FINAL

FORMER NAVAL AIR STATION MOFFETT FIELD
RESTORATION ADVISORY BOARD
BUILDING 943, EAGLE ROOM
MOFFETT FIELD, CALIFORNIA

NOTE: A glossary is provided on the last page of these minutes.

Subject: RAB MEETING MINUTES

The Restoration Advisory Board (RAB) meeting for former Naval Air Station (NAS) Moffett Field was held on Thursday, 10 January 2008, at Building 943, Eagle Room, Moffett Field, California. Mr. Darren Newton, U.S. Navy Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) and RAB co-chair, opened the meeting at 7:05 p.m.

WELCOME/AGENDA REVIEW

Mr. Newton introduced himself, welcomed everyone in attendance, and provided a brief agenda overview. There will not be regulatory agency announcements at tonight's meeting to allow more time for the Hangar 1 presentation.

Mr. Newton welcomed Mr. Bob Moss, RAB community co-chair, to lead the introductory agenda topics.

Mr. Moss asked for self-introductions of those present. The Moffett Field RAB meeting was attended by:

RAB Members	Regulators	Navy	Consultants & Navy Support	NASA	Public & Other
14	6	5	4	9	46

APPROVAL OF MEETING MINUTES

Mr. Moss asked for corrections to the 08 November 2007 meeting minutes. No corrections were suggested. The 08 November 2007 RAB meeting minutes were approved.

DOCUMENTS FOR REVIEW

Documents are available in CD-ROM format. Sign-up sheets for the documents listed below were circulated during the meeting:

#	DOCUMENT	APPROXIMATE SUBMITTAL DATE
1	2006 Annual Groundwater Report for WATS and EATS	July 2007
2	Final East-Side Aquifer Treatment System Evaluation Report	February 2008
3	Final Site 22 First Five-Year Review Report	February 2008
4	Final Work Plan for Site 14 South	February 2008
5	Final Work Plan for Building 55 Sump Area	February 2008
6	Draft Site 27 Remedial Action Report	February 2008

7	Final Phase III Petroleum Sites Report	February 2008
8	Final Investigation and Closure Report for Building 29 and 55 Petroleum Pipelines	February 2008
9	Site 29 (Hangar 1) EE/CA	TBA
10	Site 29 (Hangar 1) Action Memorandum	TBA

ANNOUNCEMENTS

- Mr. Moss said he was contacted by Mr. Daniel DeBolt of the Mountain View Voice this afternoon regarding a call from Amstar Envirochem, a company that has had success in removing polychlorinated biphenyls (PCBs) from buildings. Mr Moss said the chemical process has been used on aircraft carriers and steel mills to isolate and neutralize PCBs. Mr. Moss contacted the company and will notify the RAB when he receives a response. Mr. Newton said the Navy also has been in contact with Amstar Envirochem and will update the RAB at a later date.
- 2008 Meeting Schedule: Mr. Newton reminded the attendees about the 2008 RAB meeting schedule, which was approved at the November 2007 meeting. The schedule can be found on Page 9 of these minutes.
- Hangar 1 Information Update No. 4: Mr. Newton said the Hangar 1 Information Update No. 4 is available at the sign-in table. The information update was mailed to over 1,600 addresses on the project mailing list.
- Orion Park Environmental Documents: Mr. Newton informed the group that the Army's environmental documents relating to redevelopment of Orion Park are posted on the Navy's Moffett Field website: http://www.bracpmo.navy.mil/bracbases/california/moffett/viewdocs.aspx?doc_cat=enviro_docs.
- Moffett Reuse: Mr. Newton provided the contact information for local, state, federal, and regulatory agencies and reminded the attendees that all of this contact information can be found on the points of contact sheet, located at the sign-in table. Per request from a community member, the contact sheet will be updated to include e-mail addresses for the Army contacts. Mr. Newton reminded everyone of the purpose of the RAB and said that questions related to Moffett Field reuse should be directed to Mr. Michael Mewhinney, National Aeronautics and Space Administration (NASA) Public Affairs Officer, 650-604-3937; michael.mewhinney@nasa.gov.
- RAB Member Excused Absences: RAB members were reminded to call Mr. Moss or Mr. Newton for an excused absence if they are unable to attend a RAB meeting.
- Hangar 1 Environmental Documents: In response to an inquiry at the last RAB meeting, Mr. Newton presented a listing of pertinent documents to the RAB and said that background information about contamination at Hangar 1, including sampling reports and source investigation reports, are available at the Mountain View Public Library.
- Navy Project Team: Mr. Newton also said Mr. Mark Walden is the Navy's new Lead Remedial Project Manager for Moffett Field. He will be transitioning from his current BRAC position at former Hunter Point Naval Shipyard to the Moffett Field team. He can be contacted at 619-532-0931; mark.walden@navy.mil.

HANGAR 1 EE/CA UPDATE AND OVERVIEW OF STRUCTURAL ANALYSIS

Mr. Scott Gromko, Navy remedial project manager, briefly outlined the topics of tonight's presentation: Hangar 1 background, revised Engineering Evaluation/Cost Analysis (EE/CA), structural analysis, and next steps. The

presentation is attached to these minutes as Appendix A; the Hangar 1 background information presented by Mr. Gromko can be found in the Appendix.

Structural analysis

Mr. Gromko explained that a structural analysis is typically conducted during the "predesign" phase, but the structural analysis of Hangar 1 is being conducted now because it will provide valuable information in selecting a recommended removal action alternative. The structural analysis will be conducted by Exceltech Consulting, a structural engineering firm.

Mr. Gromko introduced Mr. Abdul Chahim, a structural engineer and project manager from Exceltech Consulting. Mr. Chahim explained that Hangar 1 is supported by a gravity system that is a three hinged arch system supported on A-frames. A lateral resisting system also is in place that shows the arch and the steel trusses between the arches.

Mr. Chahim said the first step in the structural evaluation is to gather information and review existing documentation including as-built documents and reports. Next, criteria are developed according to applicable codes for evaluations (e.g., California historic building codes, American Society of Civil Engineers load criteria codes). A site inspection and field work is then conducted to review connections, inspect the condition of the structure, identify weaknesses, and gather information for the structural analysis. The fourth step is to develop gravity, wind, and seismic loads. These will evaluate what effects Alternatives 2, 4, 6, and 10 may have on the structural system. A computer model is then developed to determine what forces gravity, wind, and seismic loads will have on the structure, identify deficiencies based on the demand capacity ratios, and develop strengthening methods compliant with historic preservation guidelines. The model will be used to test the proposed strengthening and evaluate the removal process. The last step in the structural evaluation process is to prepare a report and costs for structural upgrades if necessary. This report will summarize site conditions, identify areas of unacceptable structural integrity, and present options and costs for areas of retrofit, if necessary.

Next steps

Mr. Gromko explained that the schedule for the release of the EE/CA has not been established yet. The RAB will be updated as more information becomes available.

Mr. Gromko explained the next steps in the revised EE/CA process, which are to complete the structural analysis and incorporate the findings into the document. Once the revised EE/CA is released, there will be an opportunity for written comment, and a public meeting will be held to receive oral and written comments on the document. After the revised EE/CA is completed, the next document that will be released is the Action Memorandum. This is the document that memorializes the removal action decision. The Action Memorandum will include a responsiveness summary of the comments received on the revised EE/CA.

The following questions followed the presentation:

- Community member and architect Ms. Linda Ellis asked if architectural fabric will be included in the evaluation of alternatives. Mr. Gromko said only alternatives that address contamination are being evaluated, and the details will be in the revised EE/CA. The Navy has not looked at siding alternatives. She also asked if the structural analysis will look at reduced loads (which would be the case if the siding were removed) to determine whether the siding adds any structural significance. Mr. Gromko responded that reduced loads are part of the structural analysis. She then asked if she could get copies of the record drawings and existing documents for her study. Mr. Gromko offered to talk with her after the meeting about which documents she needs.
- A community member asked about the timeframe for the structural analysis. Mr. Gromko said that right now, the Navy is in the preliminary stages of the analysis. Mr. Chahim will be conducting a site

inspection in the next few days and the Navy should have a better idea of the timeframe after that. The community member also asked how many oral histories are being taken and from what eras. Mr. Gromko said NASA compiled the oral histories, which include the dirigibles and various war periods up to when the Navy left Hangar 1. Ms. Sandy Olliges of NASA added that NASA had made the request for oral histories some time ago, and that the oral histories have been completed, and NASA does not intend to do any more.

- A community member asked if the software tools that will be used in the structural analysis modeling have been identified. Mr. Chahim replied that it would first need to be determined what capabilities are needed for the modeling. Mr. Gromko said the Navy will update the RAB as more information becomes available.
- A community member asked how long the contract period of performance is with Exceltech. Mr. Gromko replied that it is six months. The community member then asked if it was for the entire analysis or for the first phase and also asked whether the contract was funded. Mr. Gromko said the contract is funded and six months is for the entire contract although it can be extended if necessary.
- Mr. Peter Strauss, Technical Assistance Grant (TAG) consultant to the Center for Public Environmental Oversight (CPEO) asked Mr. Gromko to clarify how the alternatives were narrowed down to five. Mr. Gromko said one aspect that was looked at was how the technologies would be applied to the siding. If the technology required removing the siding, dipping it or media blasting it to remove the contamination, and then reapplying the siding to the hangar, for example, it would not be technically feasible because the siding is not designed to come off the hangar. There are adhesive and rivets that hold the siding on, and the act of taking the siding off will damage the siding such that it cannot be put back on.
- Mr. Strauss asked if there has been any documented earthquake damage to the hangar in the last 75 years. Mr. Gromko said not to the best of his knowledge. Mr. Carl Honaker, the last executive officer for Moffett Field, later responded that the biggest seismic activity that occurred in the hangar's history was the Loma Prieta earthquake. After the earthquake, there was a significant amount of study done for all three hangars on Moffett Field. The studies found no damage to Hangar 1 as a result of the earthquake.
- Community member Mr. Jeff Segall asked why a release date for the EE/CA was set, and now the direction has changed with the announcement of the structural analysis. He asked if new information came forward or if there was a change in thinking. Mr. Gromko said the Navy has been working very closely with the regulatory agencies. When the alternatives were narrowed down to five, four of those alternatives required more information regarding the structure of the building (Alternative 11, demolition, would not require additional structural analysis). He said that if an alternative requiring the siding to be removed was recommended (for example), evidence was needed that the structure would still stand. Likewise, the other three alternatives would require additional weight being placed on the hangar. This prompted conducting a structural analysis at this stage. The structural analysis would help determine how the hangar would handle additional weight and the absence of the siding. Mr. Gromko said that although a structural analysis is typically done during the predesign phase of a removal action, the Navy decided that for a more thorough and accurate engineering and cost analysis, it should be done now.
- A community member asked how many structural engineering companies were considered before Exceltech was selected as the contractor. The community member also asked how the selection was made and asked about Exceltech's experience, including their experience with similar steel frame structures. Mr. Gromko said Exceltech was recommended as a structural engineering company from the Navy's preapproved list of engineering companies; there is an existing contract vehicle to work with the preapproved companies. Preapproved companies have submitted their qualifications to the Navy and

have been selected. Mr. Newton said more background information for Exceltech will be provided at the next RAB meeting.

- Per Mr. Moss's question, Mr. Gromko affirmed that the Navy is currently in the process of gathering information and developing criteria. The structural analysis contract was awarded in December, and the Navy is coordinating with NASA for access to the hangar and various other things. Mr. Moss also asked if Alternative 8 (neutralizing PCBs by emulsified bimetallic extraction) was dropped from further analysis because it requires removing the siding panels and cleaning them off-site. Mr. Gromko said details of this alternative will be in the revised EE/CA, but Alternative 8 does require removing the panels, and the technology has not been done on a scale as large as Hangar 1. Mr. Moss asked if the Navy has a "drop dead" date for implementing the removal action since the asphalt emulsion coating on Hangar 1 is nearing its five-year lifespan. Mr. Gromko said sampling shows that the coating is still working as expected and the Navy continues to monitor it, so there is no "drop dead" date for action. The three- to five-year lifespan is a manufacturer guarantee; the coating can still be effective beyond its guaranteed lifespan. Mr. Moss asked if there was any analysis done structurally prior to the first asphalt coating. Mr. Gromko said seismic and wind calculations were done to determine if the structure could handle the additional weight of the coating. The asphalt emulsion coating is factored in when evaluating the alternatives.
- A community member asked if Alternatives 2, 4, and 6 also include coating the frame. Mr. Gromko said there are coating alternatives for the interior. The community member also asked what the structural analysis will achieve with the differences in building codes between 1932 and today. Mr. Gromko said that the Exceltech team is researching which building codes are applicable to historic buildings and said there are ways to evaluate historic buildings using current codes and safety factors. Mr. Newton said the Navy is in consultation with the State Historic Preservation Officer (SHPO) Mr. Wayne Donaldson to integrate California historic building codes. Mr. Donaldson said that California historic building codes are performance-oriented codes, not prescriptive codes. This means that the Office of Historic Preservation (OHP) and the Navy will look at the performance the hangar will have on its own merits. Mr. Donaldson said it is possible the hangar may exceed current seismic codes. When the hangar was built, engineers were already considering seismic activity. Mr. Donaldson also said that in recent meetings with the Navy, he had raised the issue of conducting a structural analysis at this stage.
- A community member asked for the specifications on the thickness of the coating. Mr. Gromko said he did not have that information and would get back to him with it.
- In reference to the evaluation criteria, a community member asked how much "weight" is given to community acceptance versus feasibility. Mr. Gromko explained that there are three types of criteria: threshold, balancing, and modifying. Threshold criteria must be met; an example being the overall protection of human health and the environment. If a removal action alternative does not meet threshold criteria, it would not be carried forward for further analysis. There is also balancing criteria, an example being reduction of toxicity, mobility, or volume through treatment. If an alternative does not meet balancing criteria, it is not necessarily eliminated. Lastly, there is modifying criteria, such as community acceptance. If an alternative does not meet modifying criteria, it is not necessarily eliminated. The community member asked if a metric rating system is applied to the criteria. Mr. Gromko replied no.
- RAB member Mr. Gabriel Diaconescu asked if there has been any human health impacts on the community from Hangar 1, and if there is any statistical data showing whether there is or is not. Mr. Gromko said that data hasn't shown an increase in cancer risk or a similar health concern in the area. A community member later commented on Mr. Diaconescu's comment and said she has worked in a building directly across from Hangar 1 for 24 years and has had no health problems. The building she works in pulls in air from outside. Mr. Gromko said that air sampling has been conducted outside of the hangar and was "non-detect" for PCBs.

- A community member asked if there were any studies for PCBs at Hangar 1 prior to 2003. Mr. Gromko said that 2003 was when it was determined that Hangar 1 was the source of PCB contamination. Prior to 2003, there were studies to find the source of contamination at Site 25. The community member asked if there is more rust on the roof of the hangar. Mr. Gromko said that the rust could be an indication that the coating is starting to break down, however the roof is not RPM (Robertson Protected Metal) like the siding. Mr. Gromko said the Navy will update the RAB as more information becomes available. Community member Mr. Steve Williams asked for further clarification on the process for delaying the revised EE/CA release, what the internal processes were for doing so, and how far along the document was before the Navy realized more information was needed. Mr. Gromko replied that the Navy is working closely with the U.S. Environmental Protection Agency (USEPA), San Francisco Bay Regional Water Quality Control Board (Water Board), Advisory Council on Historic Preservation (ACHP), and OHP in developing the document. When the alternatives were reduced to five, the group needed more information about whether or not the hangar could withstand these alternatives. The Navy and regulatory agencies felt it was important enough to postpone the release of the EE/CA and move forward with the structural analysis to answer that question. Mr. Newton said that the Navy meetings with regulatory agencies are an ongoing consultation process. Mr. Williams said the decision would have had to been made sometime between the November RAB meeting and the scheduled 10 December 2007 release date. Mr. Gromko affirmed Mr. Williams' comment.
- Community member Mr. Bill Whissel, a founding board member of the Moffett Field Historical Society, asked how the community will have an opportunity to submit comments when the revised EE/CA is released. Mr. Gromko said that an e-mail address, fax number, and mailing address will be provided, and there will be a public meeting to accept oral and written comments. Mr. Whissel also asked if there was a proposal to take a small panel off the hangar to see the effect [on the hangar]. Mr. Gromko said the Navy has consulted with the project team of the sister hangar in Akron. The removal action for the Akron hangar was to apply a rubber membrane; however, the rubber membrane could not be applied to the lower 30 feet of the hangar, so the siding was pulled off. This demonstrated the extreme difficulty of pulling off the siding. Mr. Gromko said that there have been small pieces taken off Hangar 1 for lab analysis of the siding composition.
- A community member commented that the hangar could save millions of dollars and that there is nothing wrong with the hangar. She said that some suggested uses for it are to park planes, have meetings in it, and use it as an emergency shelter. She recommended the community coat the hangar and use it. The community member recommended sending the United States President a letter requesting funding and also recommended that at least three companies conduct a structural analysis of the hangar.
- A community member asked what the basis is for the assumptions going into the model, such as what are the local wind data, soil conditions under the hangar, and other data unique to the site. Mr. Newton said the Navy will update the RAB as more information becomes available.
- RAB member Mr. Lenny Siegel thanked the Navy for conducting a structural analysis and also granting Ms. Ellis' team access to the hangar to do an independent structural analysis. He said this helps the community gain confidence in the Navy's structural analysis and the potential for reskinning the hangar. In reply to Mr. Siegel's comment about Ms. Ellis' team having access to the hangar, Ms. Olliges said that under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Toxic Substances Control Act (TSCA), NASA has an obligation not to use the hangar or allow access to it. Allowing access would be considered a willful violation of TSCA, and the only people allowed in the hangar are Navy contractors, removal action contractors, remedial action contractors, Navy/NASA structural engineers, regulators, the OHP, ACHP, the USEPA, Water Board, and NASA maintenance and security. If the USEPA gives an interpretation in writing allowing Ms. Ellis' team into the hangar, NASA will try to work out the details since they understand the community's desire. The other details include identifying the scope of work, ensuring proper training for Ms. Ellis' team, and

coordinating legal issues with the Navy. Mr. Newton said that the Navy will continue to coordinate with Ms. Ellis and NASA regarding access. A member of Ms. Ellis' team later responded to NASA's concerns and said their team is very cognizant of NASA's concerns and assured NASA that the four people requesting entrance are two architects, a structural engineer, and a professional construction cost estimator. The team member said the team will follow procedural requirements such as training. Ms. Olliges commented that access to the building is not up to NASA entirely, and NASA needs approval from the USEPA. She said that NASA has no contractual relationship with Ms. Ellis' firm and certain legal issues need to be examined in addition to training.

- Mr. Siegel asked if there are blueprints for the structure stored in the hangar. Mr. Gromko said the rumors of drawings stored in the hangar is unfounded. Blueprints are archived in a separate building at NASA.
- Mr. Siegel said the Navy's previous goal was to remove all contamination and not have to worry about long-term management. He felt this is a change not highlighted in tonight's discussion since a coating option would require long-term management. Mr. Siegel also commented that leaving the hangar as a skeleton would not meet the substantive requirements of the National Historic Preservation Act; the structure needs to look like the way it has looked for the last 70 years to be historic preservation. Mr. Siegel also requested that the Navy consider the equipment in the building (such as the man-cranes). The historic significance of this equipment is as important as the structure itself and should be integrated into reuse of the hangar. He said it is important to be creative and to use historic mitigation as an opportunity to make the building useful, with signs of history peeking through. Mr. Newton emphasized again that no recommendation has been made and the Navy will continue the consultation process.
- A community member asked what the reuse would be for the hangar assuming it is preserved and who makes that determination. Mr. Newton referred to the point of contact sheet, stating that Mr. Mewhinney is the NASA point of contact for reuse.
- The community member asked if the Navy will be paying for reuse rehabilitation. Mr. Newton said that the Navy is obligated to pay for the removal action, and the Navy's responsibility is environmental restoration (to control or prevent the PCBs); reuse is not part of that responsibility. Mr. Newton stated that no decision has been made on the removal action alternative and there are still five alternatives to be evaluated. Mr. Moss clarified that the revised EE/CA will describe the condition of the hangar if each alternative is performed. If the community objects to these outcomes, comments can be submitted to the Navy. Mr. Newton offered to speak individually with the community member after the meeting.
- Mr. Honaker commented that the four interior alternatives are all coating-related. He asked if the evaluation for the interior of the hangar considers future uses, such as the ability to coat over the removal action coating, and whether or not the coating meets codes. Mr. Gromko said the evaluation will only address removal of the contamination, not what it would take to bring the building up to code. Mr. Honaker asked that an option of removing the existing contaminants without a coating be added. Mr. Gromko said that while no decisions have been made, he provided the example of media blasting the hangar frame. Media blasting would be difficult due to overlapping structural steel members. There are places that can't be reached with a media blaster, and would have to be coated anyway. Therefore removal of the contamination without re-coating would not be feasible.
- A community member asked if the layers of the siding pieces sent for testing have been found to contain contamination. Mr. Gromko said yes, and showed the presentation slide of the siding composition. He said that a panel has been dissected by the lab to determine chemical makeup of each layer. This panel also has been used for the testing of coatings. The panel consists of a steel piece in the center, asphalt with asbestos, then PCBs, then lead-based paint. The community member asked where the material came from, and if it was specific to the Navy or sold to civilians. Mr. Gromko said the RPM is used

around the country; he is not sure if it is used in other buildings in the area, and the Navy is looking at other military bases to determine if it was used.

- Mr. Siegel commented that the Navy accepts responsibility for removing the contamination, and it is not yet known whether the Navy will agree to pay for required historic preservation. He said the Navy does not have an obligation to bring the building up to code or pay for reuse, and NASA does not have the budget. Mr. Siegel hopes that users will propose to invest in the building, bring it up to code, and prepare it for reuse.
- A community member asked if there has been any research to determine what the composition would be for replacement siding. Mr. Gromko said that a replacement siding could be a one-layer fiberglass corrugated material (available in different colors). The community member asked if the attachment points would be identical to what they are now for ease of application. Mr. Gromko said this is a detail that is still being looked into, but it is possible that it could be closely matched. Ms. Ellis commented that in addition to corrugated fiberglass, corrugated aluminum and corrugated steel are available and would last longer; but they are both very expensive. She also said there is also the option of doing the architectural fabric (mentioned at the 05 May 2007 meeting) that could be colored to look like corrugation and has a 60-year lifespan expectancy.
- A community member commented that if there are contaminants within panels, in order to mitigate the problem and address contaminants, he feels the hangar will have to be put in a skeletal condition and then address any structural steel problems. He asked if the Navy is not concerned about reuse, can they legally leave the structure as a skeleton. Mr. Gromko said that is one alternative that is being evaluated (Alternative 10, to remove the siding and coat the structural steel). He said that no decisions have been made, and the Navy is still evaluating alternatives.
- A community member asked how many ounces per square foot of PCBs are contained in the RPM and suggested that perhaps there is no more contamination; the contamination could have been deposited during construction of the hangar. Mr. Gromko said the RPM information regarding percentage concentration levels is in reports that can be found at the Mountain View Public Library. Mr. Gromko also said that the PCB found, Aroclor 1268, is a unique PCB, and sampling has been done to show that it was found downstream at Site 25. Mr. Newton offered to speak individually with the community member after the meeting.
- RAB member Mr. Dan Wallace said he heard the black color of the hangar's roof is not original to the hangar. He said this is important to know because it may make a difference on recoating. He then asked if the hangar siding has to be corrugated to maintain historical significance, if not, it could make a difference in the material chosen to replace the siding. Mr. Gromko said the hangar was originally all one color, and the roof was painted black to counteract condensation. He said the Navy is working with the SHPO to consider these types of historical details.
- Mr. Strauss asked if the corrugation in the panels provides structural integrity. Mr. Newton said the structural analysis would determine that.

Mr. Gromko concluded the presentation.

RAB BUSINESS

Future RAB Topics - Mr. Newton asked for topic suggestions for future meetings. The following topics were identified as potential agenda items:

- Hangar 1 EE/CA
- Orion Park – Groundwater
- Site 22
- Site 27 and Western Pond Turtle

Other -

- In reference to Site 22, Mr. Newton said the Navy is completing the five-year review. RAB member Ms. Libby Lucas said burrowing owls were displaced from the site, and they are now inconvenient for the airway field and recreation. She asked the Navy to consider replacing the landfill cap so that the site is usable for the burrowing owl; there has been a depletion in the population of the burrowing owl.
- Mr. Moss provided background information on Orion Park groundwater remediation.

RAB Schedule - The next meeting is scheduled for Thursday, 13 March 2008, from 7 to 9:30 p.m., at Building 943, Moffett Field, California.

The RAB meeting schedule for 2008 is as follows:

- 13 March 2008
- 15 May 2008
- 10 July 2008
- 11 September 2008
- 13 November 2008

Adjourn - The meeting was adjourned at 9:15 p.m., and Mr. Newton thanked everyone for attending.

Mr. Newton can be contacted with any comments or questions:

- Mr. Darren Newton
  BRAC Environmental Coordinator, Former NAS Moffett Field
  BRAC Program Management Office West
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  San Diego, CA 92108
  Phone: 619-532-0963
  Fax: 619-532-0940
  E-mail: darren.newton@navy.mil

GLOSSARY OF TERMS USED IN THESE MINUTES

ACHP – Advisory Council on Historic Preservation
ARARs – Applicable or relevant and appropriate requirements
BEC – Base Realignment and Closure Environmental Coordinator
BRAC – Base Realignment and Closure
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act
CPEO – Center for Public Environmental Oversight
EE/CA – Engineering Evaluation/Cost Analysis
NAS – Naval Air Station
NASA – National Aeronautics and Space Administration
NEPA – National Environmental Policy Act
OHP – Office of Historic Preservation (State of California)
PCB – Polychlorinated biphenyl
RAB – Restoration Advisory Board
RPM – Robertson Protected Metal
SHPO – State Historic Preservation Officer
TAG – Technical Assistance Grant
TBA – To Be Announced
TSCA – Toxic Substances Control Act
USEPA – U.S. Environmental Protection Agency
Water Board – San Francisco Bay Regional Water Quality Control Board

RAB meeting minutes are posted on the Navy's environmental webpage at:
http://www.bracpmo.navy.mil/bracbases/california/moffett/

Hangar 1 Update

Former Naval Air Station Moffett Field
January 10, 2008

Presented by:
Scott Gromko
Project Manager

1

Introduction

- Background
- Revised Engineering Evaluation/Cost Analysis
- Structural Analysis
- Next Steps
- Questions

2

Background

- Built in 1932
- Uses:
  - Used for lighter-than-air program
  - Used for fixed winged aircraft
  - Offices and museum

3

Background

4

Background

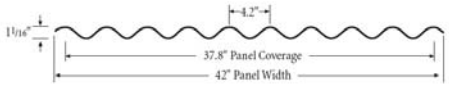
- 1997 - PCBs detected in Site 25 sediment
- 2003 - NASA studies identified Hangar 1 as a source
- NASA sampled:
  - Building materials
  - Stormwater
  - Air
  - Wipe-samples inside

5

Background

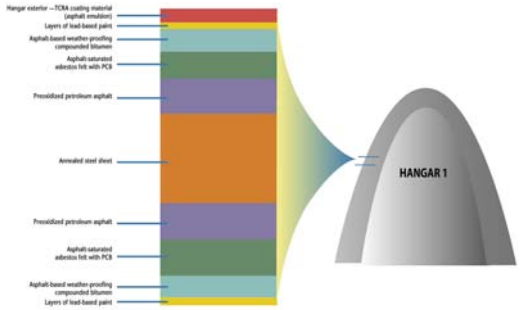
6

Background



7

Background



8

Background

- Hangar 1 building materials contained PCBs, asbestos, and lead
- Hangar 1 was releasing PCBs to the storm drains and to Site 25
- Air samples showed Aroclor 1268 above EPA's Preliminary Remediation Goals inside Hangar 1

9

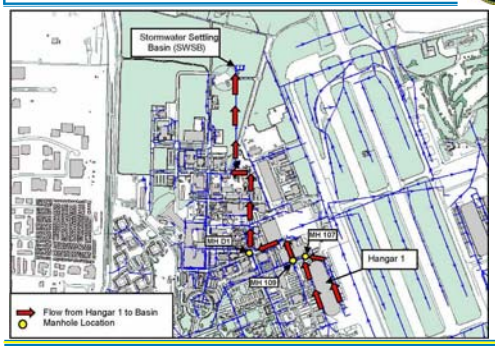
Background

- PCBs (Aroclor* 1268 and 1260) - Contaminants of Concern
- Asbestos – Hazardous Material
- Lead – Hazardous Material

** Aroclor is a polychlorinated biphenyl, or "PCB."*

10

Background



11

Background

- Identification of PCBs resulted in a need for mitigation
- Hangar 1 coated in 2003 (TCRA)
  - Asphalt emulsion
  - 3 to 5 year manufacturer guarantee
  - Sampling shows reduction

12

Background - TCRA

13

Background - TCRA

14

Background

- EE/CA released on May 5, 2006
- Recommended Alternative 11 – Demolition
- Public Meeting May 23, 2006
- Community comments collected and reviewed
- Document being revised based on comments and new information
  - Responses to comments will be provided in Revised EE/CA

15

Revised EE/CA

- Similar format as the previous EE/CA
- Evaluates:
  - Thirteen exterior removal action alternatives
  - Four interior removal action alternatives
- Considers historic significance of the hangar
- Structural analysis

16

Evaluation Criteria

- Implementability
  - Technical feasibility, administrative feasibility, availability of services and materials, community acceptance
- Effectiveness
  - Overall protection of human health and the environment, compliance with ARARs, short-term effectiveness, long-term effectiveness, and reduction of toxicity, mobility, or volume through treatment

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Revised EE/CA

- Alt 1: Enclose in another structure
- Alt 2: Cover with rubberized material
- Alt 3: Coat with asphalt emulsion
- Alt 4: Coat with acrylic coating
- Alt 5: Coat with plasma-sprayed oxide
- Alt 6: Cover with new visually-similar siding
- Alt 7: Media blast contaminated surfaces
- Alt 8: Neutralize PCBs using emulsified bimetallic extraction
- Alt 9: Remove by chemical stripping and coating
- Alt 10: Remove siding and coat exposed surfaces
- Alt 11: Demolish and remove hangar
- Alt 12: Collect stormwater runoff and treat on-site
- Alt 13: Collect stormwater and treat/dispose off-site

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Revised EE/CA

- Five removal action alternatives carried forward for additional analysis

  Alt 2: Cover with rubberized material
  Alt 4: Coat with acrylic coating
  Alt 6: Cover with visually-similar siding
  Alt 10: Remove siding and coat exposed surfaces
  Alt 11: Demolish and remove hangar

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Revised EE/CA

- Includes an analysis of interior removal action alternatives

  Alt 1: Acrylic coating
  Alt 2: Epoxy coating
  Alt 3: Asphalt emulsion coating
  Alt 4: Polyurethane coating

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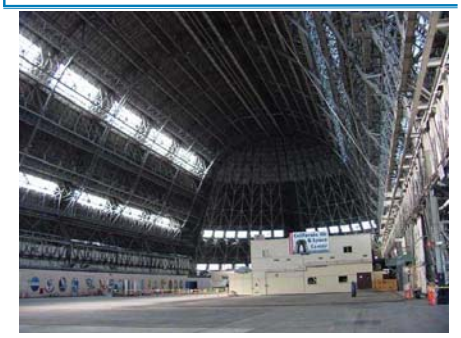
Revised EE/CA



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Revised EE/CA

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Historic Mitigation Measures Considered

- Level I Historic American Engineering Record
- Evaluation of the effects of the selected removal action on the Shenandoah Plaza Historic District
- Oral histories of individuals who worked in the hangar during the different eras
- Virtual Hangar 1 interactive compact disk (CD)

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Historic Mitigation Measures Considered - Continued

- Inventory-catalogue of Hangar 1 collections contained in the Moffett Historical Museum
- Preservation of Hangar 1 man-cranes
- Matching or replacing Hangar 1 exterior features with coatings or materials similar in color and appearance to the original hangar
- Coating the exposed steel structure with protective material similar in color to the former siding
- Other considerations

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Structural Evaluation

- Typically conducted during the predesign phase
- Will provide valuable information to select a removal action alternative
- Contract awarded to structural engineering firm (Exeltech)

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Structural Evaluation

- Hangar 1 structural system
  - Gravity System
    - Three hinged arch system supported on A-Frames
  - Lateral Resisting System
    - The arch and the steel bracing trusses between the arches

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Structural Evaluation

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Structural Evaluation

- Gather Information
  - Review existing documentation
    - As-built documents
    - Reports
- Develop Evaluation Criteria
  - Applicable codes for evaluations

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Structural Evaluation

- Conduct site inspection and field work
  - Review connections
  - Inspect condition of structure
  - Identify weaknesses
  - Gather information for the structural analysis

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Structural Evaluation

- Develop Gravity, Wind, Seismic loads
  - Alt 2, 4, 6 - Additional loads (coatings, rubber membrane)
  - Alt 10 - Without exterior (roofing, decking, siding, windows)

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Structural Evaluation

- Computer modeling
  - Determination of element forces
  - Identify deficiencies based on the demand capacity ratios (DCR)
  - Develop strengthening methods compliant with the Historic Preservation Guidelines
  - Test the proposed strengthening using the analysis model
  - Use the model to evaluate the removal process

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Structural Evaluation

- Prepare report and costs for structural upgrades if necessary
  - Summarize site conditions
  - Identify areas of unacceptable structural integrity
  - Present options and costs for areas of retrofit, if necessary

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Revised EE/CA

- Next Steps
  - Complete structural analysis
  - Incorporate structural analysis findings into Revised EE/CA
  - Release Revised EE/CA for review and comment
  - Public meeting to receive comments

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Action Memorandum

- Decision document
- Document that follows the EE/CA
- Contains a Responsiveness Summary
- Memorializes a removal action alternative

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Summary

- Currently conducting structural analysis
- Revised EE/CA will contain responses to comments received on the May 2006 EE/CA
- No release date scheduled for Revised EE/CA at this time
- A public meeting will be scheduled during the comment period

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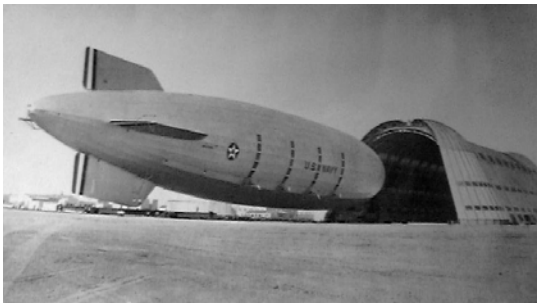
Questions



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