

**MARE ISLAND NAVAL SHIPYARD
RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES
HELD THURSDAY, October 25, 2007**

The Restoration Advisory Board (RAB) for former Mare Island Naval Shipyard (MINSY) held its regular meeting on Thursday, October 25, 2007, at the JFK Library, Joseph Room 505 Santa Clara St., Vallejo, California. The meeting started at 7:05 p.m. and adjourned at 9:05 p.m. These minutes are a transcript of the discussions and presentations from the RAB Meeting. The following persons were in attendance.

RAB Community Members in attendance:

- Myrna Hayes (Community Co-Chair)
- Michael Coffey
- Kenn Browne
- Wendell Quigley
- Paula Tygielski

RAB Navy, Developers, Regulatory and Other Agency Members in attendance:

- Chip Gribble (DTSC)
- Carolyn D'Almeida (USEPA)
- Brian Thompson (RWQCB)
- Neal Siler (Lennar)
- Chris Jespersion (Weston)
- Dwight Gemar (Weston)
- Mark Kleiner (Weston)
- Tommie Jean Damrel (Tetra Tech)
- Ray Beinert (Tetra Tech)
- Debbie De Leon (Tetra Tech)
- Steve Farley (CH2MHill/Lennar)

Community Guests in attendance:

- Diji Christian
- David Godsey

RAB Support from CDM:

- Doris Bailey (Stenographer)
- Wally Neville (audio visual support)

I. WELCOME AND INTRODUCTIONS

CO-CHAIR HAYES: Good evening. Somebody new and different up here -- you wish. It's actually really great to have you here this evening. And my name is Myrna Hayes. And on behalf of the Navy, as well as myself, I'd like to welcome you to the October, 2007 RAB meeting for Mare Island Naval Shipyard. Yeah. As you probably have gathered with the absence of half of our audience and as well as our CO-CHAIR from the Navy and our CDM staff, and Tommie Jean from Tetra Tech is filling in for them, they are all pretty much grounded in San Diego. So we're wishing them the best. And I talked to Michael last evening. He has not been evacuated, he doesn't seem to be -- he's got fires going all around him but not threatening his home though. Lots of others of the staff have had to evacuate or have been on readiness to evacuate, and so we'll just wish them the very best. But they just didn't think that it made sense for them to get on the plane and all try to be getting out of there when they might be able to be of service or support to their family or have to get out of harm's way. So I think the best we can do is pray for rain for them.

MR. COFFEY: And the winds to stop.

CO-CHAIR HAYES: Yeah. He said it was perfectly still the night before last and there wasn't cinders and things, and so they opened the window. And in the middle of the night he woke up just choking because the little bit of wind had come up and it filled their house with smoke. So all right. Well, the first order of business, as I recall, is introductions. So I'll pass the microphone.

Attendees introduce themselves as requested.

CO-CHAIR HAYES: I just want to quickly acknowledge Dave Godsey here as a -- well, you were a civilian -- but a retired Navy Lead RPM, and many, many years at Mare Island, a part of the naval shipyard team. So welcome back as a resident of Vallejo, a citizen of Vallejo. So next the presentation. Yes, why don't you introduce yourselves? An offshore sediment investigation. I'm not sure that I even know where this is and what you're testing, so this will be a good presentation for me to get up to speed on what you're doing. I obviously haven't read your prior documents. And do you want to introduce yourselves again?

II. NAVY PRESENTATION: *Time Critical Removal Action (TCRA) Update: Installation Restoration (IR) Site 04, the Paint Waste Area, the Horse Stables Area, and IR Site 05* Presentation by Mr. Dwight Gemar, Weston Solutions

MS. DE LEON: I'm Debbie de Leon with Tetra Tech, and I believe the next presentation is the TCRA we have up here.

CO-CHAIR HAYES: You know what's confusing to me -- yeah.

DR. BIENERT: We can flip a coin if you like.

CO-CHAIR HAYES: Yeah. It says Marie Dreyer, the Navy, and she isn't here. So the Navy, Dwight, you're here, and Weston Solutions, and the Time Critical Removal Action (TCRA), how about that, an update on it? I'm fired.

MR. GEMAR: So as Myrna mentioned, Marie Dreyer with the Navy is not -- could not be here, so I'm going to substitute for her, so you're stuck with me. This is an update on the TCRA. As a reminder, the TCRA is occurring at four different sites, investigation site four, Investigation Restoration Site 05, the horse stable area, and the paint waste area. And the work that is being done is removing contaminated soil and moving it to the soil consolidation -- the consolidation --

CO-CHAIR HAYES: You said it right the first time.

MR. GEMAR: -- area to H1, easy for me to say. As a summary, the objective, of course, is to reduce the risk to human health and the environment. And, again, the scope is, first at IR Site 04, is to remove the -- as much abrasive blast material as we possibly can. This was material that was generated as a waste product after the Navy used it to clean the hulls of ships, either to remove the paint or to prepare the surface for painting the vessels. The work at IR Site 05, the paint waste area, and the horse stable area is primarily driven by removal of soil or to reduce ecological risk. And at the horse stable area there's also some abrasive blast material that was deposited there. And as I mentioned, the soil is -- and/or abrasive blast material is being transported to the H1 site to be placed under the engineered cap that is currently under construction. And, of course, when we're done we'll restore the sites by hydroseeding or grading as appropriate.

This is a refresher on the work that's going on at IR 04. We started work in late September after the documents were approved. We started at this site. And again, the objective is to remove as much of

the abrasive blast material as we can with the equipment that we have, and this is being done visually as observed by an on-site geologist. And, again, the key word here is to the maximum extent practical, because there is abrasive blast material (ABM) or suspect ABM at some pretty significant depths on this site. So what we've been up to last month since the work was approved is there was seven existing groundwater monitoring wells that needed to be abandoned before or during the work because they were basically in the way. And what we do here is we drill out the casing and inject grout into the bore hole in order to properly abandon the wells so that we can then excavate in those areas. Since we started working at IR 04 we've removed an estimated 20,700 cubic yards of ABM material. The excavation depths have been up to an estimated fifteen feet below ground surface as determined later by confirmation borings. There is a small amount of suspect ABM, we call it black sand because when it's in the ground it has a very dark color. It's different than the green sand that a lot of people are familiar with, although when this sand dries out it has more of a tannish or grayish color to it. But nevertheless, this material underneath the green sand has not really been fully characterized, but it's nevertheless being treated as suspect ABM, abrasive blast material, and so we're trying to remove that as much as possible.

The main challenge with this layer of material is it's deep, so it's wet, and it tends to slough off into the excavation. So we have a challenge in trying to remove all of it. And so, therefore, some of it remains. But, again, my guess is that probably less than ten percent. But the agencies feel that there could be several feet of mixed zone of clay and/or this black sand at depths that we're not able to remove with our excavation equipment; and therefore, some type of confirmation borings will be necessary in order to determine what is left and what threat, if any, that that material exhibits. The good news is that in all of this 20,000 plus yards of material that we've dug up, so far we've not encountered any munitions or munitions debris, so that's a positive note. And as I mentioned, this material is all being transported to Investigation Area H1 along the south side of the island along public roads and is being placed under the future engineered cap. And simultaneously with the excavation, because of the concern with both the sloughing of the black sand and the infiltration of groundwater, we're simultaneously backfilling this excavation. We're doing it basically in strips about twenty feet wide or so. And as we get to what we think is either clean looking clay bottom, or as far as we can reach, then we start backfilling immediately in order to keep a lot of water from entering the excavation. And so far we've transported an estimated 21,500 cubic yards of backfill material. This is material that is coming from a development site over in Napa, and it was sampled and characterized and approved by DTSC for use on this site as backfill.

And here's a photograph of this kind of simultaneous excavation and backfilling operation. You see here's an excavator arm reaching down along the edge of this face of the excavation. And you can probably see it a little better on your handouts, kind of the bright green horizon of green sand, that's a couple of feet below the top surface. And then a little bit harder to see in this particular photograph is, below this green sand is this darker "black sand" quote unquote that has been encountered, and we're attempting to remove as much of that as possible. And you can see on that insert on here, that little bit of -- that nice horizon of green sand in the afternoon when the sun is hitting it, it kind of looks like the Grand Canyon with all the different colors in the side wall. Here's just a group abandoning the wells as I mentioned. This is a photograph of that. And we had previously mentioned that we were setting up vibration monitors along the haul route from IR-04 to the Investigation Area H1. And that's a little picture of what the meter looks like and it's being set up near these historic magazines. And so far the trucks have not caused any vibration anywhere close to the prescribed limits. So it appears that by keeping the haul route a little bit further away from these buildings, and the large tires on the vehicles themselves, that they have not caused any

significant vibration. And this is a kind of a multi-colored diagram of the progress to date at IR 04. On the legend you can see the different -- what depths or approximate depths the excavation represents based on the color coding here. In the background there are some contour lines. This is kind of the estimated depths that were provided to us from previous investigations as to kind of what to expect. And for the most part, the depths of the ABM or suspect ABM have generally followed these contours, although we've encountered ABM at depths greater than what really the topographic maps show. And in some cases, like in the steepest area here, we were down to what we think is about fifteen feet and we're not getting it all, because there was still some of this black sand kind of sloughing in the hole, or visible in the bottom of the hole that, you know, just could not be removed. Actually as of today, this kind of thirteen row here along the shoreline was excavated so we're up to about right here as of the end of today. And then as we come around the corner here toward the west, this is supposed to be just a couple of feet depth-wise for the green sand. So that should be -- hopefully it should go a lot quicker than this area because there are some pretty significant depths there. And we'll come back and get this little bump out here as well before we, you know, finish up the work. So that's what's been going on at IR 04.

During some of the rainy days that we had last week, we sent a crew over to the paint waste area which will be the next site on the list to do excavation. And we started by cutting the vegetation in a methodical manner under the direction of a biologist, per the agreement with the -- between the Navy and U.S. Fish and Wildlife Service, in terms of avoidance techniques so that we hopefully do not disturb any salt marsh harvest mice or encourage them to leave the area towards some adjacent pickleweed which is down in this area here. And so that was done about a week ago or so. And then we did a background radiological survey of the surface with detectors. And lo and behold, we started running into quite a few anomalies that, upon investigation, turned out to be mostly what the Navy called cat eyes, which are three quarter inch diameter markers, luminescent markers that were used onboard ships or submarines for positioning so that the -- if they lost power, the crew could see where these pieces of -- or instruments were that they were marking with these little cat eyes.

And so they were, at least so far where we've surveyed -- we've surveyed this whole corner over here -- that's where we've found most of them. We've done some grid lines through the rest of the site so far and we've picked up some here and there. We're going to go ahead and do a complete hand survey of these other areas in between the grid lines just to make sure that we're -- try to get those out of the ground before we start excavating. They're kind of like -- the hot spots that we're initially going after, these little squares here in these areas here. But the plan is to also excavate this entire area down to about two feet, and then do confirmation sampling to see if that area meets the cleanup criteria, which are mostly, you know, based on ecological criteria.

And this is kind of how the schedule looks like currently. We should be done with IR 04 on or before November 1st. And on this one we show the horse stable area, but I think we'll probably jump over and do the paint waste area first and then come back to the horse stable area. And then we'll finish up with IR 04 which is going to, at least currently, even with good weather, probably push us to the end of December. So to summarize, the next slide, where we're at in the first month of field operations is we've removed what we believe is about 85 percent of the ABM, and that work is continuing. The amount or volume of ABM or suspect ABM seems to be running about 25 percent higher than what was estimated. And the remediation of the other sites will occur sequentially after we've completed IR 04. The discovery of these radiological items in the paint waste area was not really expected, although I guess I should just calibrate myself to always expect the unexpected on Mare Island. But so far we've not observed any MEC or munitions or munitions

debris, but that's, you know, a potential possibility. And I suppose we'll just have to see how that works out. So if that wasn't scary enough, Happy Halloween. And I'd be happy to entertain any questions.

MS. TYGIELSKI: I'm wondering, Dwight, what does ABM stand for?

MR. GEMAR: Abrasive blast material.

MS. TYGIELSKI: Thank you.

CO-CHAIR HAYES: I have a few questions. Will you re-install monitoring wells at new locations on that site?

MR. GEMAR: Well, that will have to be worked out, Myrna, with the Navy and the Agencies. I would guess that they would want some monitoring wells re-installed. The thought process, I believe, is to see where we think the ABM might be remaining, and then, you know, base it on some of that new information. But, again, that's going to have to be worked out with the Water Board and DTSC and EPA.

CO-CHAIR HAYES: Next question. When you mentioned that you had excavated down to depths up to fifteen feet, was that evenly across the area of excavation? You showed that one area that -- yeah, that map.

MR. GEMAR: Yeah, can you go back to this slide, Debbie? Yeah, this shows kind of the approximate depths as we moved across the site. So you can see that we started out, you know, three to four feet, and then a step down to six to eight, and then eight to ten, and so on. Which more or less followed the -- kind of the contours that were based on previous investigations. There was a real, kind of a steep drop-off in the depths of the ABM, and then it just kind of comes back up. So there's one area kind of with the cross hatching in the middle there that we just clearly couldn't get it all because it's just too deep for the equipment and for the site conditions. The material is very fluid, it's almost like quicksand, so you take a scoop and more flows into the hole, basically.

CO-CHAIR HAYES: Did your geologist have any analysis about why it was there or why it was flowing or why it turns from black to sand or black to tan like, I guess, a Doberman or something is what I imagine? And in its existence is it very uniform at that depth? I mean in that green -- in the deeper area? Or do you encounter it randomly in all of -- in all of the areas but just not at the depths that you do at the fifteen feet or --

MR. GEMAR: Well, it's pretty prevalent across the site, Myrna. It does dip down in those areas that we've shown on the figure here. The green sand appears to be more uniform, that is it's, you know, anywhere from zero to two feet below the ground, and it seems to be about four to six feet thick. But below that, this black sand appears to, you know, be not as uniform in thickness, and in some areas of the site it does appear to, obviously, dip down pretty deep underneath the overlying green sand. So I'm not real sure how it, you know, how the topography ended up that way or how the material would have been placed originally, but it's definitely deep in certain parts of the site.

CO-CHAIR HAYES: And could you remind me of what the contaminant profile of that black tan sand is?

MR. GEMAR: Well, the -- and correct me if I'm wrong from our resident expert over there in the cheap seats, David -- but I don't recall that it's really been characterized as fully as the green sand has been. So, you know, most likely if it is abrasive blast material, which is certainly suspected, it

would be contaminated with heavy metals or materials that would have been in the paint from the ships cleaning.

CO-CHAIR HAYES: So you don't have, you couldn't -- you knew that there was Monterey sand used at the site, and then later this green sand is nickel slag, but you don't know what this mystery sand is or what -- when it might have been used? I mean, I guess where I'm going with this is how do you know that it's not ship's ballast? I mean sandy beach, with that infamous name, you would think -- or characteristic name you would think was a beach, but it wasn't until just ships ballast sand was applied to the other side of the river in massive quantities. And this was a very low lying, swampy, marshy area that shows in all the historical maps with these huge kind of perched wetland ponds within marshes. So how do you know that this is ABM or suspect ABM or is it just suspect so take it away?

MR. GEMAR: Well, I think that it's kind of the latter. I think it was just considered suspect, and because of the opportunity to remove a large volume of material without being very selective, that it was a more conservative approach to remove it now rather than do a lot of extensive characterization and perhaps lose a window of opportunity to remove it. So, you know, the Navy agreed with that approach and decided that anything that had an appearance of sand would be considered suspect and would be removed to the extent that we could remove it.

CO-CHAIR HAYES: And that fill coming in from Napa, doesn't that increase our property values quite a bit? It looks like it would be nice enough soil for maybe a miniature golf course there or something.

MR. GEMAR: It's very nice fill. I think -- hopefully if the confirmation borings, you know, show that most material has been removed, it hopefully will be a robust cleanup.

CO-CHAIR HAYES: I guess this is your lucky day because I don't have anymore questions.

MR. GRIBBLE: I wanted to make a couple of comments. You talked about the radium buttons that were found out at the paint waste site. That wasn't expected, and it's caused us some -- to think back on what we've done and what we haven't done with the past radiological surveys. There are a couple of things to point out. It does point out, number one, the MEC support that is generally applied to excavation activities -- loosely meaning whenever you dig out in the west side, in a very loose way, you always look ahead for MEC or RAD, radiological items, just as a precaution. And in this case, that kind of demonstrates the appropriateness of that safeguard or that precaution. The other thing is why are we still finding these things out in the west side of Mare Island? And we had to go back and recollect some of the past activities. And it occurred to us that we had thought about that in the past, and in the past we did not survey a hundred percent of the west side of Mare Island because some of those areas are inaccessible, and it's just not possible to get either a MEC, a decent MEC survey or a decent radiological survey because of the underbrush or the vegetation. That you can't get, for instance, close enough to the ground and that you get interferences. And also it's an impact for us to be trudging out there in endangered species habitat. So the surveys that we did in the past were limited to some of those areas that were vegetated. And if we think about how do we -- what do we do with this new information, which I -- clearly we have to rethink, I think we're going to be struggling with the same issues which is that there are limits to how much of the areas out there that we actually can or want to survey because of the vegetation and the endangered species habitat. Perhaps there are some areas that maybe we could access and do some more surveys in some of the -- near the berm areas, but I'm not sure that that's realistic either. It's just a

limitation that I think we're going to face again when we try to discuss this with the Navy. I applaud Weston for aggressively searching for them and proceeding to take out the ones that they find.

MR. GEMAR: Appreciate that, Chip.

MS. D'ALMEIDA: How vegetated is this area that appears to be an outfall?

MR. GEMAR: It was kind of your typical fennel infested area, Carolyn. So, yeah, before we cut it, I mean, you really, you know, I mean you'd have to take a machete to walk through it basically. So once we cut it, then we're able to go in, as Chip mentioned, you know, and get the detectors close enough to the ground -- close enough to the ground so that you could detect what might be in the near surface. And there's some exposed debris, but not a lot. But you could tell from the topography that there's obviously been something placed in that area because it is a little bit higher in elevation than the surrounding wetland area. At this point we don't know for sure if it's an outfall. We haven't found any MEC but that could change. And the RAD buttons are kind of dispersed over kind of a fairly wide area. But, again, that could be just somebody out there messing around and got them spread out. But at this point we're going to reserve judgment until we get a little bit more information. And I don't think there's any historical information of an outfall at that location, but it doesn't necessarily mean that it couldn't have been one, because we certainly found one over at the rifle range that we didn't know about until we started our excavation work. Always expect the unexpected at Mare Island. Thank you.

CO-CHAIR HAYES: Well, if you've ever seen -- take a look at some of those photos of the way the island was built. It wasn't exactly just the river's waters flowing through those pipelines. They took the opportunity on that west side to throw -- well, probably everywhere, you guys -- are probably doing a lot of excavation in the eastern early transfer parcel, and they took every opportunity to get rid of construction debris and all kinds of other stuff, and then just sort of smooth out that fill, that slurry over it, and let it dry and get it all cracked and muddy, and then some more slurry got poured in over that. So I'm sure that as they were building up the west side, but all over, anyplace they filled, that you will find some interesting treasures. Didn't you tell me you found a toilet over here somewhere?

MR. GEMAR: Yeah. We haven't found the kitchen sink, but we did find a toilet at IR 04.

III. NAVY PRESENTATION: *Offshore Sediment Investigation Update (Investigation Area K): Pilot Study Results and Study Design Overview*
Presentation by Dr. Ray Bienert, Tetra Tech

CO-CHAIR HAYES: Okay. I'll tell you how I got confused looking at the agenda earlier. They both started out with Ms. Marie Dreyer giving a presentation, and so I apologize to you for jumping ahead, Dwight, and for almost missing out on your presentation. And so while we're figuring out how the laser pointer works, I'll introduce Dr. Ray Bienert. Good to have you here.

DR. BIENERT: Thank you. And Marie also won't be here for this presentation. Yeah, I'm Ray Bienert from Tetra Tech. I apologize if my voice comes and goes, it's the beginning of my fall allergy season so this could be a bit of a challenge. I was also asked to tell you that we've given you a black and white version of the handout for this presentation. If anybody would like a colorized version, either electronic or hard copy, please let us know and we'd be happy to get that to you.

Now, it's my understanding that you've already had a lengthy presentation at another RAB meeting of the offshore sediment pilot investigation. So what we're doing tonight is we're really just giving

you an update. So provide an overview, again, of what the goals were for setting up the pilot study. And then I'll get the results and conclusions from that investigation. And then I'll go into an overview of the purpose and the sampling design that we implemented for the full offshore sediment investigation 2008. I'll touch on the schedule and talk a little bit about the path forward. And then there will be time for questions. But if you have questions as I go through this, please don't hesitate to stop me and I'd be happy to answer them.

So this is the offshore sediment area, Investigation Area K. And these numbered cells are a throwback from the earlier ecological investigations, and we sort of carried those forward for historical context. It also helps that if you continue to access some of the earlier reports it just makes it easy to track things through time. And so that's what all these are. So a pilot study was conducted in January of this year, and the purpose of that investigation was really to do reconnaissance. And the purpose was to gather information that could be used to refine and really optimize the full site investigation that would be coming up in the RI. So really there were three main goals of the pilot study. The first was to evaluate the applicability of two types of rapid sediment characterization (RSC) tools. The first was a series of hand held x-ray fluorescence or XRF instruments. And these are appropriate for measuring a broad spectrum of metals in the sediments. And the second RSC tool was immunoassays test kits. And in this case we're talking about a test kit that was specific for polychlorinated biphenyls, or PCBs. The second goal was to confirm the presence of benthic biota, Asian clams, mainly. And then the third was to corroborate a series of conceptual models that we had developed for understanding the behavior around the different outfalls. The models were based on discharge characteristics of different outfalls. So the results of the pilot study are provided in a technical memorandum that came out in May of this year. And the results of this TM were used to guide the study design for the full offshore investigation.

And so the main conclusions for the two rapid sediment characterization tools. We found that the XRF tools in general were of very limited utility. And the main reason for that was because we weren't really dealing with a wide range of concentrations of metals in the sediments. And most of the metals that we were seeing were down around the detection requirements for the instrumentation. So the XRF would have been a more viable tool in a situation where we have a wide range of concentrations. In particular, where we're chasing areas of very high concentrations where we're trying to locate an area of high concentration and then doing some proof delineation. The PCB test kits fared a little bit better, but again we had the same situation, in that we're typically dealing with very low concentrations that were below our screening criteria for PCB's in sediments. And so for the full-blown offshore investigation we'll be using regular analytical techniques. For the benthic biota we were able to verify the presence of Asian clams and benthic fish. Although in the case of the clams we did find that the clams were numerous but they were very small. And then lastly, we found that, for the most part, the conceptual models that we had developed based on the discharge characteristics of the outfalls did, in fact, hold up for outfalls that discharge onto mudflats. We indeed did see the dispersion, so higher concentrations right around the mouth of the outfall. In cases where the discharge was into shallow water, we tended to see a pattern of decreasing concentration as you move away from the mouth of the outfall, which is what we were expecting to see. And then, lastly, in the case of the deep water outfalls, discharging into deep water, limited pattern of chemical distribution, it had very few. And, again, that's more or less what we thought we would see for that set of outfalls.

Here are some of the sampling arrays for a few of the select outfalls. This is outfall 40. So this is going to be at the southern portion of the site. So this would be the Carquinez Strait right in through here. So this is the outfall. These are the stepouts with the XRF. And then there are a few symbols here that you can't read. These little crosses, I believe these are the MEC sites, and then the ones where the crosses were circled, those were MEC sites that were investigated, I guess, in a study that was done in early 2006. Here is outfall one. And, again, this is the area. And these are the outfall areas there, and the stepouts. And then, lastly, here is outfall thirteen in north Mare Island, north Mare Island Strait.

Now moving onto the full offshore investigation. This, the sampling for this investigation will begin sometime in the spring of 2008. And there are two components to the investigation; one is the outfall characterization component, and the second is the baseline ecological risk assessment (BERA) component. And so the goal of the outfall component, again is to complete the characterization of sediment around the outfalls. And this is going to be done in support of the nature and extent of contamination investigation that will go into the RI report. And the goal of the ecological risk assessment is to gather enough data to address uncertainties that were identified when the original offshore ecological risk assessment was presented in 2002. And so the strategy for identifying locations for sediment coring in this investigation, again is based on the discharge characteristics for the different outfalls. So for the mudflats the cores will be located proximate to the mouth of the outfall. For the outfalls discharging into shallow water, the cores will be set within ten feet of the mouth in the direction of Mare Island Strait. And then for the deep water sediment where we don't expect to see any pattern, we'll be laying down a random array in random locations determined using the Department of Energy's Visual Sampling Plan, and that's a very useful tool to aid sampling; that will be used to direct the sampling.

And so in terms of the individual cores, the maximum depth of the individual cores as well as the number of -- and location of the intervals of the core that we're going to be sampling, that's established pretty much on a location by location basis looking at a number of things, including the historical dredging records that we have for this site. Bathymetric maps, including a recent bathymetric survey. And then also taking into account what we know about sediment dynamics in the area. And sediment deposition rates. So here's an example here of the core. And for the case of the shorter cores, the maximum depth -- and in this case it's going to be determined by making sure that we at least capture the depth of sediment that will reflect the period where we expect to see contributions from Navy site activities. So this particular schematic will be down to about here, and then when you go down deeper than that you're looking at the pre-Navy condition. And so the design for the BERA is based on, in terms of where we're going to be -- where we're going to be evaluating, the areas of the site that were recommended for additional investigation in the data gaps technical memorandum that was released in 2004. And for the most part, the data quality objectives for the sample design that were developed through a series of technical work group meetings that we had with the regulatory agencies, and those were held between May of 2005 and March of 2006.

The sampling design for the BERA is really designed to provide representative coverage of the habitat based exposure units that we've defined for this site, as well as some subdivisions of those habitat units, the exposure sub-units. We identified three separate exposure units based on like habitat types as part of the earlier ecological risk assessment that was done at this site. And there was a little bit of refinement done then for moving this into the BERA that is upcoming. And, again, based on exposure units (EU's) and based on areas of similar habitat, and then in some cases

they're broken down into sub-units which are defined as groups of contiguous cells within an individual habitat. And so, again, you can't see this very well, this is the original map that I showed for IA K -- and the color doesn't show up very well -- but this just identifies the three different habitat types. So in here, this probably shows up the best, this area in light blue, this is the habitat that is represented by cells that have significant mudflat. And then up here we have a deep water habitat without adjacent wetlands or mudflat. And then we're calling exposure unit two is habitat adjacent to or containing wetlands with minimal or no mudflat in here. And so we're going to be conducting all the sort of standard things that one would do in some of these biological assessments, including using bioassays and 28 day bioaccumulation testing to assess exposure for benthic invertebrates to chemicals through the dermal and ingestion pathways. And then we'll be using food chain modeling to assess exposure to higher trophic level receptors. And, again, these are all ingestion based models. In this particular case, the surrogate receptors that we've selected to represent different feeding bills are the surf scoter, killdeer, double-crested cormorant, the river otter, and the Pacific harbor seal, which you can see here in this slide.

So now, in terms of the schedule of the path forward. A Draft Work Plan and the Sampling Analysis Plan, the SAP, is scheduled to come out next month. The offshore sampling will begin in spring of 2008. And then the Draft RI is scheduled for sometime in the winter of 2008. And with that, I'll be happy to take questions if there are any questions.

MS. TYGIELSKI: A simple one. There's a word --

CO-CHAIR HAYES: Use your microphone, please.

MS. TYGIELSKI: I would like to know what bathymetric means.

DR. BIENERT: When you create a bathymetric map you're basically taking soundings of the surface, so you're measuring the depth to sediment. So if you look at a bathymetric map you'll see contours, and the contours represent different depths.

MS. TYGIELSKI: Thank you.

DR. BIENERT: Anybody else?

CO-CHAIR HAYES: On slide -- I can't see -- slide five.

DR. BIENERT: The rapid sediment characterization tools?

CO-CHAIR HAYES: Yeah, right.

DR. BIENERT: Yes. You want to know how they work?

CO-CHAIR HAYES: No, I don't want to know that. I kind of got a feeling about that. No, I don't want to know that. Number three, "*Confirm the conceptual site models used to develop the sampling plan for the outfalls that they are appropriate.*" What the hell does that mean?

DR. BIENERT: Okay. What we were doing when we were thinking about coming up with the sampling to characterize the outfalls, we said, well, we should in some way leverage information we have about the outfalls in terms of would we expect to see different patterns of potential contamination around the outfalls based on their discharge characteristics. And so we thought that we could group the outfalls broadly into three groups: Those that discharge onto mudflats; those that discharge in the shallow water; and those that go into deeper water. And we thought in the case of the outfalls that discharge in the mudflats, that we would expect to see the best signal for any contamination very close to the outfall, which makes sense, the materials are coming out of the

outfall, depositing right there onto the mudflat, and then accumulating over a period of time. And so if that model holds up -- and the pilot study shows that it does -- we did find higher concentrations right at the mouth. Now, the shallow water one is sort of an intermediate between discharging to mudflats and then discharging to deep water. There we thought we might see higher concentrations near the mouth of the outfall, but we might see a pattern of declining concentrations as you get away and as the material is distributed more. And in fact, in a large number of cases, that's what we saw in the pilot study. When the discharge goes into deep water where there's an awful lot of turbulence, we would expect that immediately once it comes out of the outfall it just gets circulated and then distributed around, we wouldn't expect to see any pattern. And so we said, if we tested that and we verified that, in fact, those are the patterns, then we could use that information in the design to make sure we were sampling in areas where we have an expectation of seeing something.

CO-CHAIR HAYES: Okay. On slide eight you mentioned that the Asian clams that you collected were, "Very small in size." Smaller than a normal Asian clam? What was the significance of the fact that they were very small?

DR. BIENERT: I didn't participate in the pilot study. All I have from that was that that was the observation the field crew made. And I can only speculate -- I can't address whether or not that -- but I don't believe that what they intended to communicate was that they were abnormally small or anything. The size --

CO-CHAIR HAYES: They were stunted because of their exposure?

DR. BIENERT: I mean, just in general if you look at --

MS. DE LEON: I can answer that question.

CO-CHAIR HAYES: She says she can answer.

MS. DE LEON: I can clear that up since I was actually collecting --

CO-CHAIR HAYES: Why don't you use the microphone?

MS. DE LEON: Generally we did find that the Asian clams were unusually small in size. Partially that's attributed to the fact that we were collecting in the wintertime, so we hope to correct that by doing the full offshore investigation in the springtime. So we didn't find many Asian clams, and they were about that big. And you can see this grate here. Most of the Asian clams fell through the grate. So this is one of the largest -- this obviously isn't to scale -- but that particular Asian clam was about that large in diameter.

DR. BIENERT: And just to expand on that a little bit. The ecological explanation for why a lot of times you see differences in size in different populations of clams, oftentimes it's related to the quantity and quality of food source. So in areas where you have a lot more food and the clams are better fed, they tend to grow larger. Results where there's competition for food and you have high densities of clams, they're all competing for the food source so that's another factor.

CO-CHAIR HAYES: Well, I will throw in another one and you'll probably laugh, especially Wally the bird nerd in residence tonight. I was thinking maybe because it was winter that all our diving ducks had come by for the winter and eaten all the big ones.

DR. BIENERT: That's not outside the realm of possibility either, so --

CO-CHAIR HAYES: Oh, do you expect -- I mean you're taking these cores in areas that -- core samples in full study that are in areas that are historically -- also have ordnance, as you pointed out on a couple of your maps. What do you do when you encounter or do you expect to encounter ordnance in those core samples?

DR. BIENERT: My understanding is that there is some provision for that in terms of a health and safety plan, and also in terms of how the sampling is going to be conducted. Is that specific enough?

MS. DE LEON: I can talk about that. During the pilot study we didn't encounter any sort of MEC or anything of that nature, but we do have a UXO expert with us. So every time we pull up one of those cores, it's scanned for potential MEC. And we did have one that we returned just because of the high content. But the scanner doesn't actually identify whether it's MEC, but there was a high concentration of metal, of anomalies within that particular core, and we did put it back and take another core out. So we will use the same criteria in the sediment investigation.

DR. BIENERT: Thanks.

CO-CHAIR HAYES: Of course, if you put it back you might be putting some contaminants of concern associated with MEC or something like that back in the soil or back in the river that might give you a different characterization. In the cores that you've already taken in these samples, was there anything you can say about the pre-Navy core samples portion of the core as compared to the rest of the core in terms of constituents that you did find? Or was that just variable depending on the site, specific site?

DR. BIENERT: That really wasn't the focus of what we were doing, so I'm not sure that the data have been summarized in such a way to address that. The parts that I'm familiar with is they had very specific goals, specific things that they were looking at. And mainly it was to get the information so that when we do design the full investigation, we'll know where to sample, what depths to sample, and all that. And then once that information comes back, then we'll have hopefully sufficient data to address that question. I know in a preliminary way, just from what they've seen in the pilot study. I haven't actually looked at the data, so --

MS. DE LEON: I'm not sure if this answers the question -- if I understand your question entirely -- but we were visually able to --

CO-CHAIR HAYES: I'm sorry. You have to use the microphone. In this room --

MS. DE LEON: I'm not sure if I caught your whole question, but we were able to visually distinguish the pre-Navy sediment layer.

CO-CHAIR HAYES: Was there something consistent about it in terms of its lack of contaminants, or was it just the age of the, you know, the formula of the sediment or --

MS. DE LEON: It was primarily just the --

CO-CHAIR HAYES: The way it looked?

MS. DE LEON: Visually the way it looked, the coarseness of it. You could visually see a difference in the texture of the core.

CO-CHAIR HAYES: I think I only have another question or so. And the next one relates to your food chain model. It seems to me that these are receptor species that are better than the ones that

were first proposed in these studies a way long time ago. But are there any of these that are diving ducks? Is a surf scoter a diver?

DR. BEINERT: Yes.

CO-CHAIR HAYES: Okay. Then you must have changed your species receptors, because in the past they were pretty irrelevant, and these all seem to be locally relevant species.

DR. BIENERT: My recollection is that there is overlap with the original studies, and that initially when we started doing this, I believe they had to carry all of the receptors forward. This was the focus of a number of discussions during our technical work group meetings. And the agencies have made some proposals for a few alternate species, and I believe that the risk assessors are still discussing that with a few folks from the agencies. There's one suggestion to replace the double crested cormorant with the osprey, and we are investigating that further. The conclusion was that the cormorant as a fishing bird is a year-round resident, and the feeling was that it had greater exposure than the osprey. So I think in that instance the risk assessors decided to retain the cormorant. And there was one other suggestion to replace -- I believe it was the killdeer with something else. I think those discussions are still ongoing.

CO-CHAIR HAYES: Okay. Is killdeer maybe because it's year-round too?

MS. DE LEON: I actually have one more comment just to clarify. When the core did have a high amount of anomalies, we didn't actually throw it back overboard, it actually was disposed of properly, in drums, and taken to a hazardous waste facility with the rest of the core. So, I'm sorry if I misled you with that answer.

CO-CHAIR HAYES: Okay. Well, that's useful. Thank you. That did more fully answer my question. Any other questions on this topic? Thank you very much, Ray. Your voice held out.

Now there's an opportunity on the schedule for public comment. And that would be either anybody from the community, the audience who has something you want to bring to the Restoration Advisory Board -- it doesn't have to be on our agenda -- or it can be RAB members who have something unrelated to the agenda that you want to comment on. I'd like to make that clarification. Hearing none, I guess we'll take a break. And I didn't bring too much in the way of chips, I kind of forgot those, so I think we've got cookies, but we do have Diet Coke and water. So we're right on schedule at twelve minutes to twelve where we've been holding steady for the last hour and a half. So why don't you come back like about 8:10 -- no, 8:15. How's that?

**IV. Presentation: *Community Update: USS Wahoo Memorial*
Presentation by Ms. Myrna Hayes, Community Co-Chair**

CO-CHAIR HAYES: All right. Well, welcome back to the second hour of the Restoration Advisory Board. Not very often do I give a slide presentation or does any member of the community give a presentation, but from time to time in the last twelve, thirteen, fourteen years we have. And I was asked actually to give this presentation very briefly because -- I don't know why exactly, but here's the reason I want to give it, why I agreed to give it is because sometimes I think we forget or we could be susceptible to forgetting what the reason we're here gathered together here, and why we're trying to do environmental cleanup, and what the roots of this place are. And I have a very favorite former Navy chaplain, he's 87 years old, who you'll see at this slide show, who at the Naval Ammunition Depot 150th said that we should remember to remember. So that's what

we'll do this evening is just quickly go through -- maybe go back one more -- go through these slides. Oh, and I'll pass these out. I happen to have a few extra if you weren't able to be at this day.

The Wahoo was one of over 500 ships that were built at Mare Island. And typical of the thousands of other ships that were overhauled here, she was overhauled between each of her patrols here. In other words, coming in for repairs, but also coming in for modifications and improvements to the technology. And the reason that we held this ceremony was because, as you can read, on her seventh patrol she was lost at sea. And for 63 years the exact location of her final resting place, along with a crew of eighty, was not known. But in July of 2006 the vessel was found in an inter -- part of an international effort between Russian diving teams, the Russian Energy Corporation, and the highest level of retired Japanese military personnel, a Vice Admiral who did the Japanese side of the research into the Japanese military archives. And with a lot of pretty fancy technology, including sonar used by the energy company, they were able to pinpoint where they thought the vessel was. And in July of 2006, the Russian diving team actually did locate and photograph the Wahoo in the Strait of Soya or La Perouse Strait, depending on whether I guess what the Japanese call it or what the Russians call it. So in Russian water south of Sakhalin Island in Russia and north of Hokkaido in Japan, in just 213 feet of water. And many of the other 51 World War II submarines are in much, much deeper water somewhere in the Pacific or the Atlantic. So in many ways they were -- the search team was just lucky that they could gain access to this vessel and that it could be found with standard diving equipment.

So because we know it was lost on October 11th, we now know in 1943, there was a large ceremony planned in Hawaii for October 11, 2007, to commemorate the 64th anniversary. A lot of times we commemorate things on the 65th or 75th or 150th, but in this case because there had actually been no memorial service ever for this crew, it was important that as these vessels had been found -- and several have in that same year -- that the families be brought together. So I learned about this vessel and her story at Mare Island from Larry Maggini -- who many of you know from his presentations on the ordnance work plans for Weston -- but he formerly worked at the shipyard, and he took an interest in the search. So I kind of challenged him a few months ago that if he would do a slide show for the -- for a ceremony, that I would hold a ceremony. So we did that.

On October 11th, this Thursday two weeks ago, we started out at Morton Field which is on the corner of Railroad, Walnut, and G Street. You probably drive by it every day that you're on the shipyard -- you drive by it on your way home, Wendell. But very rarely does it do -- any of you, I'm sure, think of the history of how it became Morton Field. And, of course, it's named after the commander of the Wahoo Dudley Mushmouth or Mushmorton. It was named after him in honor of him after he and his crew were lost at sea, because the field was part of the submarine base at Mare Island. And these are all World War II submarine vets. I just met with Bob yesterday. He's 86 years old. And how many of you know the submarine the Lizard Fish? Yeah. Well, he decommissioned her at Mare Island in 1946 and lived in -- where your home is now, Wendell -- lived in quonset huts there in Quarrelseen Village a number of times. And he gave me a set of photos I forgot to bring tonight of what the living conditions were like inside the quonset. And there's only one remaining, and he wants to do everything he can to help us save that quonset as a memory to that submarine force at Mare Island, over 350 of those quonsets that were there on the island to house the sub vets or submarine force and their families while the ships were in for their repairs.

And this is the president of the Vallejo chapter of the World War II Sub Vets, that's Cal Potts. And we were lucky to have a day between rains. And the California Maritime Academy Merchant

Marine Reserve Detachment 71, members of that detachment raised the flag for the first time, I think, probably since the closing day. Have you ever seen the flag flying on that field? Yeah. Well, we weren't going to fly it that morning. We found out the night before that the lanyard was screwed up at the top -- yeah -- it had a rope, but I think it's like a hundred feet tall, and it didn't work. So that morning I called the city tree crew, and they were ten or twelve feet short of the top, so I called out the ladder truck. And luckily the guy who runs the -- the captain for the ladder truck is a grandson of the former marine commander for Mare Island, and he said he knew exactly where that pole was, and they got right out and fixed the lanyard. So that's what you can get accomplished in a small town when you know who to call and you have the courage to call. Just go back one slide. This is the -- all veterans who were attending that flag raising service. And the wreath was part of the later part of the day and, of course, made in memory of the Wahoo crew. And we had the privilege of having the sister to one of the lieutenant commanders on board that last -- that seventh patrol, Eleanor Nimsura in the '53 Nash there. She came up from Sunnyvale. She wasn't -- due to her health she wasn't able to fly out to Hawaii for the service with the rest of the families, and she really, really was delighted with what we did here, because she was sort of the queen for the day and felt very special. And then chaplain John Berger and his wife Iona from San Jose. And I want to thank Bud Camphousen and his assistant Phil for driving the -- Nash and Mrs. Nimsura from the flagpole ceremony -- flag raising ceremony to the chapel.

We had a memorial service in the chapel and slide presentation. And actually the slides that we're using today are photos of the event, but if you would like the entire slide presentation that Larry Maggini put together -- though he modestly never identifies himself in it -- I do have it available for twenty bucks, and I'll pass it around. And it's pretty impressive. It's quite a story of where all that boat went. And she was probably the most famous submarine in World War II. So she was really fundamental in changing the history of the war. When Americans were losing pretty badly, she began to lift Americans' spirits by her extremely brave and brash actions. And this is part of the service. And Chaplain Berger is the chaplain of the USS Hornet; though if you Googled him, you will find out that he's an absolutely incredible man, a third generation chaplain. His grandfather was a Civil War chaplain, and his father was a World War I chaplain. And he has an incredible tenor voice and can belt out God Bless America better than all of us in the room put together.

So at the wreath laying service we were quite shocked and again -- at least I was -- to find the river full of boats from the Straits of Mare Island Rowing Association, who I had first given a flyer and they said we'll have one boat. Well, they had two. The Vallejo Yacht Club and the Coast Guard came out, as did the Vallejo Fire Boat. And I can assure you that it was very moving for me because those were phone calls or e-mails or dropping the flyer off that I made just within a day or two before the event. And it made it very special event with their flags all flying at half mast. And the weather again cooperated. And the gentleman on the left, they did -- the World War II sub vet Vallejo chapter gave a reading of all 52 sub vets -- submarines lost in World War II, and as they called a name the gentleman on the left rang a ship's bell once in memory of each of that -- of those vessels.

And this is Chaplain Berger blessing the wreath -- a traditional maritime custom -- before laying the wreath in the water. And, of course, even though Eleanor was reticent because she was afraid she'd fall in the water, I guess Steve photographing this wasn't a bit afraid of the water, he was right in there, she and Cal Potts, the President of the World War II sub vets, laid the wreath together. And as the wreath was being laid Taps was being played; and so, of course, our military men were at full salute. And there flies the flag at half mast. I didn't know this, but you've got to call the

Governor's office to fly the flag at half mast. It can only be for armed services personnel, otherwise you have to -- the President decrees when a flag can be flown at half mast. And the Governor agreed to let us fly it that day, so I was very proud. And this was in the evening as we retired the colors.

We appropriately gave the flag to Mrs. Nimsura. And the flag had been flown over the U.S. Capitol by Congressman George Miller and given to us to fly that day in memory of the Wahoo crew by Kathy Hoffman at senior field day. So this was just the end of a really wonderful and rewarding day for Eleanor that certainly after 64 years she finally had a memorial service, a funeral for her brother who was four years older than her; she's a delightful woman. We spent an hour on the phone last night, and she's really a cool character. Thank you, Steve, for these tremendous photos -- Steve Farley -- took of the day.

One of the four remaining crew of the Wahoo still alive, Carl Hood from Akron, Ohio. And his son lives in Fremont. They went to Hawaii, but when they returned from that service they just had to get up to Mare Island. They learned about our event on the Internet, as did Eleanor. And here he is at berth six. The last time he was here was on July 21st, 1943 as the Wahoo left Mare Island for her sixth and seventh, and in that case its final patrol. So it was a very moving and emotional day for him. Though he's quite a character. And his son Tim from Fremont and daughter and son-in-law from Akron with his wife. And he then told us that he remembered that the boat was in dry dock, because he would come and go with overhaul on the various patrols. And we asked if it was a stone dry dock or a concrete one? Well, it was stone. So here he is with his wife at dry dock number one. And Larry Maggini on the left, Sue Young on the right from Weston joined us that day as well. And then we had scheduled it just right so it was the monthly meeting of the World War II sub vets Vallejo chapter, and he met with them as well. So that is the last slide. And I appreciate you taking some time out from what is normally environmental cleanup topics to remember to remember. We should pass these around. I've got lots of them. And we also tried our hand at recording some of Mr. Hood. So we'll see if we can find some of the -- get some of those quotes. And look for these photos on the website that we're borrowing or joined in with the environmental cleanup website, www.MareIsland.org, and then go to Wahoo memorial.

V. ADMINISTRATIVE BUSINESS (Myrna Hayes and Michael Bloom)

CO-CHAIR HAYES: And next on the agenda -- I took more than my five or ten minutes, didn't I? Oh, ten. Well, Michael Bloom isn't here so we can do away with -- We should still do administrative business. And that would be if anybody has any corrections, additions to the minutes, you could give -- pass them off to me or you could e-mail them to Michael or to me.

VI. FOCUS GROUP REPORTS

CO-CHAIR HAYES: So then let's go to some focus group reports. Wendell, on the community outreach focus group.

a) Community

MR. QUIGLEY: We have nothing this evening.

b) Natural Resources (Jerry Karr)

CO-CHAIR HAYES: All right. Jerry isn't here. And I might note, because we're a family, that I'm sure Jerry wouldn't mind me telling you that his cancer has reappeared, and so he's undergoing

chemotherapy again as of last week. So keep him in mind. And I'm sure that he'll be checking his e-mails, so if you've got uplifting jokes or words of encouragement, I know he will appreciate that.

c) Technical (Paula Tygielski)

CO-CHAIR HAYES: Paula, you're chairing the technical focus group.

MS. TYGIELSKI: No report.

d) City Report (Gil Hollingsworth)

CO-CHAIR HAYES: All right. And Mr. Hollingsworth is not present. I don't think anybody else is allowed to speak for him.

e) Lennar Update (Steve Farley)

CO-CHAIR HAYES: Lennar update, Steve.

MR. FARLEY: Yes. Okay. Two handouts as usual. One showing some of the major deliverables that are in agency review. These are both over on the table up front, so grab them before you leave if you haven't got one already. Our eleven by seventeen handout showing the map of the island and some other features to point out for tonight. Starting in the lower left corner, not much change there, the major documents that are in review and those that are significant upcoming documents haven't changed from last month. In terms of the environmental site closure status in the middle of the bottom table is that there's a couple of changes, a couple of additional PCB sites that have been closed recently, and also a couple of additional UST sites have closed. So that's always good news.

Starting with the main map, the color coding indicates the stage of the cleanup and closure that each of the investigation areas are in. You can see in the lower right-hand corner the stages between the survey and sampling, all the way down through pending closure and closed. Nothing has changed in a while. There will be a couple of changes probably next month with some sites being -- moving into the final RAP stage. The -- I'd like to draw your attention to a couple of the colored dots. There's an orange colored dot, a green colored series of dots, and then another series of dots that are white. And those are all PCB sites. These were sites that were on the map last month. And what I've tried to do is just show the number of sites that we've completed, for example, since the last month. And all of the ones that are in -- that are colored orange represent sites that we have completed all the work at since the last RAB meeting. And so there's a number of those that have gone through to completion. The other ones shown in green are almost done, and I would expect that by the next RAB meeting they will, in fact, be done. So that's always good news. The other lines that are sort of magenta colored, those represent fuel oil pipelines or FOPLs. And they are part of a -- they are included in a work plan that we're currently finalizing with the agencies to go out and do some additional investigation along those pipeline segments. So that's another exciting stage of work that we're going to be starting probably in the month of November.

On the left-hand side there's a couple of photographs that point back to location underground storage tank 231. A couple of interesting things. One is in the upper left corner the track mounted drill rig. It's a small rig used for installing temporary well points. These are locations where we want to get some groundwater samples, but without going in and putting in a monitoring well. So we'll use that rig. It's robotically controlled, if you will. It's got a little joy stick that moves it around the site. On the bottom is -- shows just a typical setup for collecting a solar gas sample. And so what we'll do is we'll drive that steel rod into the ground, and then we'll grout around that. And you can see the cement, the darker colored gray material around that steel rod. And then the tubing goes

down inside that, and there's a cork there at the top that seals that off. And then the canister that you see in the lower left, the stainless steel canister, that's a vacuum canister. And so we'll open the valve, and there's a little gauge there that shows the negative pressure, and that will draw soil gas out of the ground into the canister. Then that canister will then be sealed with the green knob, and we'll send that out to the laboratory for analysis of the soil gas. And one of the things that's done while that whole operation is going on, there's a small spray that they use to spray around the apparatus to demonstrate that there aren't any leaks in the system. If there was a leak, this chemical -- I forget what it is -- but it would show up in the analysis. So it's almost like a negative blank, if you will.

On the right-hand side there's a couple of photographs. The lower right one is just an example of one of the excavations that we're doing inside of building 680. It's a pretty extensive excavation for removing PCB contaminated concrete. The various lines and dots and dashes represent the grid used to do our verification sampling. And you can just see the size of the excavation relative to the fellow that's in the middle of it. So that's just an example of some of the work that we're doing inside that building.

The last one is -- even though it looks like its building 866, it's not, but I thought it was interesting for two reasons. One is, towards the bottom of the photo there's an excavator with a dump truck next to it, and that's the UST -- or excuse me -- the building 866 sump excavation. We're doing some over-excavation in that area, working with the agencies. They want to come out and take a look at some of the site conditions, so we're coordinating with them while we do that work. But also just to show you what Lennar has to do to make things -- to develop the island, and building 866, I'm sure you've all seen it, it's what, a four or five story building, and they're chunking away at it, knocking it down so they can come back in and improve the area for some residential development. So it's quite interesting. You should go out there, I don't know, a couple times a week and just take a look. And it always amazes me. It sort of seems like it goes, moves along very slowly, and then, boom, one day a whole floor is gone. So anyway I thought that was an interesting photograph to show you and share that part of it with you. So I think that's all I have to present tonight. I'd be happy to answer any questions anyone might have.

CO-CHAIR HAYES: Well, I was particularly interested in this PCB site because I think there's at least a couple people here who remember the pilot study -- is that what it was called? -- that was done by a subsidiary of Shell or somebody. And they came in and they used three different -- and Paula is nodding her head in agreement -- three different methods of searching and destroying, searching for and destroying PCBs using heat. They were using products -- high temperature probes -- and then what was the other one? -- heating it up some -- heating it up some other way under a -- Chip remembers.

MR. GRIBBLE: I try not to. That was at building 866. It was Terratherm, I think it was. And they came in under the -- purportedly doing a pilot study, but when we started questioning it -- well, they went ahead and did a lot of work without our involvement and, you know, I'm sure they made some improvement of some magnitude, Steve probably knows more about how much they improved it because he works on it now and I don't. But it was kind of frustrating in that the regulatory agencies were not involved and, therefore, we had a lot of problems because of that, because we were not able to, you know, there was no ability for us to see what they had done good versus bad. Obviously the, you know, the agencies and Lennar have made progress on that in the years since I've stopped working on it. Not because I'm not working on it anymore, but -- (LAUGHTER.)

CO-CHAIR HAYES: Quick on the draw there. Paula, you were nodding.

MS. TYGIELSKI: I remember.

CO-CHAIR HAYES: Yeah, we actually had a RAB site visit, that was back in the days when we got invited to come and see cleanup in action.

MR. GRIBBLE: The technology that they were trying was, at least in concept, you know, was interesting. And I understand that they're still around. But it was basically putting in a bunch of, you know, electrical points or rods into the ground, and baking the PCBs and volatilizing them. I think there was some degree of destruction as well as some degree of volatilization. Never knew what -- how much went up in the air versus how much was actually destroyed.

CO-CHAIR HAYES: It was the technology that they had developed in Bakersfield or somewhere to try to extract oil out of the shale. And they found out that it just vaporized the oil, and that got them thinking that maybe it could be a good use for environmental cleanup, and they told us that they used it on their refinery sites for environmental cleanup for a number of years for oil products before they started taking it out on the road that caught the Navy's attention. So I was always curious about what you might find. And the trick was that 866, while the Navy was interested in them using it as a pilot site, was because, first of all, they said they could go down, search and destroy PCBs under asphalt, and then under concrete structures, under the floors. So it would be a really useful tool. I think one of the problems, as I recall, was that the clay soil didn't allow the heat to transfer quite as readily as the shale did in their previous use.

f) Weston Update (Chris Jespersen)

CO-CHAIR HAYES: All right. So where were we? We were going along on the next report which looks like it's Weston's.

MR. JESPERSEN: Thank you, Myrna. As you can see from the handout, we've done a number of documents here in the past month for review to the various agencies. Moving on from that, we've been working on consolidation of hot spot soil within area H1. And as of this month we believe we've removed all of the hot spot soil from 58 identified areas. We've got sample -- confirmation sample results back. We've cleaned areas up to the criteria. And we have those results into the agencies for their review. And if they concur, we've got everything -- we'll start bringing in clean soil and backfilling those areas. And to date we've moved over 200,000 cubic yards of hot spot soil today from the area, and moved that consolidated under the area of the H1 landfill cap.

And on the next point there we do continue work on grading activities to bring the landfill cap up to the design elevations. And we've been doing this with a combination of soil from the hot spots, some clean soil on 4S, and also some contaminated material that's being removed as part of the time critical removal action that Dwight Gemar briefed us on and started the RAB meeting this afternoon. And we moved this material using large trucks, placed it into the H1 area, spread it out with a dozer into one foot thick lifts, and then compact it using a twenty ton sheepsfoot compactor, a motor grader. And then use a smooth drum roller to pack it and prepare it for installation of the geosynthetic.

Myrna just had a nice presentation there on the Wahoo Memorial. I just wanted to thank a couple of you. Myrna mentioned Larry Maggini who did a real nice booklet and slide show. Sue Young participated. Joe Kendell my UXO guy. Phil was also out there participating. And all those people did that on their own time. So we thank them for the contribution.

And then finally the next step in the containment area is putting the cap on top. We've dug up contaminated soil and graded it and compacted it. We've put on the geosynthetic cap, and we've used a subcontractor to do this. And so far he's completed 44 of the 72 acres. I have a couple presentations on how a cap is constructed. There's two different types of a cap depending on the area. It consists of up to four layers. The geotextile gas vent layer, the geocomposite clay liner, the 60-mil high density polyethylene geomembrane layer, a geocomposite drainage layer, and then on top of all that we put two feet of clean soil and hydroseed it. So that's been quite a bit of work the last year plus. And we hope to have everything wrapped up by late December. You can see a couple of pictures there on the top right. The guy is doing subgrade preparation. And on the bottom right is the geosynthetics. So that's it unless anybody has any questions.

CO-CHAIR HAYES: Well, what Cris didn't tell you is not only did Weston's -- many of his crew give a tremendous support at the Wahoo Memorial, but so did Weston Solutions with financial support. And I really did neglect to thank also Buck Kamphausen, Sue Lemmon, Cooper Crane and Rigging -- Sue Lemmon the former Mare Island Historian. And Lennar gave us a great boost with a lot of in-kind support, everything from rental of -- use of meeting space and the berth to the all important portable restrooms. And amazingly people like Berkeley Farms came to our rescue on Mare Island by simply providing an extension cord through the fence at the berth so that we had power for our microphone. It's just really fun to work in a community where everybody has something to contribute. And that would also include incredible volunteers, including Steve Farley with the photographs, Wally Neville here tonight, putting on microphones, and, as you mentioned, Joe Kendall bringing back from vacation in Baltimore at the National Archives some information only recently declassified about the Wahoo. He was able to recently scan the ship's records, and that became part of a scrapbook that was given to Eleanor so she could see her brother's own writing and his comments in the ship's logs. And some information from Admiral's personal correspondence. And now we've just discovered from an e-mail this week that the National Archive in San Bruno, the head archivist there for the Mare Island collection, has just gotten Declassified 132 new boxes of Mare Island material, and including all of the World War II material. And he tells us that as soon as we can get down there to get access to some of it we'll have the interior of the boat as well as photos of the crew. And that will be information that has never been in the public domain, and we hope to get that out there real soon. So it's a whole new frontier, as you know, from environmental cleanup to introduce a new era, really, of Mare Island to the public.

g) Regulatory Agency Update (Chip Gribble, Carolyn D'Almeida, Brian Thompson)

CO-CHAIR HAYES: And having said that, let's go to a regulator's update. And there are all three of you here, so whoever wants to take the microphone first, you're welcome to it. Chip?

MR. GRIBBLE: Well, Michael sent me this e-mail and asked me to read his -- since he wouldn't be here, asked me to read his -- the Navy's report. And it says, "Of course you know, Charles, the Navy has been doing an outstanding job on Mare Island." And that's the end of his report. (LAUGHTER.)

MR. GRIBBLE: And DTSC's report is that, of course -- no, that's a joke, Michael. I'm sure he'll read the minutes. By the way, Dwight, you didn't recognize any of the Cal maritime people that came out to the Wahoo celebration, I trust?

MR. GEMAR: Yeah, maybe there were trespassers in that group, I don't know.

CO-CHAIR HAYES: Actually that was community service for them. No.

MR. GEMAR: They've probably washed out by now.

MR. GRIBBLE: So seriously, DTSC has said in a letter back to the Navy on the -- was it last month we got a semi -- a couple months ago we got a semiannual, I think it was, groundwater monitoring report for H1, and -- which we approved. But with that, DTSC has now made the conclusion that the groundwater contamination at H1 is under control and is being actively monitored, which is a big achievement with respect to groundwater issues for Mare Island and H1 in particular. And other than that we're busy trying to keep up with Weston and all of their digging and reviewing the confirmation data to keep them moving at their rapid pace. And that's about it.

MR. THOMPSON: Brian Thompson with the Water Board. We have commented on four reports this month for the Navy. Those are the Draft Geophysical Investigation for the Product Manufacturing Area and the South Shore Area, the Traffic Closure Care Plan for the IA-H1 landfill, the Draft Final Expanded Site Inspection Report for Building 742, the Former Degreasing Plant, and Investigation Area C-2. And a letter that I thought was going to come out today, it will probably come out Monday, that provides comments on the draft technical memorandum for total petroleum hydrocarbons at the defense reutilization and marketing office site. We also provided comments on one report for Lennar Mare Island, and that's on the Final Remedial Investigation for the IR-14 Investigation Area in Investigation Area C-2. We're currently in a lot of discussions about some areas that Lennar is trying to move forward, and so I'm expecting that you'll probably hear some information on work plans in the IA-C3 and related to the underground storage tank 231, as we're talking pretty extensively with them about those sites now. And then the last thing is I probably won't be at the next RAB meeting, our family is expecting a new child at the end of November. Thank you.

MS. D'ALMEIDA: Well, I don't have a report, but I have a question for Steve. I mentioned to Henry to keep me in the loop on the in situ dechlorination work plan for IR-15 that was discussed at the last meeting, because I'm going to get some, I'm looking into getting some technical support to take a look at that. Generally we're not looking at the stuff that's been transferred, but in this case we'd like to take a look at it. So I mentioned it to Henry, so put that down too. He told me he thought that the work plan was coming in November, but I don't see it on your report. So when's it coming?

MR. FARLEY: It could be in that timeframe. It should be in that timeframe. It may not be on that schedule because we're not listing all the documents. If we listed all the documents it would be twelve pages long or so. But what I will do is I'll confirm with Tom Wallace that he knows U.S. EPA's interest, and ask him to send you a confirming e-mail as to both the schedule and that he understands that you're interested.

MS. D'ALMEIDA: Okay.

VII. CO-CHAIR REPORTS

CO-CHAIR HAYES: Okay. Tommie Jean Damrel is going to give Michael's Navy progress report.

MS. DAMREL: Thank you. So just in looking at the Navy's handout, I just want to highlight a few items. Under the field work and removal action, section two, I see that abrasive blast material, Dwight covered that earlier. On the second paragraph I wanted to point out that the following investigation for TPH at the DRMO is going to resume on Monday, and residents and drivers had been alerted to possible road closures on Azuar Drive and Dump Road. And that is expected to go for about three weeks, so that will go into November. I wanted to point that out. And on the back

there are a few documents that the Navy has submitted. The Draft Final 2008 Site Management Plan which might be of interest, and then the Final TCRA completion report for the Marine Corps Firing Range and historical outfall 4S. And then there is a list of different comments that have been received from the agencies in the past month. And then the other item I just wanted to point out is the next RAB meeting which is Thursday, November 29th. So that's that Thursday right after Thanksgiving. And then the last item is just the boat photo that was at the request of Mike Coffey. That's the Mighty Midgets.

MR. COFFEY: That's not the Mighty Midgets I was thinking about, the one that's being brought here. It looks like a small cruiser, not a flat top.

MS. DAMREL: Okay. So we'll have to look into that. So just have it out there the Navy does take boat picture requests. So if you have something you'd like to see, let us know. And that's it. Thanks.

CO-CHAIR HAYES: We'll have to send you the Wahoo's photo. But we do have -- what was that boat duty really in real life or in its past life? Now it adorns our waterfront, it's so small you can't see it.

MR. COFFEY: It was a shallow water attack vessel.

CO-CHAIR HAYES: And --

MR. COFFEY: And it's the last remaining one.

CO-CHAIR HAYES: The last One, World War II. And was built here, and it's been used by the Japanese Navy, and later the Thai Navy, and now it's donated to us to paint.

MR. GRIBBLE: The name of it is the Nakha, N-A-K-H-A. And I think they're having some dedication ceremony on November 11th.

CO-CHAIR HAYES: Oh, for Veterans Day, that's right, they are. That's its Thai name, the Nakha.

MR. COFFEY: It only had a number.

CO-CHAIR HAYES: Yeah, it had a number, right. So, speaking of numbers. As Tommie Jean just pointed out, the next RAB meeting is right after Thanksgiving. So that would mean Happy Halloween and Happy Thanksgiving to you. And that is the last RAB meeting of the year. We don't normally meet in December unless Cris is buying. And that means that if you have a topic that you really want to get on the agenda and in front of the public before the end of the year, November 29 is your day. Though we have been known, under duress and in emergency conditions, to meet in the -- in December, like right before early transfers were looming. And let me just put one other date in your head, and that is the Flyaway Festival coming up February 1, 2, and 3, 2008. Doesn't seem like very long from now, but it has like twelve federal and state holidays between now and then, which means that nobody is around to make any decisions. So if you were thinking that you want to volunteer, that you want to give a tour, that you want to have a booth, that you want to give money, or that you just want to serve coffee or paint a picture, all of those things are all a part of the Flyaway Festival. And, of course, if you're thinking that there might be a good location for us to move to that you have in mind, like maybe the quonset hut or something, you can let us know, because I think very shortly, if Touro has their way, we'll be booted out of our current location. So put your thinking caps on about where a new good spot would be. Okay. Thanks again and -- oh, a public comment period, one more round. Going, going. Okay. Good evening.

LIST OF HANDOUTS:

The following handouts were provided during the RAB meeting:

- Presentation Handout – Time-Critical Removal Action Fieldwork Update – Navy
- Presentation Handout – Offshore Sediment Investigation Pilot Study Results & Study Design Overview– Navy
- CH2MHill/Lennar Mare Island Deliverables Schedule October 2007
- Mare Island RAB Update October 2007 – Weston Solutions
- Navy Monthly Progress Report Former Mare Island Naval Shipyard October 2007

(Thereupon the foregoing was concluded at 9:05 p.m.)