grid and allowed to remain for a couple of months. There will be anywhere from 100 to 200 injection points per site. Ms. Sweeney asked what was going to be cleaned up from the process. Mr. Ripperda replied a variety of solvents. Mr. Morgan asked what is the depth of the injections. Mr. Ripperda replied that most would be in the 15- to 30-foot bgs range. Mr. Humphreys asked if the agent was hydroxide or peroxide. Mr. Ripperda stated that the agent is hydroxyl ions.

Ms. Loizos commented that during the BCP focus group meetings it was suggested and requested that in the future the RAB could receive the BCT summary in writing after the meeting. Mr. Ripperda stated that he was recalling the BCT information from memory. Ms. Huang stated that there are meeting minutes taken and sent out every month after the meetings. Ms. Sweeney stated that she feels that she is guessing a lot about what is going on every month, and that it would be nice if she had the BCT minutes every month. Mr. McClelland stated that he has considered a summary of the BCT minutes be available at the RAB meetings. Mr. Ripperda stated that he and the other regulators, depending on whose turn it is to give the BCT update, could create a brief summary of the BCT meeting to hand out to the RAB members. Mr. Morgan replied that it would be helpful if Mr. Ripperda could get the highlights.

Mr. Ripperda commented that if the RAB members or community feels strongly about something, or if something does not seem right that they should submit their comments in writing to the Navy and the regulators. He stated that it is great that items are discussed during the RAB meetings and are recorded in the minutes, but comments would probably get more attention if they were submitted in writing to the Navy and the regulators. Ms. Sweeney commented that she does not have a contact list with addresses, phone numbers, and email addresses, for the RAB members, the Navy and the regulators. Mr. McClelland stated that there is not a problem with the public receiving the Navy's or regulators contact information, but that there might be a problem with the RAB members' information being released. A sign-up sheet was suggested and will be provided at the next RAB meeting.

VI. Community and RAB Comment Period

Mr. Lynch commented that recent discussions about the SPL had reminded him of a previous document on the SPL, which he was able to track down. The document, Initial Assessment Study, was produced in 1983 by Ecology and Environment Inc. (E&E) and refers to a study done in 1981 where over 20,000 cubic yards of material was removed from the SPL and deposited in the West Beach Landfill. He stated that if you are looking for the toxic contamination in the SPL you are looking in the wrong place, you should be looking in the West Beach Landfill. He stated that this document reminded him that there are two, 350- to 400-foot deep water supply wells on

the base. One is referred to as the Pan Am well and is located by Site 14. The other is the Army well located near the officers club. Based on the report, he believes both wells are contaminated with mercury. He stated what concerns him is the continued use of the two wells to irrigate the base landscape for the last few years. He stated that he would like to see use of these two wells discontinued. Mr. Humphreys commented that he was told on a tour of the base that the Pan Am well was contaminated with arsenic, and that is why it is not being used. Mr. Lynch stated that the E&E report said the wells were contaminated with mercury. He stated that it would be interesting if this happens in other wells.

Mr. Humphreys stated that he has some comments on groundwater in general, like the groundwater investigation at Site 5 and that perhaps the shallow aquifers are not usable or potable. If there are these deeper aquifers at 400 to 500 feet bgs and someone in the future were to drill into the lower levels, great care would be needed to seal the well casing to avoid the upper contamination from getting into the lower usable aquifers. He stated that people seem to deny the existence of these deeper aquifers, but on Bay Farm Island there were wells at 200 feet and 500 feet bgs. He stated that he thinks the county has a lot of data on the wells and how deep they actually are. He stated that there are usable aquifers that come down out of the hills and are pretty deep in this area.

Mr. Lynch stated that the dates of fill for the warehouses, also known as FISC, were the subject of an engineering analysis by a geotechnical engineer working for the Navy in the design of the buildings. It was that geotechnical engineer's opinion in the 1969 study that the fill was placed in two periods; one fill period was about 1915, and a second fill period in approximately 1930. He stated that the area is one of the most seismically unstable areas in the San Francisco Bay area. He said that it is interesting to note that within the engineering study that the load of the building and the materials stored within it made the soil liquidize and flow about 50 feet up to the surface outside building. He stated that it is contaminant migration and is something that needs to be considered.

A community member announced that the APC would be hosting the Permaculture Training Institute of Northern California's training in permaculture entitled; *An Urban Weekend Permaculture Design Course*. There are three two-weekend sessions; course fees are $300 per two-weekend session or a $600 to $900 sliding-scale fee for the entire course. A permaculture design certificate will be issued upon completion of the entire course.

Ms. Loizos stated that the BCP focus group would have their comments on the BCP out by the end of the week.

The meeting was adjourned at 9:10 p.m.

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ALAMEDA POINT
SSIC NO. 5090.3

ATTACHMENT

ATTENDANCE LIST

07 OCTOBER 2003 FINAL RESTORATION ADVISORY BOARD MEETING SUMMARY

THE ABOVE IDENTIFIED ATTACHMENT IS NOT AVAILABLE.

EXTENSIVE RESEARCH WAS PERFORMED BY SOUTHWEST DIVISION TO LOCATE THIS ATTACHMENT. THIS PAGE HAS BEEN INSERTED AS A PLACEHOLDER AND WILL BE REPLACED SHOULD THE MISSING ITEM BE LOCATED.

QUESTIONS MAY BE DIRECTED TO:

DIANE C. SILVA
RECORDS MANAGEMENT SPECIALIST
NAVAL FACILITIES ENGINEERING COMMAND SOUTHWEST
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132

TELEPHONE: (619) 532-3676

ATTACHMENT A

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING AGENDA
October 7, 2003

(One Page)

RESTORATION ADVISORY BOARD

NAVAL AIR STATION, ALAMEDA

AGENDA

OCTOBER 7, 2003 6:30 PM

ALAMEDA POINT – ALAMEDA POINT COLLABORATIVE BUILDING
677 WEST RANGER AVENUE
MURAL ROOM

TIME	SUBJECT	PRESENTER
6:30 - 6:40	Approval of Minutes	Bert Morgan
6:40 - 6:55	Co-Chair Announcements	Co-Chairs
6:55 - 7:30	Presentation on Draft OU-5 Feasibility Study	Navy – Glenna Clark
7:30 - 8:05	Update on West Housing PAH Removal Action	Navy – Rick Weissenborn
8:05 - 8:15	BCT Activities	Mark Ripperda
8:15 - 8:30	Community & RAB Comment Period	Community & RAB
	RAB Meeting Adjournment	
8:30- 9:00	Informal Discussions with the BCT	

ATTACHMENT B

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING SIGN-IN SHEETS

(Four Pages)

ALAMEDA POINT
RESTORATION ADVISORY BOARD
Monthly Attendance Roster for 2003

Date: October 7, 2003

Please initial by your name

RAB MEMBERS	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Ingrid Baur					X							
Ardella Dailey			*		X	X		*	*	X		
Neil Coe		X	X	X	X	X	X	X	*	X		
Nick DeBenedittis										X		
Douglas deHaan	X		X		X	X		X		X		
Tony Dover		X		X		X			X			
George Humphreys	X	X	X	X	X	X	X	X	X	X		
James D. Leach	X	X	X	X	X	X		X	X	X		
Jo-Lynne Lee												
Lea Loizos	X	X	X	X	X	X	X		X	X		
Bert Morgan	X	X	X	X	X	X	X	X	*	X		
Ken O' Donoghue												
Kurt Peterson			X	X	X	X			X			
Kevin Reilly	X	X	X	X	X	X	X	X	X	*		
Bill Smith		X			X				X			
Dale Smith	X	X	X	**	X	X	X		X	X		
Lyn Stirewalt												
Jean Sweeney	X	X		X	X	X	X		X	X		
Jim Sweeney	X	X	X	X	X	X	X		X	X		
Luann Tetirick	X			X		X		X	X	X		
Michael John Torrey	X	X	X	X		X	X	X	X	*		

Revised 10/8/03
Alameda/Meetings/Rab/SIGNINSHEET.xls

* Denotes excused absense

COMMUNITY MEMBERS	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Debbie Collins	X		X			X	X		X	X		
Golden Gate Audubon Society												
Betsy P. Elgar												
Dana Kokubaun							X	X	X	X		
Patrick Lynch										**		
David Rheinheimer												
REGULATORY AND OTHER AGENCIES	**JAN**	**FEB**	**MARCH**	**APRIL**	**MAY**	**JUNE**	**JULY**	**AUG**	**SEPT**	**OCT**	**NOV**	**DEC**
Susan Boyle (USCG)					X	X				X		
Cassie Cioci (USCG)									X			
Anna-Marie Cook (EPA)	X											
David Cooper (EPA)		X	X		X							
Jesus Cruz (DTSC)					X	X	X					
Terra Pfund (USCG)										X		
Judy Huang (RWQCB)	X	X	X	X		X	X	X	X	X		
Elizabeth Johnson (City of Alameda)	X	X	*	*	X	X	X	*	X	*		
Marcia Liao (DTSC)	X	X	X	X		X	X	X	X	**		
Laurent Meillier (RWQCB)					X							
Jaines Pruett (USCG)									X			
Mark Ripperda (EPA)		X		X	X		X	X	X	**		
Patricia Ryan (DTSC)	X	X										
Sophia Serda (EPA)												

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Alameda/Meetings/Rab/SIGNINSHEET.xls

* Denotes excused absense

U.S. NAVY	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Glenna Clark										**		
Andrew Dick	X	X	X									
Greg Lorton												
Mike McClelland	X	X	X	X	X	X	X	X	X	X		
Lou Ocampo					X							
Tom Pinard	X	X	X	X								
Lee H. Saunders					X							
Rick Weissenborn	X			X			X			X		
TETRA TECH EMI	**JAN**	**FEB**	**MARCH**	**APRIL**	**MAY**	**JUNE**	**JULY**	**AUG**	**SEPT**	**OCT**	**NOV**	**DEC**
Tracy Craig				X			X	X	X			
Corinne Crawley												
Beth Kelly				**		X	X	X	X	**		
Jim Helge												
Craig Hunter												
Lona Pearson							X	X	X	X		
Leah Waller												

Revised 10/8/03
Alameda/Meetings/Rab/SIGNINSHEET.xls

* Denotes excused absense

OTHER	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Janet Argyres-Bechtel					X							
Steve Bachofer - St Mary's College								X	X	X		
Aidan Barry - APCP												
Jim Barse			X			X		X	X			
Peggy Bloisa (CDM)										X		
Kenneth Conner										**		
Lee Dodge - LFR												
Bart Draper-Bechtel												
Bill Howell - 3-D Environmental												
Rezsin Jaulus-Alameda Point Coll.	X											
Eric Johansen - Bechtel					X							
Abid Loan-Foster Wheeler			X									
Bruce Marvin - IT, Aquifer Solutions												
Stephen Quayle-Bechtel												
Ron Rinehart, Pacific States												
Kim Taylor - CDM										X		
Jeffrey Thomas-Alameda Point Coll.			**		X	X	X	X	X	X		
Kent Udell	X											
Charlene Washington-EBCRC									X			
Carol Yamane - Bechtel					X							

*.Excused absence
** Attended but did not sign roster

Revised 10/8/03
Alameda/Meetings/Rab/SIGNINSHEET.xls

* Denotes excused absense

ATTACHMENT C

NAVAL AIR STATION ALAMEDA
RESTORATION ADVISORY BOARD MEETING HANDOUT MATERIALS

Alameda Point Operable Unit 5 Draft Feasibility Study, Presented by Glenna Clark, Navy, and Kim Taylor of CDM. October 7, 2003. (13 pages)

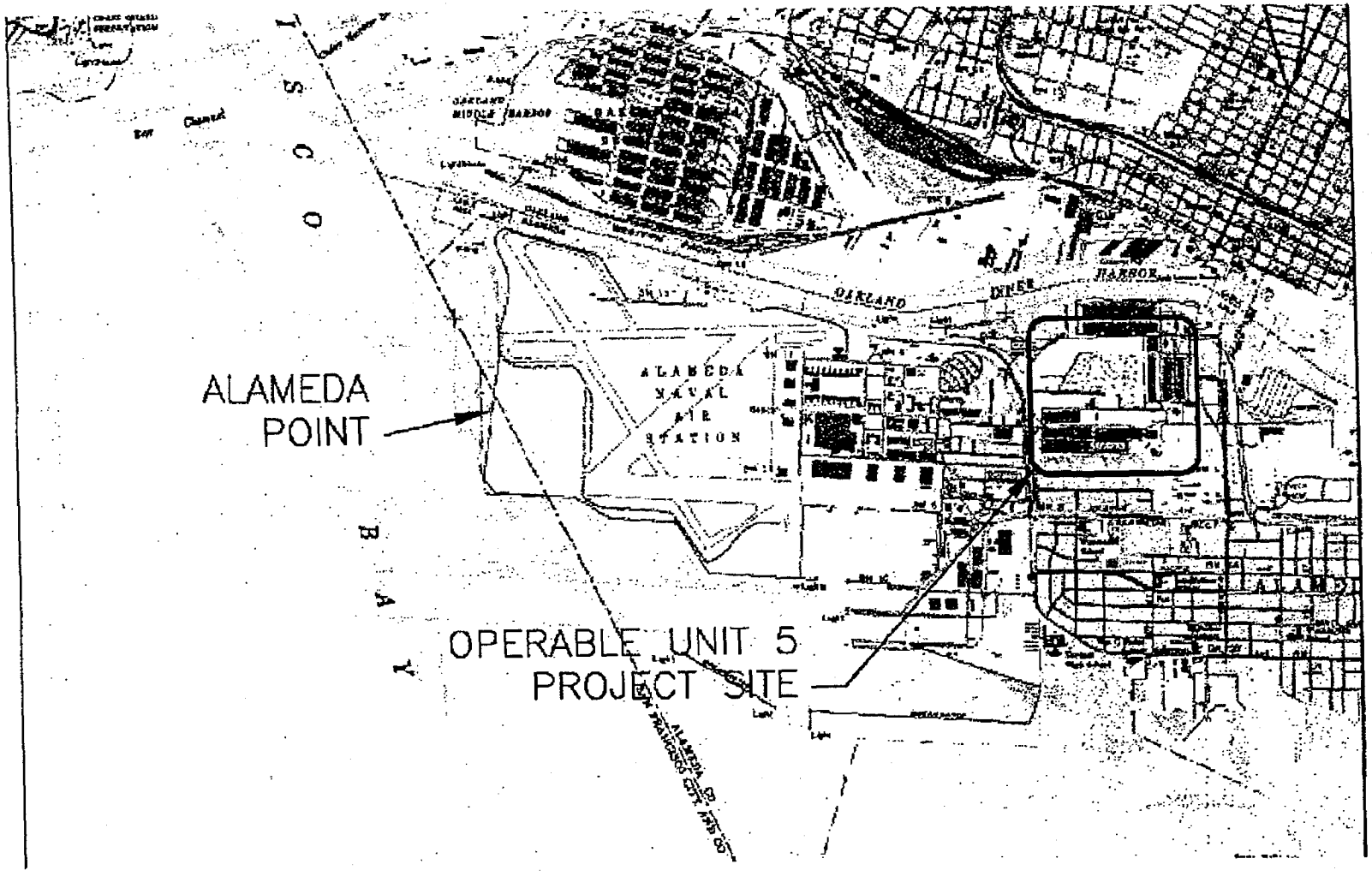
Time Critical Removal Action West Housing Area Alameda Point, Presented by Rick Weissenborn, Navy. October 7, 2003. (14 pages)

NAVFAC
Naval Facilities Engineering Command
SOUTHWEST DIVISION

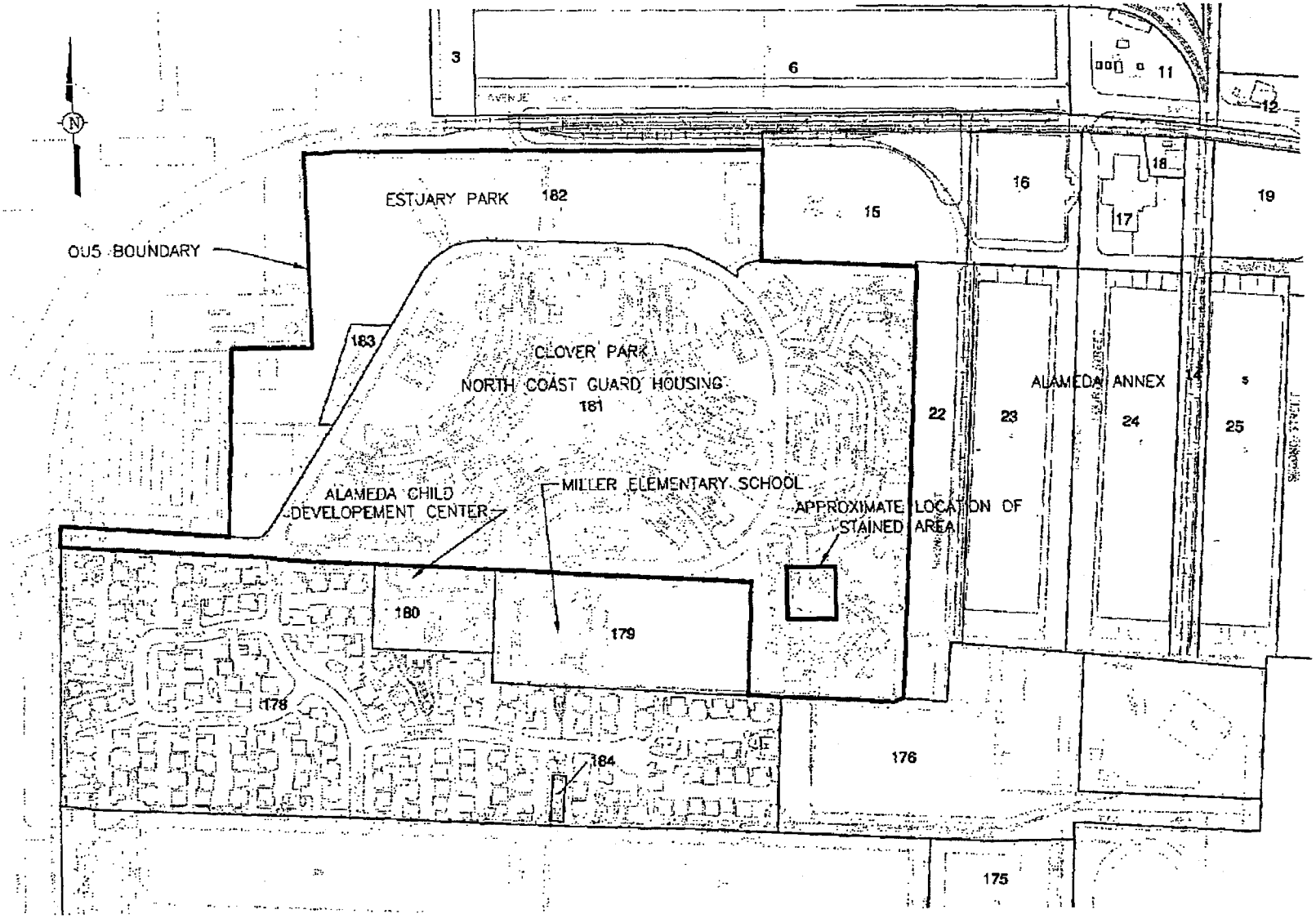
Alameda Point OU-5 Feasibility Study (FS)

07 October 2003

OU-5 Site Location Map



OU-5 Site Map


N
3
6
11
12
18
16
17
19
ESTUARY PARK
182
15
OU5 BOUNDARY
183
CLOVER PARK
NORTH COAST GUARD HOUSING
181
22
23
ALAMEDA ANNEX
24
14
25
ALAMEDA CHILD
DEVELOPEMENT CENTER
MILLER ELEMENTARY SCHOOL
APPROXIMATE LOCATION OF
STAINED AREA
180
179
178
184
176
175

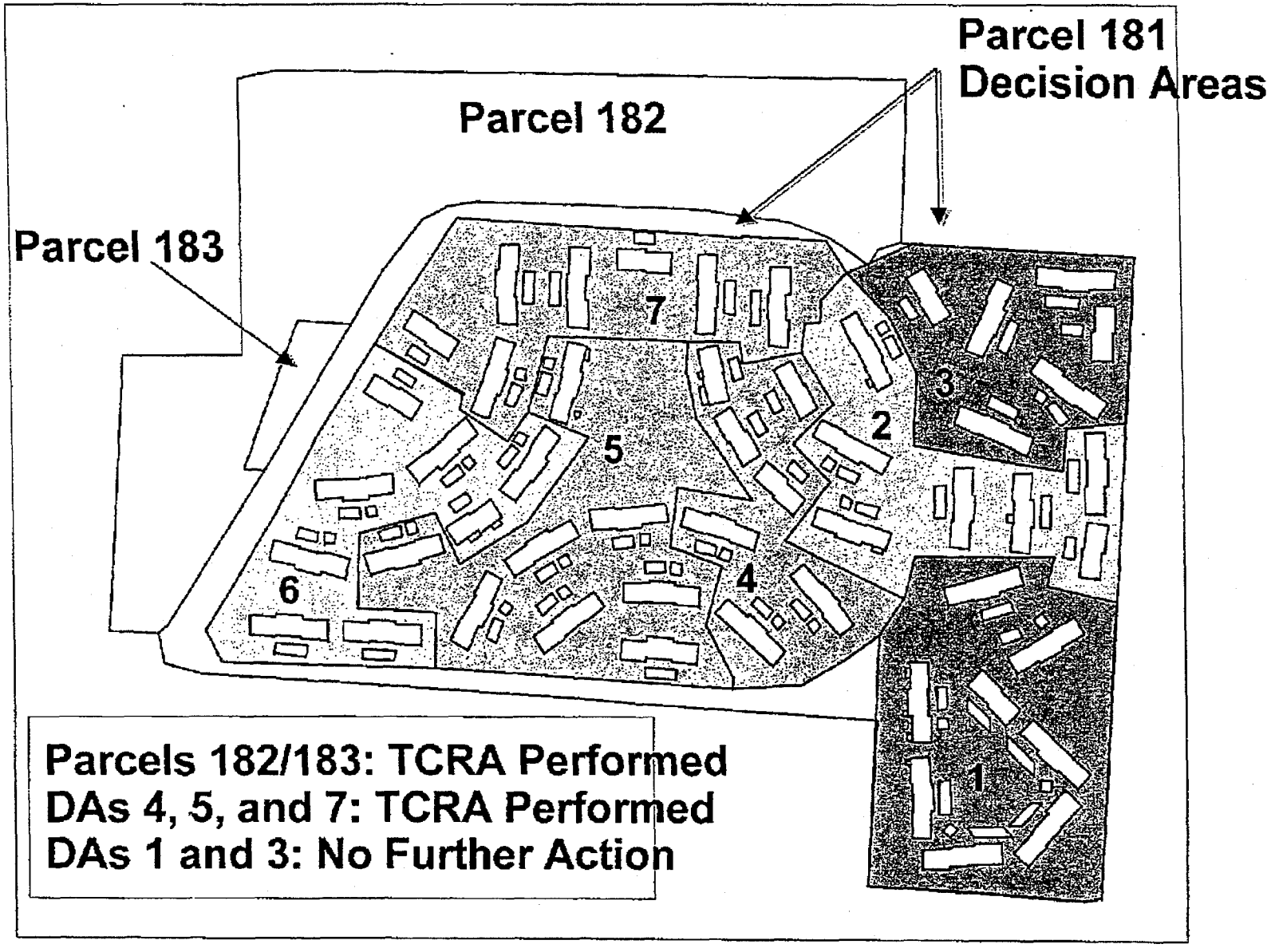
Background

- Remedial Investigation (RI) Performed in 2002
  - Included Risk Assessment for OU-5
    - Parcels 181, 182, and 183
    - on Soil only
    - from 0 to 8 feet below ground surface (bgs)

Background (Cont'd)

- No Further Action Required in Decision Areas (DAs) 1 and 3
- Time Critical Removal Action Performed in 2001/2003
  - Removed Upper 2 feet of soil
    - Parcels 182/183
    - Parcel 181 DAs 4, 5, and 7

OU-5 Parcels and Decision Areas



Parcels 182/183: TCRA Performed
DAs 4, 5, and 7: TCRA Performed
DAs 1 and 3: No Further Action

Goals of FS

- Present RI Risk Assessment Results
- Conduct New Risk Assessment
  - Parcel 181 DAs 2, 4, 5, 6, 7
  - Parcels 182 & 183

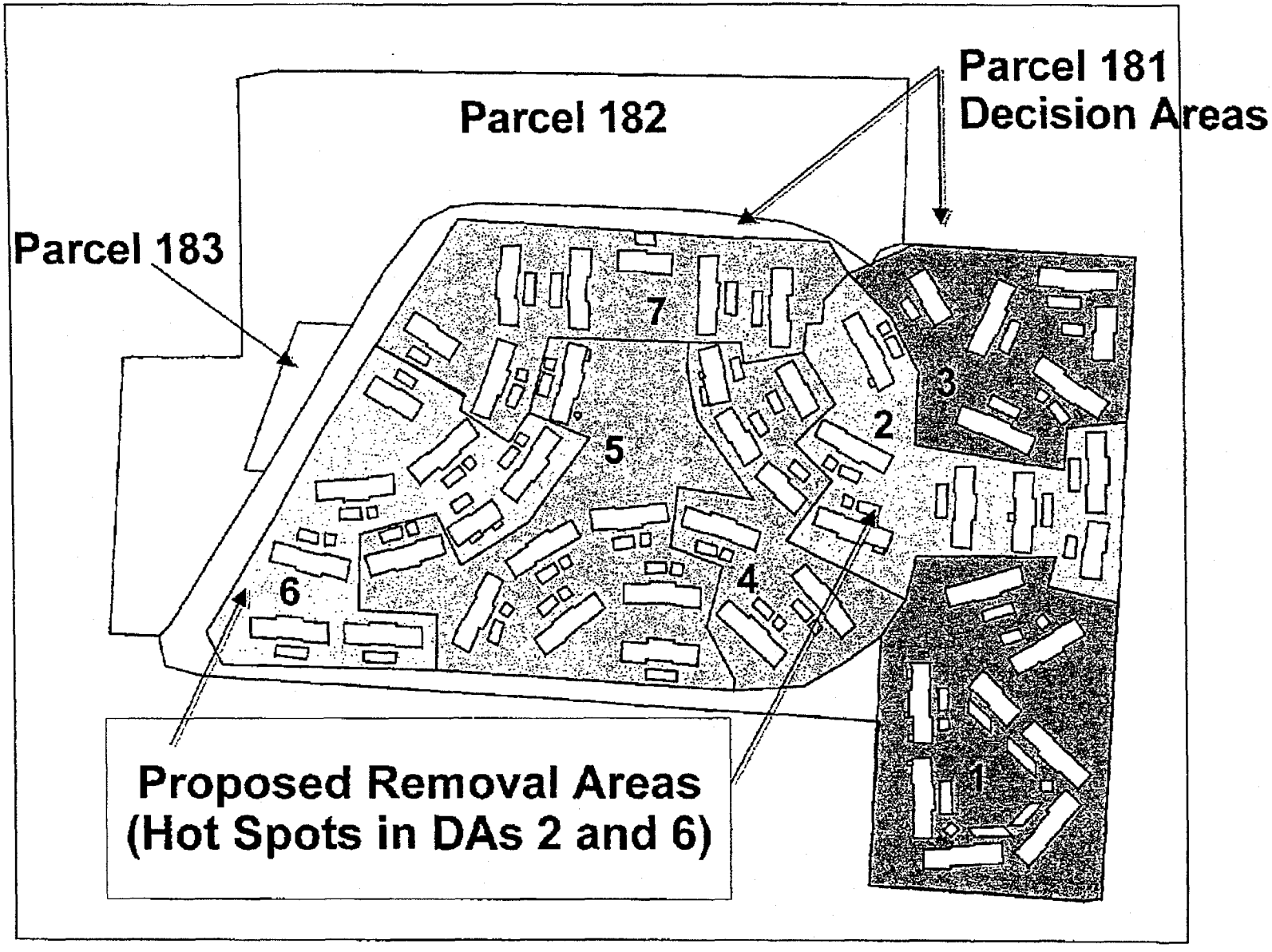
Post TCRA Risk Assessment Results

PARCEL OR DECISION AREA (DA)	CANCER RISK GROUPING	BaP EQUIVALENT CONCEN-TRATION	RECOMMEND-ATION
Parcel 181, DAs 1 and 3	Low Risk	At or Close to 1 mg/kg	No further action
Parcel 181 DAs 2 and 6	Medium Risk	1 to 2.9 mg/kg	Remove Upper 2 Feet in Hot Spot Areas
Parcel 181 DAs 4, 5, and 7, and Parcels 182/183	Low Risk	<1.8 mg/kg	No Further Action

Remedial Alternatives Considered

- Alternative 1
  - No Action
- Alternative 2
  - Institutional Controls
- Alternative 3
  - Parcel 181 DAs 2 and 6, Upper 2 Feet
  - Excavation with Off-Site Disposal and Backfill
  - Institutional Controls

OU-5 Showing Proposed Removal Areas



Remedial Action Objectives (RAOs)

- Unrestricted Residential Use

Recommended Remedial Alternative

- Parcel 181 DAs 2 and 6
  - Excavation and Backfill
  - 0 to 2 Feet Depth
  - Based on Benzo(a)pyrene Equivalent Concentrations of Less Than 1 mg/kg

Proposed Schedule

Task	Date
■ Draft Final FS	15 December 2003
■ Draft Proposed Plan	15 January 2004
■ Draft Record of Decision	15 August 2004

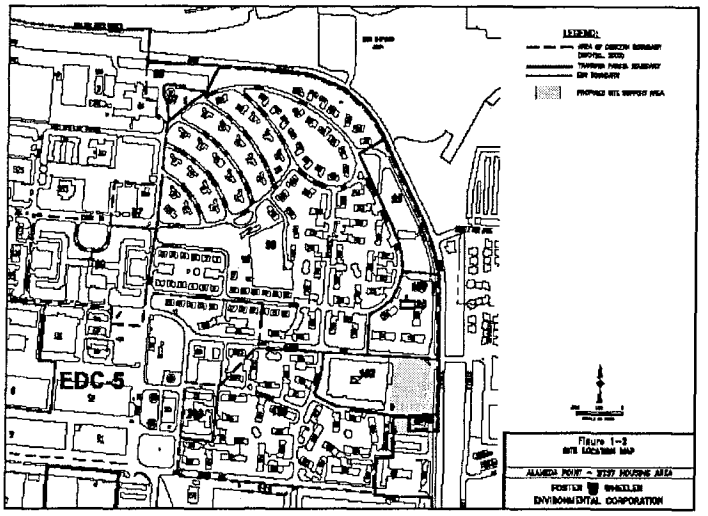
Time-Critical Removal Action
West Housing Area
Alameda Point
Alameda, California

Rick Weissenborn
Remedial Project Manager
NAVFAC Southwest Division
October 7, 2003

Schedule

Task	Date
TCRA Award	3/26/03
Work Plans	5/15/03
Mobilization	5/30/03
Excavation of Soil	9/5/03
Backfill	9/5/03
Transport and Off-site Disposal of Excavated Soil	9/17/03

West Housing Area



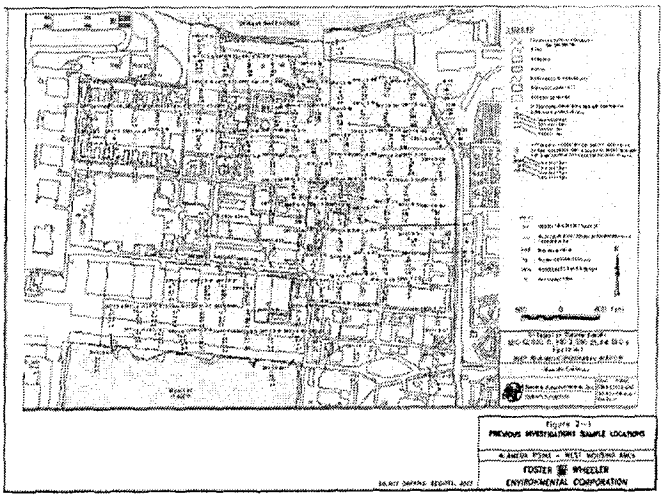
History and Background

- The WHA is contained within transfer parcel EDC-5.
- Environmental investigations revealed the presence of polynuclear aromatic hydrocarbons (PAHs) in the soil.
- Dredged fill material used to create additional land was contaminated with PAHs.
- PAHs originated from historical industrial activities.

Previous Investigations

- A Site Inspection (SI) was conducted in 2002 to quantify and assess the health risks from PAHs in the fill.
- The SI included the collection of soil samples from depths of zero to 8 feet below ground surface (bgs).
- An area of concern (AOC) was delineated within EDC-5.
  - BAP-equivalent > 1 mg/kg, depth 2 feet or less
- Pre-construction sampling further determined which areas would need to be excavated.

Previous Sample Locations



Risk Screening

- Risk estimated by comparison to PRGs.
- Sampling characterized concentrations and distributions of PAHs.
- PAH concentrations in the soil converted to BaP-equivalents.
- A risk-based action level of 1milligram per kilogram BaP-equivalent was established.

Removal Action Objective

- Protect residents by removing the top 2 feet of soil that may present a potential exposure.

Removal Action

- Excavation and Off-site Disposal

  Advantages:

  - Contaminated soil permanently removed.
  - Potential exposure mitigated.
  - Short response time.
  - Reduction in toxicity and volume.

Removal Action Activities

- Preparation
- Mobilization
- Implementation
- Documentation

Preparation

- Removal Action Work Plan
  - Sampling and Analysis Plan
  - Site-specific Health and Safety Plan
  - Air Monitoring Plan
  - Project Contractor Quality Control Plan
  - Traffic Control Plan
  - Waste Management Plan
  - Environmental Protection Plan
  - Environmental Conditions Report
  - Stormwater Management Plan

Preparation

- Action Memorandum
- Notice of Availability July 23, 2003
  - *Oakland Tribune* and *Alameda Star Times*
- No Comments Received after 30 Day Review

Preparation

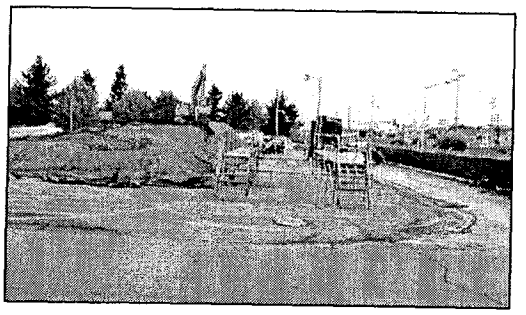
- Restoration Advisory Board and Town Hall Meetings
  - Regular Updates at RAB Meetings
  - Two Town Hall Meetings held for Residents

Preparation

- Site Surveys
  - Geophysical – Locate Underground Utilities
  - Land Survey – Establish 58' x 58' Grids
  - Soil Sampling
    - PAHs
    - TPH
    - Metals
    - PCBs
    - Pesticides

Mobilization

- Staging Area:
  - Construct decontamination pad
  - Setup contaminated soil liner
  - Setup fence and screen at perimeter
  - Setup site office trailer
  - Utilities (electrical, phone)

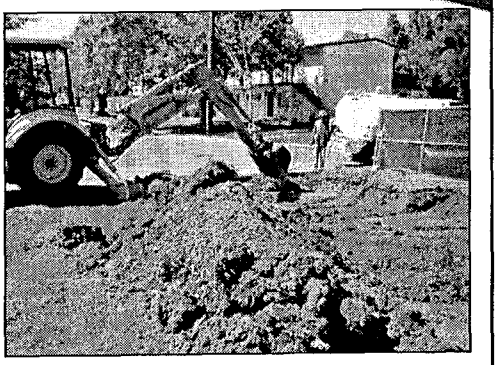


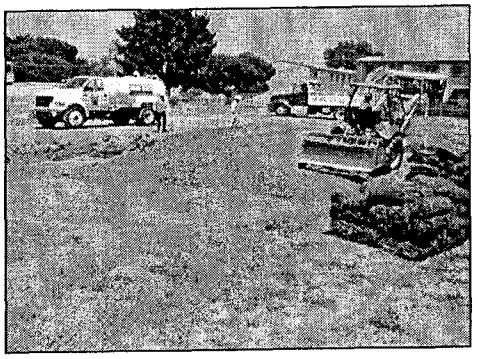
Mobilization

- Establish Fixed Air Monitoring Station
  - Baseline Air Quality Monitoring
- Mobilize Equipment
- Mobilize Crews

Implementation

Excavation





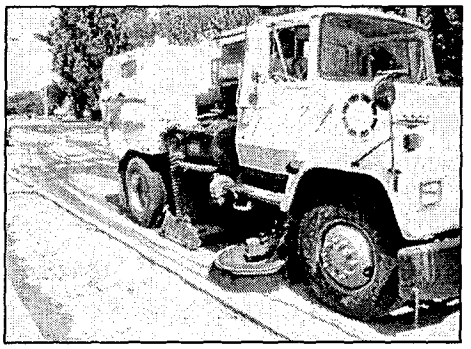
Backfilling

Implementation

- Top 2 feet of soil excavated, visible marker installed
- 52 grids were excavated
- 5,110 cubic yards
- Excavations backfilled the same day
- Fill and topsoil were sampled daily, composited weekly, analyzed for PAHs, arsenic, and PCBs.

Implementation

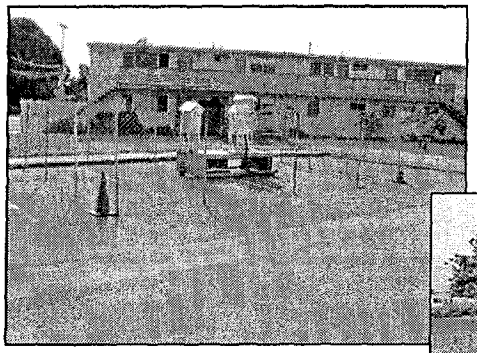
- Windows covered with plastic.
- Excavation and backfilling performed in small areas.
- Dust suppressants during all phases.
- Dedicated sweepers were used in staging area and truck routes.
- Air monitoring during all phases.



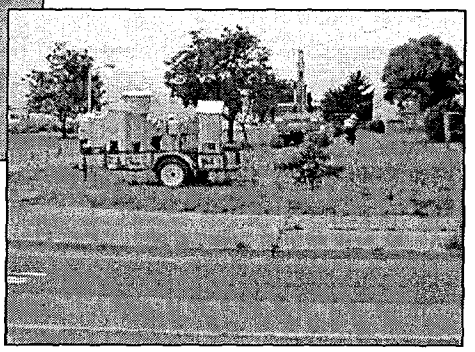
Implementation

- Air monitoring performed during earthmoving activities.
- Baseline air monitoring documented preconstruction conditions.
- Six air samplers (three downwind and three within the work area) sampled for PAHs, PM_{10}, and total dust.
- Two real-time dust monitors in vicinity of the excavation.
- Meteorological station for continuous wind speed, wind direction, and temperature monitoring.
- 440 air samples were collected and analyzed.
- No air samples exceeded the exposure criteria.

Implementation



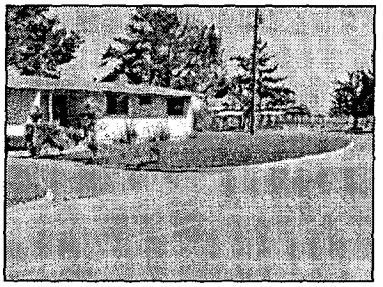
Stationary Air Monitor



Mobile Air Monitor

Implementation

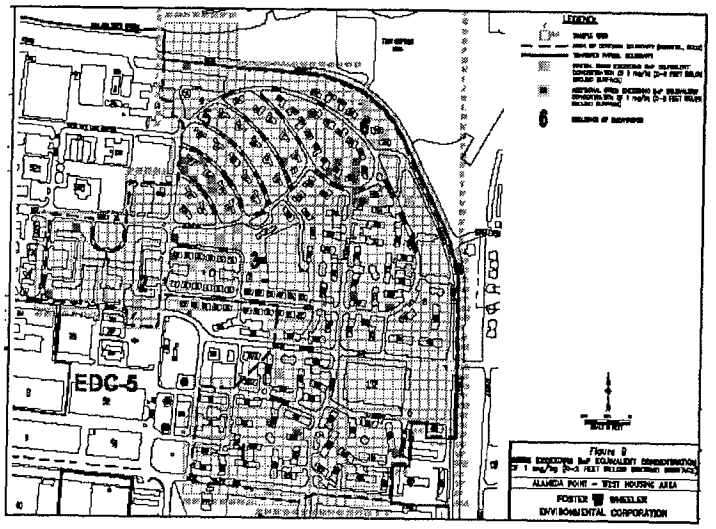
- Backfill and topsoil covered with sod, *Gazania*, and wood chips.
- 80,251 square feet of new sod, 316 flats of *Gazania*, and 300 cubic yards of wood chips were used.
- Watered the newly installed cover until relieved by the Alameda Point Community Partners or Alameda Point Collaborative



Implementation

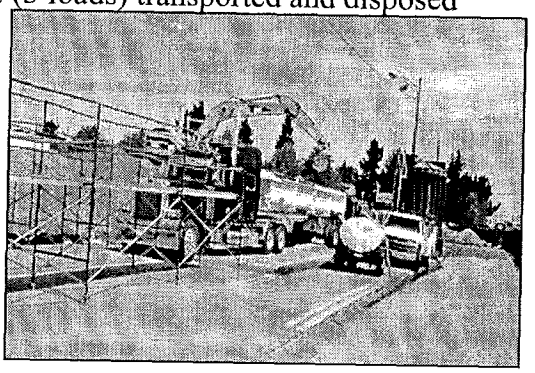
- Approximately 2,300 soil samples were taken during the course of the removal action.
- Samples collected at zero to 0.5 feet, 0.5 feet to 2.0 feet, 2.0 feet to 4.0 feet, and 4.0 feet to 8.0 feet.
- Selected samples were analyzed for TPH, metals, PCBs, and pesticides.

Sample Grids



Implementation

- Approximately 7,500 tons (320 loads) of soil transported and disposed at Altamont Landfill, a Class II landfill.
- Approximately 70 tons (3 loads) transported and disposed at Chemical Waste Management in Kettleman, California.



Documentation

- A post-excavation report is being prepared to document the TCRA activities.
- Soil sampling data will be incorporated into the Remedial Investigation Report for the site.

Summary

- Because the top 2 feet of PAH-contaminated soil were removed from the site, the risk to human health and the environment from the surface soil was reduced.

SulTech

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

DATE: 04/09/04
CTO: 010
LOCATION:
Alameda Point, Alameda, California

FROM: M Wanta
Michael Wanta, Contract Manager

DOCUMENT TITLE AND DATE:
RAB Meeting Minutes July - Dec 2003
April 9, 2004

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