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MARE ISLAND
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MARE ISLAND NAVAL SHIPYARD
RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES
HELD THURSDAY, MARCH 30, 2006

The Restoration Advisory Board (RAB) for former Mare Island Naval Shipyard (MINSY) held its regular meeting on Thursday, March 30, 2006 at the Mare Island Conference Center, 375 G Street, Vallejo, California. The meeting started at 7:10 p.m. and adjourned at 9:16 p.m. These minutes are a transcript of the discussions and presentations from the RAB Meeting. The following persons were in attendance during this month's RAB meeting.

RAB Members in attendance:

- Myrna Hayes (Community Co-Chair)
- Neal Siler (Lennar Mare Island)
- Ken Browne (Community Member)
- Michael Coffey (Community Member)
- Brian Thompson (RWQCB)
- Carolyn d'Alemida (EPA)
- Gil Hollingsworth (City of Vallejo)
- Jerry Dunaway (Navy Co-Chair)
- Chip Gribble (DTSC)
- Dwight Gemar (Weston Solutions)
- Steve Farley (Lennar Mare Island)
- Sheila Roebuck (Lennar Mare Island)
- David Godsey (Navy)

Community Guests in attendance:

- Bob Bancroft
- Mike Casey
- Wendall Quigley
- Rizgar Ghazi (DTSC)
- Patricia McFadden (Navy)
- Brett Pasapane (Weston Solutions)
- John Kaiser (RWQCB)
- Diji Christian
- Tommie Jean Damrel (Tetra Tech EMI)
- Janice Rubay
- Mike Murray (ECC)
- John Hunter (Weston Solutions)
- Matthew Gifford
- John Bowles (ECC)

RAB Support from CDM:

- Darlene McCray (CDM)
- Kathleen Soloaga (Stenographer)
- Wally Neville (audio visual support)
- Carolyn Moore (CDM)

I. WELCOME AND INTRODUCTIONS

CO-CHAIR DUNAWAY: Good evening everyone. Welcome to our March Restoration Advisory Board meeting. We have a couple of really good presentations tonight covering our munitions cleanup progress down on the south end of the Island, so hopefully that will be interesting to all of you.

My name is Jerry Dunaway. I'm the BRAC environmental coordinator for the Navy, for those who don't know me. And I just want to make one clarification. The mailing packet that went out, we

had dates for all of the remaining 2006 Restoration Advisory Board meeting dates. There are a couple of errors there, so a new sheet is being sent out to everyone. There is a sheet at the table to show the new dates, too, but obviously we're not going to have a meeting on April 1st. I think it was an April Fool's joke there. So the next meeting is April 27th.

CO-CHAIR HAYES: Oh, not June 1?

CO-CHAIR DUNAWAY: Yeah, on June 1st -- June 1st is actually accurate. That's our in meeting that we pushed out because of Memorial Day. But why don't we jump into the meeting, but first start with introductions around the room. We don't have a cordless microphone tonight because we have some difficulties with that piece of equipment. So this is a small room, I think everyone can speak up well enough.

CO-CHAIR HAYES: But she's new, so make sure they speak up well.

CO-CHAIR DUNAWAY: Yes, and our stenographer is up front, so please make sure you can speak or she can hear you. Again, my name is Jerry Dunaway BRAC environmental coordinator and the Navy co-chair for the Restoration Advisory Board.

MR. GRIBBLE: Chip Gribble with -- Chip Gribble with California EPA, Department of Toxic Substances Control. I also want to induce Rizgar Ghazi, sitting here to my left, with DTSC. He's another project manager that is now assigned to Mare Island and working on principally the ordnance sites.

MR. KAISER: Yeah, my is John Kaiser. I'm from the Water Board. I'm the DOD program manager. I wanted to introduce to everybody a new case worker. He will be taking over responsibilities for George Leyva. He will be handling both the Navy and the Lennar portions of the facility. I would like to introduce Brian Thompson. Brian Thompson comes to us, master's degree from Santa Clara -- from Santa Cruz, UC Santa Cruz. He also has several years of experience in essentially the private sector. He's very familiar with geotechnical and environmental geology issues, and I would like to welcome Brian formally here.

There is one other person of my staff we recently retained. I hope to introduce her next RAB meeting. Her name is Agnes Farres, and Agnes is published extensively and has actually been actively involved on wetlands restoration issues as well as sediment issues. She will be working on that particular end as pertains to Mare Island, and she also will be handling issues pertaining to Landfill H1.

CO-CHAIR DUNAWAY: Thank you everyone. With that, why don't I bring on Dwight Gemar and the Weston team. They will start the presentations tonight talking about the work that's onshore and that's ongoing right now. They have been out in the field for the better part of this year so far, and they'll tell you all what's been going on, what they've found so far.

And I know Dwight is very open to questions during the presentation, so we don't have to wait till the very end for that. Dwight.

IIA. PRESENTATION: *Munitions Cleanup at the South End of Mare Island*
Presentation by Dwight Gemar, Weston Solutions.

MR. GEMAR: Thanks, Jerry. I'm going to do a brief introduction with some of the site background and then I'm gonna turn it over to Brett Pasapane and Matt Gifford, who are actually on the front lines doing the work and spending my money. I'm going to talk about the Southern Onshore Sites, and there is actually five different areas that Weston is involved in, and to make it more interesting, there's two different contract mechanisms that we're working under.

There is the fixed-price Environmental Services Cooperative Agreement, or the ESCA, that is a grant from the Navy to the City of Vallejo, and the City has retained Weston to implement the requirements of the ESCA. And under the ESCA, we have three sites: the Western Magazine area, Installation Restoration Site 5, and the Dredge Pond 7 South. And here is also a map which you can come up and look at during the break, but just for reference, we're going to be talking about the Western Magazine area, Dredge Pond 7 South and IR-05, the South Shore Area, and this red-and-green area, the Production Manufacturing Area, and actually includes a small area called IR-O4, but we'll basically refer to this area as the Production Manufacturing Area.

And just as a little background, the Western Magazine area, again, in this area, was built in the late 1930'S in the tidal wetlands on the west side of the Island. It was used for ammunition storage until basically the end of the Vietnam war. The Navy did conduct a magnetometer survey of this area in the late 1990's, and as a result of that survey, they generated over a thousand anomalies. An anomaly is basically an instrument signal that indicates some type of metal in the ground.

So then they investigated those anomalies and basically uncovered 137 munitions items from an area in the northeastern portion of the Magazine area here, which turned out to be an old outfall, which, as some of you know, most all of the outfalls that were associated with dredge ponds basically always had some munitions associated with it that got sucked up by the dredgers in Mare Island Strait when those items were discarded into the water. They also recovered 22 items in the south portion, kind of this panhandle area in between some of the magazines. There was also this area of IR-05 and the 7 South area that's been investigated.

IR-O5 used to be an area that the Navy used for basically destroying unwanted munitions, either by burning or by detonation. The Navy conducted a, what's called a Mag and Flag operation, basically taking a magnetometer and flagging areas that were suspect and pulled out a number of items as indicated here, 92 items from IR-O5 and 122 items from Dredge Pond 7 South, again, at the outfall.

And for those that haven't been out at the site, this is a typical shot of the Magazine buildings. This is looking south toward the East Bay hills.

Another area that we're working on is the South Shore, which was also created from fill and has a number of miscellaneous buildings. There were some buried munitions items that were encountered by the Navy in the 90's, and a subsequent geophysical survey and investigation revealed numerous munition items. And at the break, if you would like, you can come over and take a look at this figure, but it basically shows where munitions items have been recovered at the South Shore and also along the PMA, and it lists the types of munition items that were removed.

And as you can see, for the most part, a lot of these items were found along either the current or the historic shoreline, most likely due to, you know, those items being discarded there as those areas were being filled.

And for history buffs, this is a 1923 photo of the South Shore, which actually is under water at this point, which is right here. This is the original shoreline. So the South Shore Area actually extends out from this cliff area, currently, and then the old Production Manufacturing Area is above it there. So I'm going to turn it over to Brett Pasapane, who is going to go over our current scope of work for these areas and describe a little bit more of the actual details of what he and the troops are doing out there.

MR. PASAPANE: Thanks, Dwight.

MR. GEMAR: Yep.

MR. PASAPANE: I'm Brett Pasapane with Weston. I'm the project geophysicist, and, I don't know, a few of you might have remembered me from the dredge pond stuff back in the day. So, basically, our scope of work was to first start out with a Geophysical Prove-Out, and what that did was we ended up burying seed items in areas that would be typical of what we're going to be surveying, which in this case were, you know, the PMA and the South Shore Area. And using different instrumentation and different procedures and processes, we were trying to find out those -- the best way to find those seed items. So that was our first thing.

The second thing was to conduct digital geophysical mapping, or DGM, another good acronym, and we did that in the open areas and also the -- under the magazines, which were constructed on the fill areas; and those areas on this map, in this case for the Western Magazine area, would be this area in the purple.

The next thing that we were tasked to do is, well, process all the geophysical data that we collected, and this will give us a permanent geo-referenced digital database of all of the targets or all of the anomalies that the instrumentation would pick up. And then the next thing would be to select anomaly targets from that information, and basically we're selecting them to be consistent with the future land use.

And then we're -- we need to -- which we're going to be doing shortly, is anomaly reacquisition, which now we have a digital record of all these anomalies, we're going to go out and navigate them, put a pen flag, and we will be excavating those in the Western Magazine area IR-O5 and eventually Dredge Pond 7S area. And then the other task for the scope is to update the conceptual site models based on our geophysical data.

Here is some examples of some of the items that were seeded or buried in the geophysical prove-out. A couple of these were pretty big. These are the eight-inch-diameter projectiles. In our geophysical plot, which is about a 90-foot by 125-foot area, we had to use a backhoe to get those in.

So we had different objects which had been, you know, previously found throughout, you know, these historically, and we buried them at different depths, different orientations, and we're trying to use the different equipment to see if we can find them. And we had a couple simulants here which are pipe with rebar, and down here is a 20-millimeter round, and some of the objects -- most of them are ferrous, a few of them are brass, like the brass casings and whatnot, so that's just a flavor of what we might expect.

Now, some of the equipment that we're using basically comes down to magnetometry and electromagnetics. So here is a picture of our mag cart, which has multiple sensors. In this case, we're using the Geometrics G-858 Magnetometer, Cesium vapor magnetometer. It's cart mounted.

We were able to put four sensors on it, like you could see right here. Right now, we have six sensors on it. We have expanded it a little bit. And right now, our sensor separation is one foot, and our positioning system is -- we're using the RTK GPS, which has centimeter-type accuracy.

The other piece of equipment is the electromagnetic -- the all-metals detector. In this case, it's the Geonics EM61-MK2, and it's a -- kind of like the pony pulling the cart kind of deal. But here you can see, here is a -- it's a 1 meter by half a meter. Here is the RTK GPS on top. And as you can see, the backpack and everything is ergonomically correct. And here is one of our faithful coworkers here having a good time. That's Mr. Hunter back there.

From the geophysical prove-out, we had the -- these are the results, basically. This is a plot showing the prove-out, and this is 125 feet by 90 feet. And one of the reasons why we chose this area -- and when you see all these violet colors here, there's a lot of clutter. There's a lot of buried footers. And in this case, we chose this area to include a utility. And what we try to do is also not only find out what the instrumentation can do but find out what it can't do.

So, but the GPO results here for the EM61, we were able to find 33 out of 33 ferrous items that were -- also nonferrous items, too -- that were to be expected to be detected within the reported detection depths. So, in this case we got 100 percent out of what -- our data quality objective was 90 percent, so we did exceed that, and the DQOs were met.

But one thing we found out that it couldn't do was detect the MEC items up against the utility, because that type of equipment just doesn't have the broad range and the sensitivity due to this really large anomaly; so this equipment isn't appropriate for areas that may be adjacent to utilities or, you know, or some really heavily strong metal in the ground, 'cause we do see a lot of concrete footers. There used to be a building like right here, and there are some footers. But we were able to detect the seed items that weren't at those footers or the utility.

Now, this slide represents the magnetometer data, and you will notice the real funky colors here. What we realized, that we couldn't find everything up against the utility, so we were able to use different processes and algorithms, which Matt Gifford will be touching on a little bit later. And basically, with the magnetometer, we were able to detect 27 out of 27 ferrous items that we did expect within the detection depth, so that -- that, again, was, you know, 100 percent.

We were able to -- we also buried, you know, the items adjacent to the utility, and we were able to find those 20-millimeter rounds, you know, adjacent to the utility, but we couldn't do it using conventional data-processing techniques. And, like I said, Matt will be touching on that. We ended up using U-Hunter software.

And we also found out that -- originally, our DQO, data quality objective, was to use a two-foot sensor spacing. We kind of proved that that wasn't adequate enough to find all of the items, so we had to go to a one-foot sensor separation, so we're collecting high-density data. And that, coupled with the data processing and the algorithms, we were able to find the items. One thing I wanted to touch on real quick was the -- did you have a question?

CO-CHAIR HAYES: No, not yet.

MR. PASAPANE: Oh, okay. Was the data quality control and the activities, because we do have a pretty rigorous quality control program, and we have daily field checks. So not only when we first start in the morning we do these checks, and then at the end of the day we do the same ones. So we have equipment function checks. We do repeatability transects. We do a latency test, pre and post.

Basically, that's -- the equipment, there's always inherent delays in how the instrumentation collects data. We're talking microseconds and whatnot, but we do tests to find those out. And we also do a pre- and a post-navigation position test. In addition to that, we do the daily data review, where the site geophysicist makes sure that, you know, all of the data is downloaded properly, it's archived and whatnot. But we also have -- we also take measurements on the data quality objectives and the data metrics, and some of those include like sample frequency, velocity, or the speed of the data acquisition, because if you go too fast, that means your data points are too far apart.

So we have to -- we run these scripts to measure all of the velocities, the sample separation, and lane spacing, and all that, so all that -- all the data is looked at; so not only do you have equipment checks, but you have data checks. And, of course, we have our quality-control seeds which we plant. In the Western Magazine, we went a little overzealous with them, but we do have -- there's probably about 100 pieces of metal that we put in the ground, GPSN-to-centimeter accuracy, and we look for it in the data.

That day when we're collecting the data, by the next morning when we look at it, we're looking for that anomaly that we planted. And it's another good check to show real quick that your navigation is proper and your equipment is able to pick the object up. And, of course, we're doing a repeat survey where it should constitute about 2 percent of the overall data collection.

Here is a -- well, basically, it's the data all condensed into one map in the Western Magazine area. You could see it's kind of color coded. It's on a real broad scale, but basically, to date, we've done magnetometry along the roads, the rail lines, and around the magazines. That's completed. We've also completed the possible dredge outfall area, which is up here.

And as far as the electromagnetics in our scope of work, we completed that in what's called the Open Storage Areas or Laydown Areas, and that's those areas like right in here. So, for the most

part, that data is complete. There is one little spot there, but it's under a couple feet of water right now.

Here is basically the data from the results and the target picks for that potential outfall that's in the northern part of the Western Magazine area. And I don't know if you can see it, but there's about 1200 little crosses there, so each one of those represents a target. And the way we color scaled this was just to bring out the fact that there are some masses of metal, like that right there.

To show our progress in the South Shore Area, which we're working there right now, we've completed the magnetometry in the hillside area, which is basically -- this is Tyler Road. It's everything north of Tyler Road. And the magnetometry is completed in the Shoreline area, which is south of Tyler Road. The one part that we didn't get yet is the accessible tidal area, which will end up being -- it's approximately five acres down along here. The EM61, the all metals, that is still in progress. We basically just started in this area about a week ago.

Well, that leads me to introduce Matthew Gifford, and he's gonna touch on his surveys that he was doing underneath the magazines. It's quite interesting. Matt?

MR. GIFFORD: Thank you. My name is Matthew Gifford. I'm right there in the picture. We're doing surveys underneath the ordnance magazines to look for metal. And this is quite a difficult geophysical environment. As you know, if you are looking for ordnance, things like rebar and metal doors, they all put out geophysical signals. And so these buildings, as you could see in the -- when Brett was showing, they are all blue all around them because they are very strong geophysical emitters because of the contribution of the rebar and the building components.

And so what we are doing here is we are taking a cart -- this is our little cart. And I didn't realize how silly I looked until we got the pictures back, and I'm sitting there very intently looking ahead. And what we do is we have a winch, and this is our winch frame here, and we hook the cart up to a winch and we pull the cart to the back, and then we start the winch up and I control it from here and we pull the cart out, okay. And the whole idea of doing this is we have to know where the head is, because under these buildings, because there's such large geophysical gradients because of these pillars, the reinforced concrete and the re -- and the rebar in the roof, that we have to take very dense data.

For instance, Brett was using data which was about one-foot separation between the lines. Well, we need data that is about one-inch separation, and so we have to swing the head back and forth. Now, if we're swinging the head, we have to know where the head is at any given time, okay. Now, we can't use GPS because we're under the buildings, and also GPS only updates once per second, and we need to update that position ten times a second.

So, on the back of this head, we have a little ultrasonic array, and ultrasonics are used, and we use that to monitor the position of the head relative to our cart, okay. Now, on the front of the cart, we have a laser, and the laser shoots at these targets as we're pulling down; and so we know where the cart is, and we know where the head is, so we know where the data is. And so that's really what we're doing. We don't go very fast. It takes about ten minutes to pull through from one -- from one

to the other, and also we pull from the other side, so that we can always get between the pillars, okay.

We're doing 100 percent magnetic surveys underneath the 15 ordnance magazines out there in the Western Magazine areas. Like I said, we're using the GeoVizor Sled system. GeoVizor is just what I named it, so it's mine. All right. It's high-density data, over 100 samples per square meter, okay. And so we know where each of those samples are so that we can differentiate what's the column and the roof contribution from what's a contribution from something in the center.

We have to use special data processing to isolate the anomalies from the structural building contributions because, as I told you, if you swing that head back and forth underneath those buildings, there's about a 1,000 nannotesla difference between one side and the other of the swing of the head, and that's with no metal underneath it, okay.

Now, a typical 20 millimeter, for instance, will have a magnetic gradient of about 20 to 30 nannoteslas, and so we've just got this huge gradient as we go back and forth, and that's why we have to use special data processing to isolate it. This is what the buildings look like. They are composed of a series of bays, okay. Each bay is about ten-foot wide, okay. Like I said, we start here and just pull ourselves out, and then we go to the next one and pull ourselves out.

This is an example of the prove-out that we did. There were eight items buried in it. During the prove-out -- it was a blind prove-out, so we didn't have the truth. We detected all eight of the ferrous targets, 100 percent probability detection. The Navy also came out and did a second prove-out for us that was also blind, and we successfully completed that and we met all of our DQOs.

This is an example of some of the data processing that we do, okay. And, once again, because we're using U-Hunter, which is a program I wrote, we have funky colors, and most geophysicists swoon over it, but it works and it's the way I work.

Anyway, so what we've got here is we've got all of the different targets that we identified, and I just have a green background there so we can see them. Here is an example of the raw data, and you can see I've got it so that you can see the gradient from one side to the other, and you can see each of these pillars is contributing a large component.

I come in and do a processing whereby -- and I won't go through the whole processing because you won't understand it and you will just get bored anyway. But needless to say, one of the things that we're doing is we're modeling the noise within the system, because you can actually tell a lot from the noise. And so we're using some techniques, and this is what happens when I apply the algorithm. The targets just pop out, and we can pick them.

And that's about my contribution. Now, we're also using the same algorithms that I had to develop for -- under the buildings, we found that they were very useful, and we are actually using them for the rest of the Western Magazine, because they allow us to work near utilities, they allow us to work near high-gradient areas, and so we found them to be very useful. Back to Dwight.

MR. GEMAR: Thanks. I will finish it up. As you can tell from Brett and Matt's presentation, geophysicists are a very strange lot. But what we're going to do in the Western Magazine area, and we have discussed this with Rizgar and the Navy, is we do know that there are some areas shown in the bold grids that previously were found to contain munition items; so we're going to do 100 percent of the targets in those areas, and we're going to pull everything out and take a look at it to make sure that nothing was left behind when the Navy originally did their removal.

Then we're also going to sample roughly 10 percent of the remaining upland area, and we'll do 100 percent removal of targets in those grids. And as you can see by the color coding, based on the data that's been processed so far, the grids that are showing up in red are examples of high-density anomaly grids, that is, there's a lot of clutter or targets there.

At this point, we don't know if it's trash metal or if it's munitions, but we'll sample some of those; and we'll also sample some of the grids shown in the yellow, which is kind of medium density on a relative basis; and then we're also going to sample some grids that have very few targets, or very few anomalies, which are shown in green, to get a feel for how they look in terms of what comes out of those grids.

And then after that, we'll be able to make a more educated decision as to what additional anomalies, if any, to go after. And, of course, as item 3 indicates, that will be done with the review of the results in consultation with the stakeholders. So that's the approach we're going to take on the Western Mag, and we're looking at starting that work next week.

For the approach under the buildings, that's gonna follow a similar tact. The only difference there is, there's been no survey previously underneath the buildings, so there's no history of MEC, munitions, under the buildings. But as Matt has determined through processing of his data, that each bay typically does show some anomalies of metal of some type; and therefore, we're going to start by selecting some very high-density bays, look at those, and some medium density, and some low-density bays, and try to get some knowledge base of what's going on there; whether everything is just uniformly trash and there's really no correlation, or whether there is some correlation between actual munition items that, you know, a sailor or marine might have tossed under the -- under the magazine; or if the area had been filled with debris or munitions before the building was constructed, that would also be determined.

That's not likely to be the case in the Western Magazine area, but it could be the case in the Production Manufacturing Area since those buildings were built on fill that was probably a result -- a number of things, including trash.

So just to wrap it up then, the approach that we're taking and the schedule is that we're gonna start investigating the anomalies in the Western Magazine area starting next week, and we hope to complete that during the month of April.

During that same time, Brett and Matt will be trying to finish up the survey in the PMA area, as well as the under the building areas. There is only three buildings that have -- that are -- that were currently scoped to do by the Navy in the PMA and South Shore at this time, and based on those results, a decision will be made whether those other buildings should be looked at or not.

And then in May, we'll turn our attention to the DGM surveys in the IR-O5 and Dredge Pond 7 South area in the May time frame, and then we will follow that again with an investigation of anomalies in May and probably into June. And then during that same time period while we're doing fieldwork, we'll also be doing office work, essentially, finishing up the data processing for the PMA in the South Shore, getting a report ready for the Navy, and ultimately for the agencies to review.

And then later on this year, when we're completed with the anomaly investigation of the Western Mag area and IR-O5 and Dredge Pond 7 South, and that information would feed into the remedial investigation report for that -- those areas. So that's the plan, and I would be happy to entertain any questions. If I can't answer them, I get to point at Brett and Matt.

CO-CHAIR HAYES: Can you review whether you will be, on those grids, you will actually be removing anomalies, or you will just be evaluating what type of anomalies they are, whether they are -- they are just scrap or --

MR. GEMAR: Well, for the Western Magazine area, we -- and the IR-5 and the Dredge Pond 7 South, we'll be digging up those anomalies. We'll pull them out of the ground, and we'll take a look at them. And as we do that and we get more and more of those items, then Brett and Matt can start making some more intelligent picks, based on what the instrument said versus what came out of the ground, whether it was a piece of rebar or a 20 mill or, you know, whatever.

CO-CHAIR HAYES: Mm-hmm. So, at some point, you might cease removal if you didn't find any ordnance anomalies?

MR. GEMAR: If you -- well, we'll be doing removal of each anomaly.

CO-CHAIR HAYES: Of anomalies.

MR. GEMAR: Right.

CO-CHAIR HAYES: But if you find that they aren't turning out to have any ordnance items in them, at some point would you stop doing your anomaly removal?

MR. GEMAR: Yeah, I think that at that point we would go to the stakeholders and -- including people like yourselves here to -- and with the regulators and the Navy and say, you know, we're only finding trash, we're not finding munitions, we think that based on the previous removal that was done by the Navy in the 90's, plus what we find during our work, that we have done a, you know, an adequate job of characterizing the site for the intended land use.

And, again, this area here, the Western Mag, is to be used for open space, slash, recreational, so, you know, that might have a different threshold, if you will, than if Lennar was going to be building homes on it, for example, so that land use has to be taken into consideration, as well.

CO-CHAIR HAYES: And I will just ask one other question then. On the -- but on the outfall, or the suspected outfall --

MR. GEMAR: Mm-hmm.

CO-CHAIR HAYES: -- there's a good chance it'll have the profile of any other outfall --

MR. GEMAR: Mm-hmm.

CO-CHAIR HAYES: -- and it will have ordnance, and you will just pick through all of that.

MR. GEMAR: Right. We'll remove all of the ordnance down to a clean bottom.

CO-CHAIR HAYES: Okay.

MS. ROEBUCK: Dwight, you said that you were gonna select anomaly targets for investigation consistent with future land use.

MR. GEMAR: Mm-hmm.

MS. ROEBUCK: Could you expand on that and explain just kind of how you do that and what you mean?

MR. GEMAR: Well, again, I think, Sheila, it's gonna depend on what we see, because right now, we have literally thousands of anomalies, and, most likely, it's not going to be practical or cost effective to do -- to remove all of them.

So what you will do, though, is as you pull out material from the ground, the geophysicists will be able to look at that, that item, versus what the instrument response was when they saw that item, and they will be able to start making some correlations between those parameters and what the item was that came out of the ground, and they will be able to perhaps make some adjustments in the number of targets that are picked.

Right now, they have a very low threshold because a 20-millimeter projectile is only, you know, about an inch and a half, and so it's a very small item. And when you are looking for a very small item, you have to, you know, pick practically everything that the instrument sees, and they base that on the GPO results, the geophysical prove-out.

So right now, you are kind of going into it blind, so we're talking a very broad, very aggressive look; and we're picking grids, and rather than sampling the grids, we're gonna do 100 percent of the anomalies, so that we should get a cross-section of items. Some will be large; some will be small.

And, you know, as those items come out of the ground, they can, again, correlate the instrument response to what those items were and then maybe go back to their algorithms and pick items that have a response similar to any munitions that we actually remove.

If it's all trash, then, you know, that -- you know, that's useful information, as well. I mean, we expect to find metal when we go back to these -- reacquire these anomalies. You almost never get a dry hole, so to speak. You will get some metal, but, most likely, it will be just be a piece of trash metal of some type, you know.

You know, one example might be -- is the recent removals that we did at the Rifle Range Outfall. You might recall, we just recently finished that at 4 South. I think we did a little over 1200 digs, and there was only one dig that produced a munition item. The other, you know, 1199 were just trash, just trash metal, wires, welding rods, you know, a lot of -- especially in the outfall areas, you know, the -- whatever got dredged up got sucked into that dredger and ended up out in the outfall areas; but also the outfalls are also the areas where you are likely to find munitions.

So I would almost guarantee that in that northern part of the site, where we see those clusters, that we're gonna find some munition items. I could almost guarantee that we're gonna find some munition items. But in some of these other areas scattered throughout the area, it's quite unlikely that we're gonna find a munition item there. I would be surprised if we do.

You know, we're looking for a needle in a haystack, essentially. And basically, as indicated in item 1, the approach we're taking is, if you are looking for several needles in a haystack, the best place to look for the second one is where you sat on the first one. So that's kind of the approach we're taking on number one. And then we'll expand, you know, that search as indicated in item 2, and if we do find some items, then, you know, that, itself, will be new information that we can use to guide any further, you know, searches.

MR. GHAZI: Dwight, just for clarification, you are gonna expect not to find much out there, because, like statistics show, that you are gonna dig up 1100 and not find anything. You are gonna find one. You want to dig up eleven -- another 1100 --

MR. GEMAR: Right.

MR. GHAZI: -- you are not gonna find thousands of items. You are gonna find a few items. And if you find a few items, then you accomplish your mission.

CO-CHAIR HAYES: There's a question back here.

MR. BOUCHARD: Paul Bouchard is my name. Question on the depth. Is there an action level which you won't go below; ten feet, for instance?

MR. GEMAR: Now, we'll go to the -- till we find the item that the instrument detected. So, if it's a very big item, it could be very deep. And if it's a -- if it's a small item, typically it will be very shallow; so it's dependent on the -- the sensitivity of the instrument is dependent on the size of the item, but we will go all the way till we find it. So if it's a 16-incher ten foot down, we'll dig ten feet until we find that item, but most likely they will be, you know, one to two feet, most likely.

MR. BOUCHARD: Thank you.

MR. GEMAR: You bet.

CO-CHAIR HAYES: I think that question probably could be followed by a clarification that would go back to the last presentation that you did in the early days of developing this work plan, where Gil brought up the notion that meeting with someone at the State, and I don't know who that was, could be most anybody, there's lots of people at the State, said that -- oh, he reported that the State said that they might require, because this would be recreational area, a depth of dig -- of analysis, anyway, and removal up to ten feet deep, and that sounded like a preposterous idea and a not very wise use of limited funds.

But from the Navy's perspective, and from your work plan, and -- what are the depths that you are -- or is this a depth-based analysis and investigation?

MR. GEMAR: Well, it's really driven by the sensitivity of the instrument versus what's buried in the ground, and, again, we're gonna remove any item that was detected within the grids that we're going to investigate. And rather than just say, "We're gonna dig down four feet and stop," because most likely no one, even putting in a utility, typically, would be less than four feet. We're gonna take it till we find it and then remove it. But some items, like a 20 millimeter at two feet, you can't see it, so that's where the rub is.

A lot of people think you can just clear to four feet, and everything anywhere above four feet is absolutely, you know, clean, and that's not the case, because if the instrument can't see it, you don't know it's there. And so a 20 millimeter, being so small, if it's two feet or less, most likely you are not going to see it. So, again, that's one of the things that folks have to realize, is the instrument can only see what it can see; but if it sees it within those grids, we'll take it out.

CO-CHAIR HAYES: I guess I always have one last thing, it seems like, don't I? I want to just remind folks who -- or people who are here from the community or potential developers and users of this property that something that we who have served on the RAB a while are aware of, and while this technology that Matt and Brett and Dwight have presented this evening is more sophisticated, I think, than anything I have ever seen to date used on this property, the fact is, that as Dwight just pointed out, the instrumentation has its limitations, and those are factored by the type of soil, the position of the item, the size of the item; and that there will always -- nobody is going to ever have the technology or the ability, and I'm not sure that there's the public will, to find every single needle in the haystack. In some cases, you should just not play in the haystack. The other way to go about preventing getting poked by the needle in the haystack is to not go digging around in it.

And that's something that I wanted to be on the record again for with early transfer proponents in these properties, as well as the general public, that this property is, I assume, going to have a land-use control on it. It's going to encourage people in every way not to pick up things they didn't put on the ground and to have a mechanism in place to be able to report something that looks suspicious, and that's going to be a long-term education program. That is going to require money.

And I'm gonna just remind the Navy and any early transfer proponents, as well as any ultimate users of the property or potential managers of the properties, that while I -- and I know dozens of

other people in this room are working really hard to make that property available to the public for recreational use and also to developers for commercial purposes.

The fact is, that the long-term public education of land-use controls must be factored in, priced in, to any decision-making on these properties.

CO-CHAIR DUNAWAY: Well, I want to thank the Weston team, Dwight, Matt, and Brett, for their presentation. I know our entire Navy team is proud of all of the work that we're doing, and it's very innovative.

I do want to give John the right amount of time for his work, which is yet another step into the unknown of future technology, and he's doing a great job of that in the offshore environment, which is, probably magnitude of order, more difficult to work in, of course. But why don't I let John come up, get himself set up.

A couple of questions that were posed do raise an interesting perspective on the work we're doing. This is a technology approach to seeing what is out there. The issue of land use and what is the appropriate clean-up level is kind of a different story, and what this data will allow us to do is assess what might be left out there.

The Navy had done extensive amounts of cleanup in the 90's, but the problem was, the technology at the time did not leave us with anything to evaluate what is left. That's where this data differs from that prior work, so we'll have much more information to make those types of decisions from. But let me bring John up, and we'll talk about the offshore.

IIB. PRESENTATION: *Munitions Investigation at the Southern Offshore Sites*
Presentation by Mr. John Bowles, ECC.

MR. BOWLES: Thanks. Good evening, everyone. I'll tell you, having watched Matt's presentation about the buildings, the mud flat or the buildings, I'm not sure, I'm gonna probably take the mud flat, a lot more sunshine.

I'm here this evening with my project superintendent, Mike Murray, in the back. Mike, if you could raise your hand for everybody. We're very happy to return. You will recall a couple of years ago, we conducted one of the very first geophysical surveys in the offshore environment, and we're now very anxious to take a look at the results of what it was we mapped.

And my presentation tonight will -- given the information that was provided by Dwight and his team, I have opted not to go over a lot of the history. If anybody has any questions, I'm happy to share that with them.

As far as a quick overview, I will give you a little bit of the history of why we think that munitions and explosives of concern could potentially exist in these offshore sites. I'll explain, in our remedial investigation, the kinds of data gaps that we're looking to fill with our work. And at the end, I will summarize the technical approach we're gonna use to this investigation.

First of all, MEC, munitions and explosives of concern, is a term that was developed a few years ago. It essentially coupled two basic acronyms. We're adding acronyms together now. You have UXO items, which are items you might find at Fort Ord or on an impact area somewhere that have been fired, armed, fused, and quite hazardous, and then we have those that may not have been fused. If they were fused, they weren't fired, they were simply discarded, within a manufacturing setting or a rework facility setting, and those are called DMM, discarded military munitions. And while we use MEC as a catchall term, our focus here at Mare Island is pretty much on discarded military munitions.

And you are all aware that MEC items had been found in the dredge spoils and on the -- during the onshore investigations that were done in the late 90's. For everybody's benefit, the South Shore Area, where we'll be working, is about 85 acres in size. The PMA offshore environment is about 40 acres. There is some interesting challenges of our own with regard to these environments. They are comprised of wetlands; shoreline; riprap; mud-flat areas, my favorite; and the marine environment, the water.

We're challenged by some physical forces. Winds, tidal variations, currents are considerable, though we don't expect those to bother us this spring and summer; and those of you that live locally are well aware of the ferry wakes that can be generated at times. About this time in 1942, this is what Mare Island looked like. And can you see that okay, or should I dim the lights? It's okay.

On your right, you've got the Mare Island Strait, the Carquinez Strait going out into San Pablo Bay across the South Shore, the Western Magazine area on the left there, as described by Dwight. Here is the area of our focus, from Dike 12 to Pier 35, to Dike 14 to Pier 34; and then in this Production Manufacturing Area, the PMA, these piers no longer exist, but we can -- we know where they are. There's evidence, as you will see, of where they existed, and we'll pay special attention to those areas where we think ordnance was handled.

Our conceptual site model, as many of you know, determined that as a result of mishandling or what was then authorized disposal, given the history of Mare Island, along piers and shorelines, we think there are -- you know, if MEC exists, it will probably exist in those areas. There is some potential that in the near-shore environment, we could find a couple of -- or some locations to where MEC may have been buried. We know in the onshore, we encountered such areas.

And then in the IR-5 area, while we won't look at it this summer, we know from the open burning and open detonation activities that were conducted there, there is some potential that items could have been kicked out just beyond the shoreline along Dike 12.

We're also expecting that since most of the MEC sources were actually on land and near the piers, that there's a greater potential for MEC to be found in that near-shore environment than farther away from it, and you will see in our data gaps that's one of the things we're seeking to conclude.

MR. GRIBBLE: John?

MR. BOWLES: Yes.

MR. GRIBBLE: Can we ask questions along the way here?

MR. BOWLES: Certainly, Chip.

MR. GRIBBLE: So right there at the bottom of that slide, that suggests to me that in those areas you are not looking for UXO; or if you find UXO, that you might ignore that?

MR. BOWLES: This summer, or this --

MR. GRIBBLE: Let me explain to you --

MR. BOWLES: Yeah.

MR. GRIBBLE: -- what I'm -- the point I'm trying to make. The continuing changing in the definitions or acronyms, it is confusing, and I think it's a problem in itself and we don't necessarily ascribe to the definitions that you are currently using; and so what that -- what that implies, if we're to follow your definitions, is that if you were to find a UXO item on the land and piers, that you would not -- you would not deal with it, and I know that's not the case.

MS. McFADDEN: Which statement are you talking about?

MR. GRIBBLE: So if you go back to the earlier slide where you defined UXO versus MEC --

MS. McFADDEN: Yeah.

MR. GRIBBLE: -- and DMM. So as you go on on your presentation and you are using "MEC," that says, in one interpretation, and the way I am reading, in the negative way, that you are also at that point no longer looking for UXO, and I don't think that's the case.

MS. McFADDEN: MEC is inclusive of discarded military munitions and UXO.

MR. GRIBBLE: That's not what that says.

MS. McFADDEN: No, it says the MEC that we found at Mare Island is limited to discarded military munitions.

MR. BOWLES: Not UXO.

MS. McFADDEN: That is what is meant by that.

MR. GRIBBLE: Okay. So --

MS. McFADDEN: What we found to date is only DMM. We haven't found UXO.

MR. GRIBBLE: Right. So the point here, ultimately, is that the definitions continue to be changed to make it harder and harder for people to follow what it exactly is that you are talking about at any

point in time, especially if you are going back and looking at past documents. And there's a real potential for something to get lost or dropped from the conversation based on the language and -- and the convoluted nature of the language and the acronyms. So we don't necessarily ascribe to the -- to the acronyms that the Navy is currently using, and we're looking for a more inclusive definition.

MS. McFADDEN: Well, the Department of Defense has defined MEC as the term to be used, and they've defined it, and it is inclusive of all -- it's meant to be inclusive of both recovered discarded military munitions and the specific definition of UXO. The problem in the past is that our documents called things UXOs that really weren't, and it's actually intended to clarify it more, and we'll make an effort to make sure that that's clear when we're doing reports and we're doing these presentations.

MR. GHAZI: Patricia, I don't think he's arguing with the DOD definition. I think --

MS. McFADDEN: Oh.

MR. GHAZI: -- what confuses here is that it says MEC does not include UXO as part of the definition, and that's not at all --

MS. McFADDEN: Oh, is it just that -- the way we wrote the slide? Oh, yeah. I'm sorry. I realize now that as I was -- it should say that at Mare Island, we've only found DMO not UXO.

MR. GHAZI: But for the record, if you do find UXO, you are not gonna leave it. Are you gonna pick it up?

MS. McFADDEN: We're looking for MEC. We'll remove all MEC, which is inclusive of both, yes.

CO-CHAIR HAYES: Where does it say in this report that you weren't gonna clean -- they weren't gonna do anything with it? Where did you get us going down this road?

MS. McFADDEN: It's this statement there. It looked like we were defining MEC as not including UXO, when really we meant to say -- and it -- I agree, it could have been stated more clearly.

MR. BOWLES: I do want to point out that this is kind of a secondary bullet to this. MEC was found in the dredge spoils and on land during these intrusive investigations, and the MEC was limited to discarded military munitions, not UXO items. MEC, as I defined at the beginning, includes both. So I tried to explain that the munitions we expect to encounter, should we find any, will be the less hazardous variety, but certainly we'll be responding and looking for both.

CO-CHAIR HAYES: John, I would just encourage you as much as possible not to say -- not to lull us into thinking they are less hazardous. They might be to you, and they -- but they could -- it's our understanding, anyway, that if you -- that they are still -- if there's high explosives in the item, it could still cause harm.

MR. BOWLES: They -- yes, that's correct, Myrna.

CO-CHAIR HAYES: All right.

MR. BOWLES: And it's --

CO-CHAIR HAYES: We're trying to stay on track with you guys, so... They might be less hazardous for you to handle, but they aren't necessarily less hazardous for us to be playing with.

MR. BOWLES: Okay. Correct.

CO-CHAIR HAYES: Is that so? Doug Murray, bring up the stupid gene again, story.

MS. McFADDEN: Where were you?

MR. BOWLES: Where was I? Yes, exactly.

MS. McFADDEN: Finished this one.

CO-CHAIR DUNAWAY: Yeah, I think you finished that one.

MR. BOWLES: All right. For our purposes, we categorized the areas by their accessibilities within these two environments, the PMA and the South Shore. We have the -- what we call the near shore, which is a walkable, the sandy, grassy areas that many of you are familiar with along the shoreline. This includes the wetlands, and these areas are above the mean lower low-water mark, which can be broadly characterized as that line to where either Sandy Beach pretty much starts to turn into the rocky and the mud flat walking out.

We have the mud-flat area, my favorite. It's unwalkable. Mud exposed below that mean lower low-water mark, and the farther you go away from the near-shore environment, the more unsafe and the soupier it is. These areas are only exposed during low, low tides, or low tides. And honestly, only during low, low tides -- you have two tides out here, two highs and two lows each day. And on the -- they generally occur at this time of year and over the next couple of months, which is why we're here now.

The marine environment is always covered by water. I'm gonna show you a couple of maps that follow this, and then later in the presentation there is some photos which will pictorially illustrate these AOCs. Here you can see green is the near shore, yellow is the mud flat, and blue is the marine environment here in the PMA. And along the South Shore, here again, green is near shore, the mud is yellow, and the blue is marine.

The data gaps that we'll be working to develop answers for during our investigation, essentially what are the things that we know? We know there's a potential for MEC items in these offshore environments, and we believe there is greater potential in the near shore and the pier areas than further away from the near shore and pier areas.

The things that we don't know, broadly, is there MEC in the offshore areas? If so, how much? Is there MEC along the entire shoreline, or might it be located in specific areas? Are there any disposal areas in the offshore that haven't been discovered to date, and does the concentration of this MEC change from the near shore to the mud flat? Also, can MEC that's been disposed of years ago move in the mud or stay put? And our experience, as you know, is that it stays put. And looking at the mud, you can appreciate that, but we've got a sedimentation study that we're developing the results for that will provide this information scientifically.

So in terms of answering those questions about what it is we don't know in terms of, is MEC in the offshore investigating samples of the anomalies? We'll answer if it's there, what types and quantities we might expect. And what we'll be doing is to be investigating certain -- about 15 percent of the anomalies that are in the near-shore area and then we're going to have some transects. I will show you this later.

In terms of is there MEC along the entire shoreline, or is it located in specific areas? We will, as I said, investigate 15 percent of all the anomalies that we detected in these environments in the near shore during 2003. We'll take a look at what it is those turn out to be. And as we encounter them, if any of them are, indeed, MEC items, we'll also expand our search immediately in the vicinity of that to make sure it's a single item and not representative of a cache of items.

In terms of whether or not the concentration changes from the near shore to the mud flat, we're going to be doing some 15-foot-wide transects that begin at the high near shore and go out as far as we can go in the mud flat, depending on the tides we have. And along the PMA where we have those old piers, you will remember from that 1942 slide, we have established some transects along those areas where we have physical evidence of the piers having existed to insure we capture those areas with the highest potential.

Are there any disposal areas in the offshore? Well, some of the anomalies that we mapped during our 2003 survey were much higher in terms of their response than others, and all of those that were deemed to be extremely high will be investigated this summer in both the near shore and in the mud flat. And, as I said, we're doing -- we have the preliminary results of the sedimentation study that was done late last year that we are reviewing now, and we'll set in some context within the framework of our RI report for this spring's work.

And there were also some tests on the sediment to determine the potential for any of those sediments to be resuspended and indicate that some physical force could actually result in the movement of items below, or in the mud. One of the things that we have worked to do in fashioning this remedial investigation is to focus it on that data that we expect to be most helpful in contributing to remedial action decisions for these areas. We'll prioritize the areas where we have a higher potential for MEC exposure.

In the near term, we're investigating the sampling of targets, and we've also catagorized the targets so that we're getting a 15 percent sample of all of those anomalies that, based on the reference work that we did with our validation-of-detection system study and reference area where we had ground truth with regard to the signal responses from the geophysical equipment, those that are small or quiet, we're taking 15 percent of those. Those are what we consider to be the 20-millimeter to 40-

millimeter-size items. And then we'll take 40 millimeter and larger, 15 percent of those; and then we'll do all of the large mass -- investigate all of the large mass anomalies.

What we wanted to insure is that we didn't have a biased sample to where we just went and got the louder and didn't do an honest assessment of what the targets with a smaller threshold response might be. Long term, in terms of some things we're planning or that are being planned for the future, we'll evaluate these near-term results and consider whether or not there are some alternative methods we can employ in the unsurveyable areas.

While we're out here, we'll explore how difficult it might be or how effective it might be to manually sample some of the areas near the piers, using either divers, as a precursor to a clamshell dredge, lifting up some of the sediments and investigating that, we'll use hand-held detectors along those areas where there is significant erosion and our geophysical survey equipment couldn't survey, and we'll be discussing those while we're out here conducting this investigation.

I have two posters with me that show, this map and the following one, and I invite you to take a look at those during the break. And what I can show you, broadly, is, if you can make them out very well, these lines here are the 15-foot-wide transects that we'll be investigating, and we'll be looking at 100 percent of the anomalies within there. And then this general mustard-colored area is the mud-flat area of the PMA. On the South Shore -- sorry. Let me back up a second. That's the near-shore area where we will be doing the 15 percent sampling.

And here are the same context but in the South Shore environment, and this is Dike 14, and we'll do a transect on the other side. And as you can see, there are fewer transects in near shore than we looked at in this area because this is just a deeper area, physically. You don't have -- most everyone is familiar with that wide beach area in this environment.

Some photos. These are the mud flats of the Production Manufacturing Area, and you can see where you've got some erosion that's taken place. This goes back probably 50 to 100 feet, and because the grass grows over it, it's dangerous to walk there. This is some of the clumping that's occurred. Difficult to geophysically survey that, and this is what we'll be looking at ultimately with the Mag and Flag approach.

Here further south in the PMA, some of the evidence of the old piers that existed. We will be doing transects in and around that vicinity. This is A266, for those of you who know the area. And essentially we're standing in that vicinity as we look north toward Berth 24. This is further north in the PMA near IR-04. On the South Shore, here is a good view of the mud flats exposed at low, low tide. That's Dike 14 on the left.

Any questions? I do have a movie I can show during the break if anybody is interested. Some of you may have seen it before. This poor schmuck is about ready to walk in the mud flat, to give you an idea about the --

MS. McFADDEN: Do we have time? I don't know. It's about two minutes or something.

CO-CHAIR DUNAWAY: Yeah. It's worthwhile showing. Yeah.

MR. BOWLES: Let's hope it works. Drum roll, please. Yeah, this was -- this was shot by a friend of mine, who just wouldn't suit up and do it himself. Whoop. Let me -- I'm going to have to...

(Movie begins.)

MR. BOWLES: I don't know how to do this.

MS. McFADDEN: We can watch it on the smaller --

MR. BOWLES: All right. One more time.

MR. GIFFORD: Believe it or not, we have that same environment under a lot of buildings right now.

MR. BOWLES: Wait a minute before you say that, Matt.

(Movie restarted.)

MR. BOWLES: We look forward to your visit in April when you can get a closer view of all of this. And as Myrna knows, the mudders help.

CO-CHAIR HAYES: Yeah; mm-hmm. Yeah. Especially if you keep them on the ground.

MR. BOWLES: Thanks very much. I'm happy to take any questions.

CO-CHAIR HAYES: John, I just want to point out that this is another example of an educational piece for the community.

I think that the general public, because the east side of the river, which is along the Vallejo main waterfront, is seawalled, that most people don't --can't even imagine what the South Shore Area is. They -- some of them are lucky enough to live quite close by, across the river, and they have their perception of what that South Shore Area is, but a lot of people simply have just never been in this area and have some misconceptions about the beach potential, and diving potential, and all kinds of exciting recreational opportunities that they -- they very often come to the Regional Park Task Force with, jet-ski operations, sailing classes; and your little two-minute clip here would be very instructional at the entrance of the park, similar to the way the National Park Service does at Alcatraz, where you have about a 10-minute slide show you have to watch before you set out on your recreation there.

The other question I actually had is the divers, this diver deal. What are divers gonna be doing, and what equipment are they going to be equipped with? Our wonderful late RAB member Rob Schoenholtz was -- got pretty excited about the notion of using divers in these dark and muddy waters to do much of anything around ordnance, so what would that be like?

MR. BOWLES: As you know, the currents and the visibility are extremely poor, and it's very silty along those piers. You can see all of that silt re-suspended during the, you know, the incoming/outgoing tides, and so a diver isn't going to tell you too much with regard to munitions.

What I would expect a diver might do is to make sure that in the vicinity of an area along the pier, where it might be intended to take several samples using a clamshell dredge to insure that the area that -- of that clamshell grab would be relatively clear of debris and obstacles. And I don't want to bring up anything that's going to hazard anybody or complicate the operation to where they pick something up and you've got pipes or wire or something.

So the extent to which a visual and tactile examination during a slack tide might be conducted to flag some areas, especially during those parts of the year where you have -- the current's a little more – a little more moderated, I think it would just be a good precursor to the clamshell. It's not to go in and tell you very much about the ordnance or the potential for it. Yes, sir.

MR. CASEY: Yes, my name is Mike Casey. I'm a local resident, retired Navy. I'm curious, with regard to the people conducting the field activities and with relation to the ordnance and the water on the ground, whatever, if it's 8-inch rounds, 16-inch rounds, what is the general danger to the people in the field? I mean, it's obvious there's some danger of just encountering an explosion, and have there been explosions, just inadvertent explosions?

MR. BOWLES: I am not aware of any inadvertent explosions, and the -- Rizgar, what do you recommend is the best way to characterize the relative hazards associated with the DMM that we might encounter here compared to, you know, Range 43 at Fort Ord and the --

MR. GHAZI: I will leave that to the experts. But like you said, UXOs, basically, it's a fuse ready to blow up, and DMM is just something thrown overboard, so the potential for that is less. But, like Myrna said, we, from the agencies and public, they are all the same to us.

MR. BOWLES: Let me state it this way: Your typical projectile, your typical ordnance item is filled with a high explosive, and the high explosive is considered insensitive to the point that you need something akin to a blasting cap within the firing train to actually cause that to detonate. So, in terms of our handling it, or the environment in which we're working, with all of our people being so highly trained, with many years of military service, I'm not concerned or overly concerned about our mishandling items that we may encounter at Mare Island. However, that same item without a fuse and unfired, if some child were to pick it up and take it home and --

MR. COFFEY: Hit it with a hammer.

MR. BOWLES: -- put it next to the fireplace, or something, you know, along those lines, there -- I have seen so many accident reports, you just can't imagine all of the ways that people can be foolish, and certainly don't mean to downplay the hazard with regard to people that don't have this training.

MS. McFADDEN: If I can answer a little bit, in part, maybe from a more layman's perspective. We have a lot of safety plans for these works, and those safety plans have to go through review both with regulators and with the organization within the Navy that oversees explosive safety.

So, part of it covers the fact that all of the people in the field have to have a certain level of training, and that's typically the military training, where they had explosives training, as well. On top of that, most of them also have several years of being in the contractor field. So we have lots of safety plans that cover safety in the field, as well as, you know, the folks, themselves.

It's kind of like a pilot. He may not care about your life, but he cares about his. These guys kind of operate on the same -- they -- you know, they are looking out for number one. They don't take any risks out there, but they are used -- they are informed and used to dealing with munitions that have been buried in the ground for a long time. They have a process by which they uncover it where they are minimizing their contact with it until they can decide whether it's safe to move or not, so that's kind of a typical approach in the field from a layman's perspective.

Of course, a lot more goes on in terms of what goes into that decision train, but there are safety plans that cover how they approach the field activity and their training, and their personal activities, you know, relate to how they deal with each item that they find. Does that answer your question?

MR. CASEY: Yes. Thank you.

MR. BOWLES: Yeah, and at least two or three of my trained individuals will look at an item before anybody decides that it's safe to disturb it and relocate it. Thanks for mentioning that. Yes, sir.

MR. BOUCHARD: Paul Bouchard again. Is there any radiological prescreening of these materials for radiological emissions?

MR. BOWLES: No.

MR. BOUCHARD: Any expectation of finding --

MR. GEMAR: Well, there is in the suspected outfalls that I have discussed in the Western Magazine area. What we will do is we will take a radiological detector and screen the top foot and then we'll scrape it one foot at a time, 'cause we do expect to find radiological items in these former outfall areas. We found them in the past. Typically, the luminescent buttons that were onboard ships and then, for whatever reason, when they wanted to discard them, a lot of them ended up overboard and got sucked up in the dredge. So, whenever you find a radiological item, it's almost always associated with an outfall.

MS. McFADDEN: And just to help answer that, we haven't had radiological issues with munitions specifically, so that hasn't been something combined. It's typically been based on, like Dwight said, their shipboard buttons that are meant to luminate and such, but we don't have radiological issues with the munitions themselves, if that clarifies that.

MR. BOWLES: Like to leave you with two things: First, Mike and I will be available during the break and invite you to ask us any questions that may occur to you now or subsequently; and you are welcome to take a look at both, certainly the Weston and ECC posters to -- that may have been a little bit difficult for you to see. And we hope to see many of you out during the upcoming field visit next month or the month after.

CO-CHAIR HAYES: I just want to, again, on the -- on the side of the layperson and the exposure pathways to these items, and while some of them are relatively obscure and will never be found, they will be lying there silently, quietly, for the -- for a millenium, there is a possibility of, as the public becomes -- is allowed access to that area, that somebody could find something; and, as you say, you have two or three guys who -- and Patricia says, have a protocol, and they have a pretty careful way that they analyze the item.

I think that we, as Americans, have not had the opportunity to be smart about ordnance as other countries have because we have had the privilege of living in ordnance-free neighborhoods and communities.

But as military bases close and those are transferred to the public for various uses, including recreation, there is a opportunity for increased exposure. And I think that it doesn't do this community, or any community, or any individual justice to say, "Well, the material at Mare Island is nothing like the material at Fort Ord." That's actually very true.

But what if I visit Fort Ord and I've told my kids, if I had them, all about the ordnance at Mare Island, and then they go to Fort Ord and they are messing around and they find something and they pick it up and -- and it is fire, it is fused.

I think that we just have a opportunity -- and I will go back to Diana's notion of a bomb museum. We have an opportunity here to educate the public about munitions, what their purpose is, what the history was of their use, their manufacture, their storage, their transport here, and what role the community played. It was a culture -- part of the culture to work at the munitions facility.

And the more quickly you bury the past, you bury the history, and you make light of or say, "Well, there's not much of a risk, there's not much of a chance of an exposure," the more you set yourself up to have a mistake happen, and you miss out on the opportunity for the community to learn about a rather rich and interesting history. So I appreciate your presentations and the level of detail, and I don't think I'm the only one. I think there are a lot of people out there who are very curious.

And to the extent that many people have the stupid gene, which is to pick up something, and if they don't know what it is, get out the knife -- I understand it's usually men who carry knives and scrape on whatever they find, and it's usually boys and men, who, if they can't make it get shiny that way, or they can't figure out what it is, they throw it at something, or they throw it in the fire, maybe.

MR. BANCROFT: Hit it with progressively larger hammers.

CO-CHAIR HAYES: Yeah, hit it with progressively larger --

MS. McFADDEN: Somebody's got to win the Darwin award.

CO-CHAIR HAYES: Yeah, really. Might as well congregate here. So I'm not trying to be -- I think it's a great opportunity. I don't see it as a -- as ill-will or something that we should be ashamed of, but it is just what it is, and we might as well not also make it seem not dangerous. Doesn't do us service either.

CO-CHAIR DUNAWAY: I thank you for your comment, Myrna, and thanks, John, for the presentation.

MR. COFFEY: Thank you, John.

CO-CHAIR DUNAWAY: I know that this work has taken a long time. The work that John is doing in the offshore area, that particular area will probably be the last bit of work that we do here at Mare Island. We are taking our time with it. As I mentioned, the work that we're doing is innovative and new, and we have folks across the entire country looking at what we're doing here at Mare Island with regard to munition survey work, how to quantify what is out there, how to evaluate what kind of risk it poses, and that's our next step after this phase.

This is kind of a critical milestone to get to. We're able to collect data to talk about what is out there, not just what we found, what we were able to pull out, put into something to be treated, but what's the residual that is left there to evaluate risk and potential harm that could happen to people that use the property in the future. So it's a long process. We have been doing this for over ten years now, since the original investigations for ordnance here at Mare Island, but we're taking our time for the specific reason of making sure we're doing it right.

And I think that's a great idea, if we can somehow work with maybe the local historic museum to document the history of the munitions cleanup here and operational history, that would help educate the public on what kinds of hazards may exist once we do finish up this work. But we're not quite there yet to quantify those risks. We're just trying to see what's out there first.

With that, I know this has gone on longer than our agenda lists. All of our ordnance presentations tend to do that. It's an area of interest, I think, that just makes it take longer, and that's good to have that kind of questioning. So with that, why don't we take a quick break, try to get back here in about five minutes and then we'll finish up the rest of the meeting. Thank you.

(Whereupon, a brief recess was taken.)

III. Administrative Business

CO-CHAIR DUNAWAY: Let's try and get the meeting back started, if folks can take their seats. In your mail packet, you have the meeting minutes from last month's meeting. If you find any corrections are needed, please pass the correction sheets on to Myrna or myself.

RAB Membership Committee. Mike Coffey was kind enough to volunteer to fulfill that need there, so Mike will be on our Membership Committee.

And Wendell Quigley is our latest applicant onto the RAB. I'm thinking we'll probably consider his membership at the April RAB meeting. And so Mike will be working with you, Carolyn and Chip, to conference just before next month's RAB meeting.

As mentioned earlier by John, we are trying to put out -- or put together a RAB tour, site tour for Mare Island. Lots of work has been recently completed or hit some significant milestones, so we would like to take the RAB members out to look at that, plus we have our ongoing work on the South Shore.

We did another RAB tour with John's work out in the field, and that was very interesting to watch and see what's actually down there, plus you get a feel for what the South Shore is just by getting access to that area.

So the two dates we have out there that I have sent out on an e-mail are April 29th, that would be two days after the next RAB meeting, or May 13th, a couple weeks later. I have only gotten one response back from folks, so if you have a preferred date, please respond to my e-mail or let me know here. We're trying to firm up a date so we can start making plans for that.

CO-CHAIR HAYES: Maybe they can tell us if they are available for both or only one.

CO-CHAIR DUNAWAY: Yeah. What I will do after tonight is I will re-send the e-mail and suggest that folks either pick a date or see if both dates will work for them.

MR. COFFEY: Are those both Saturdays?

CO-CHAIR DUNAWAY: Both of them are Saturdays, and so we would most likely have the tour starting 9:00 or 10 o'clock in the morning and ending in the early afternoon.

CO-CHAIR HAYES: And usually there is some available space to bring a significant other or a neighbor or somebody who might -- you feel might benefit from going on that tour.

CO-CHAIR DUNAWAY: So look for another e-mail from me, and I will get that out early next week. Let's jump into the focus group reports, and, let's see, going down the line, Paula, I'm not sure if you have a Technical Focus Group report.

IV. FOCUS GROUP REPORTS

a) Community (need to select a new group leader)

No report.

b) Natural Resources (Jerry Karr)

No report.

c) Technical (Paula Tygielski)

MS. TYGIELSKI: I have nothing to talk about.

CO-CHAIR DUNAWAY: Why don't we go to Gil. I know Gil is little thin on detail.

d) City Report (Gil Hollingsworth)

MR. HOLLINGSWORTH: Yep, we have nothing.

CO-CHAIR DUNAWAY: Very quiet month at the City.

MR. HOLLINGSWORTH: I'm trying.

CO-CHAIR HAYES: It's not December, that's why.

CO-CHAIR DUNAWAY: So on the Lennar report for Steve, Neal.

e) Lennar Update (Neal Siler)

Yeah, there's a couple of handouts. I don't know if everybody's got it there. It's an 11-by-17 sheet that shows the work that's been done at the site lately, and then there's this listing of the documents that are out right now and the documents that will be out in the near future.

And just to go over quickly the work that's been done in the field, we're finishing up the remediation at Building 516 and also at Underground Storage Tank Location 742. Building 516 is in Investigation Area C3, and UST 742 is in Investigation Area C2.

There's a couple other investigations that will be coming up in the near future, probably in this spring and summer, and that is the site characterization, additional characterization of Underground Storage Tanks 102 and 142. And if you look on the map, those are both in C3. We're gonna to be advancing some soil borings at those -- both those locations, installing ground-water wells, and collecting soil and ground-water samples.

The other area were going to be doing some additional work in the spring and summer is Underground Storage Tanks 231 and 243, which are in Investigation Area H2. We're gonna be doing a soil-gas investigation in that area to delineate some soil gas that we detected late last year. So that's the summary of the fieldwork.

As far as milestones that have come up in the future, all of the land-use covenants for Investigation Area D1.2 have been recorded, and we also have approval for the Final Remedial Action Plan for Investigation Area C3. Nothing is really changed as far as the environmental sites that we have photo status on. Those are the same as they were last month. And that really concludes the highlights of what Lennar and CH2M Hill have been doing over the last month.

CO-CHAIR DUNAWAY: Thank you, Neal. Any questions?

CO-CHAIR HAYES: Yeah. Neal, could I ask you a quick question? The -- IA-D1.2 LUC's are recorded. Does that mean that you are now in a position to be able to sell those properties or transfer them or --

MR. SILER: Not quite yet. It's part -- a step in the process. We still did not receive No Further Action Certification back from DTSC. Once we do that, we would be able to parcelize those sites and go ahead and put those properties up for sale or lease.

CO-CHAIR HAYES: So when do you hope to have that?

MR. SILER: We hope to have that in our hands next month.

CO-CHAIR HAYES: And then I think I am recalling that you said that you were working with the Guardian Trust on this parcel and that you were -- or this IA, and that you were expecting to have your agreements in place with them for management sometime -- it seemed like this month or next?

MR. SILER: It will be sometime in the near future. Right now, we're going through contract negotiation stages. Were going back and forth on a number of issues. How this will work out is that in the interim, once we get the No Further Action status certified from DTSC, Lennar will be taking over the responsibility of the implementation and enforcement of the land-use covenants until we get an entity like Guardian Trust in place. Now, we hope that that is going to occur in the near future, probably late this spring or early in the summer.

CO-CHAIR HAYES: And I know that you gave a presentation, or Jeff did, I don't think you were here, Jeff Morris gave a presentation on -- and I think a component of that was how you were going to do the management. But will you -- I guess I remember way back when Guardian Trust gave their model and their way of managing. I'm not quite sure how -- what you are going to be doing is going to be different.

MR. SILER: It won't be any different from what the Guardian Trust -- it will be probably -- we will be doing it just in the short period until we get them on board.

CO-CHAIR HAYES: Mm-hmm.

MR. SILER: But, you know, over the long term, they will have the -- or whoever we hire to do that will have the long-term management of the enforcement and implementation of the land-use covenant.

CO-CHAIR HAYES: And along those lines, as I have commented a few times but I haven't ever had a response back from you, at what point does DTSC and do Lennar, does Lennar, expect that we will, as a RAB, be involved in the development of that final management plan?

Again, I have stressed probably about 960 times in the last 13-almost years that the RAB's purpose in being engaged in the environmental cleanup issues at Mare Island is for early and often

communication about decisions regarding environmental cleanup, and certainly land-use controls are the -- sort of the final part of that puzzle.

And I have asked for the last few months in what way we're going to be, you know, brought to the table and -- like we were when you came to us with the focus group and said, "What ideas do you have?" When will we be brought back to that table? 'Cause I know DTSC has a -- I would assume, had an interest in that, in having us kind of say, okay, so this is what you have decided, you know, what about this? What about that? And -- because they had quite a contingency at that meeting of folks, and I would assume that you would be interested to hear whether we think you are on the right track or not. I'm hoping you are interested --

MS. ROEBUCK: Oh, yeah, of course.

CO-CHAIR HAYES: -- before the decision is made, and it sounds like it's getting close.

MS. ROEBUCK: Well, the management -- operations and maintenance sort of management program hasn't been finalized, but --

CO-CHAIR HAYES: That's good, 'cause that's when we should be involved, is before it's finalized, right, right, right? Remember that?

MS. ROEBUCK: The framework, though, of who has what responsibilities was provided to you in a matrix that I think Neal passed out a couple of months ago, and so it's sort of to add flesh to that bone that is the intention for the O&M plan. But, as I said, it's not finalized yet, and we haven't talked to DTSC about -- about how to do that, um, and we can -- we can go ahead and do that and get back with you.

CO-CHAIR HAYES: Well, I think this would be the perfect time for us to get -- for you to engage with us. Again, you know, you haven't finalized things. You provided us a matrix some time ago, but that was sort of a quick, very brief, I think maybe three, four-minute presentation you gave Neal a few months ago, and now is a good time to get us involved, before, as you say, the final decision's made.

MS. ROEBUCK: And the other thing I wanted to point out is it is not likely that we will transfer property before we get the Guardian Trust in place, so it probably isn't gonna come up for, I would think, a few months, but we do need to follow up on that.

CO-CHAIR HAYES: Yeah, just circle back around. Whether we do it in a focus group or whether we do it here at a meeting, I think it would just be good. Again, we're representative of the stakeholders into the perpetuity, I guess. You know, we certainly aren't necessarily going to be affected by what does or doesn't happen on those parcels, but somebody will, and here is our opportunity.

CO-CHAIR DUNAWAY: Okay. Thanks, Neal. And thanks, Myrna, for your comments; and, Sheila, for input. And it may be something we can somehow incorporate into the RAB site tour if that's something that can be done.

Weston. Chris isn't here. I'm sure, Dwight, you are covering for him.

f) Weston Update (Dwight Gemar)

MR. GEMAR: I am, in fact, covering for him. Chris is in Houston, yahoo, getting rained on heavily there, too, as I understand it. So I am just gonna mention, on the Investigation Area H1, we're working on finalizing the feasibility study. Chip and I have been on the phone a lot lately, which is a little scary, but the agency's been very responsive. I appreciate that. The agency also got us their comments on the Draft Remedial Action Plan, and we're working on responses to those comments and hope to be developing and finalizing a draft final version in April for their review. And we're looking forward to getting some comments on a Draft Remedial Action or the Draft Remedial Design Work Plan here shortly, so I hope that is still on track.

MR. GRIBBLE: (Nodding head.)

MR. GEMAR: Chip is looking like a bobble doll. I don't know what that means. Do I get that with an extra large Coke or...

CO-CHAIR DUNAWAY: Thank you, Dwight.

CO-CHAIR HAYES: Dwight, I don't see how this could possibly be a photo at Mare Island on this Western Magazine photo with this clear sky and what looks like dry soil. Where is this?

MR. COFFEY: That was one day a couple of months ago.

MR. SILER: It's one of those 1942 photos.

MR. GEMAR: That's actually a horse buggy there.

CO-CHAIR DUNAWAY: Okay. How about we move on to regulatory agencies. And, Chip, do you want to start?

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

MR. GRIBBLE: Friday is a State holiday, Dwight.

MR. GEMAR: It is?

MR. COFFEY: Yeah, Cesar Chavez Day.

MR. GEMAR: Because it's April Fools', or what?

MR. COFFEY: No, it is. It is Cesar Chavez Day. State offices are all closed. Another State paid holiday.

MR. GEMAR: I hate when that happens.

MR. GRIBBLE: But we will be working still. We're working on H1. We're also working on developing some information, apparently, to provide to the early transfer discussions. Some of our notes, or the Department's notes, on the parcels that are under consideration for early transfer to assist in developing that next round of early transfers to reduce or limit the confusion of what the Department's expectations are for those parcels in terms of investigation and remediation, so we're going back and doing some internal reviews for those parcels. And that's about it for my work. Rizgar has been working principally on the ordnance sites, and he's got a number of other sites that he's taking the lead on, but in the last month, that's -- it's been the ordnance work that's been his focus. And that's it for DTSC's report for tonight. Brian, from the Water Board, I don't know if you are prepared, or --

MR. THOMPSON: I have something to say.

MR. GRIBBLE: Okay. Good, 'cause I could help if you didn't.

MR. THOMPSON: I have something to say but not a lot. As John introduced me, I'm taking over as the case manager for this, and I am in the process of getting up to speed and had a nice tour of the site. Neal took me around today, which was very nice.

I am going to report on what some of our staff have been working on. There is two issues that we're issuing, or are going to be issuing. Two of them for USTs 241 and 739. These were suspected USTs that were not located, so no further actions was -- it's going to be granted. There is a closure for UST 108, Area C3.

Some other things that we have been working on, completing review on the elementary site on 9th and Tisdale. We're expecting some additional information, and we'll promptly review it so that we can proceed -- so that the FOST can be proceeded with.

There's a tech memo for petroleum hydrocarbons. That's been reviewed, and we'll be issuing a letter commenting on it next week. We just want to make sure that the tech memo takes into account pertinent California requirements for protecting waters of the State. And the Guardian Trust has been mentioned a couple of times already.

Many of the TPH cleanups are proposing natural attenuation as a remedial method, and monitoring will likely be required into the near feature, so we just want to make everyone aware of that, that monitoring past the property transfers for sometime in the future should be expected, and that's it.

CO-CHAIR DUNAWAY: Well, welcome, Brian, and I am sure you will find lots of interesting work here. We never seem to run out of that here at Mare Island. Carolyn, do you want to cover for EPA?

MS. d'ALMEIDA: Can I have the mic? Well, earlier this month, we sent out substantial comments on the Landfill Remedial Design Plan, so they've got those; and then earlier this week, we also sent out a letter on the School Site Inspection Report, and we're satisfied with that.

The other letter I just sent out today has to do with the A2 North -- former North Buildings Way. That's the one you've been waiting for for a very, very long time. Basically, the only concerns that we have left with that have to do with finalizing the ecological assessments and getting all of that pertinent information into the final report, so it's a stand-alone document.

And, let's see, my attorney called and said that she had been discussing with Lennar regarding the covenants for D1, and she said they pretty well had gotten the language, I think, pretty much together and basically ready to go. So that's basically it for us.

CO-CHAIR DUNAWAY: Thank you, Carolyn. With that, why don't we jump to our Co-Chair Reports. Myrna, do you want to go first?

CO-CHAIR HAYES: Well, actually, I don't have a report.

CO-CHAIR DUNAWAY: Well, I will cover mine right here. And if folks did not get the Navy Monthly Progress Report, let me hand those around. The first thing at the top of our report is none other than Mr. Gil Hollingsworth's former destroyer that he commanded. Out of San Diego, right?

MR. HOLLINGSWORTH: Yep.

CO-CHAIR DUNAWAY: The USS George Phillip. What years were --

MR. GEMAR: I don't see any dings in it.

CO-CHAIR HAYES: Where are you in this photo?

MR. GEMAR: He's water-skiing. He's on the back.

MR. SILER: He's on the back with Captain Hazelwood.

MR. HOLLINGSWORTH: I also led the building team. I spent three years building that ship --

CO-CHAIR HAYES: Whoa.

MR. HOLLINGSWORTH: -- before that.

CO-CHAIR DUNAWAY: Well, it doesn't have quite the lines of a pretty boat that I would like to design, but I'm sure it was effective as a -- as a war machine.

MR. HOLLINGSWORTH: Actually, it has a steel hull and aluminum superstructure. We always used to say it was a disposable property. It was designed to take a hit right through it.

CO-CHAIR DUNAWAY: The work the Navy has been doing is essentially similar to last month. We described last month that we finished up working at the Marine Corps Firing Range. Weston is doing that work for us, and that's not on here anymore so you won't see that being reported in this

report, or probably not for the next few months until we start getting into the remedial investigation for that site.

But the DRMO site, the other cleanup that we have been actively out in the field conducting hit a major milestone. We completed the first phase of excavation. The top 18 inches across the entire site have been -- excavated soils have been screened, characterized for contamination and proper disposal, and we're using the rail-car and rail-line system on Mare Island to haul that soil out by rail car, which is much more efficient than by trucks, and it takes the trucks off the roads. So that's moving along very nicely. We do have some work left to do once the weather turns better.

MR. COFFEY: If the weather turns better.

CO-CHAIR DUNAWAY: On the other side, we do have regulatory submittals and agency comment letters that have returned. Something that's not on here that George Leyva has been very good at in the last month or so is he's issued a couple of closure reports to the Navy for various sites, and they are not on here, but I will make sure to get those on here next time.

George has done a good job trying to, I guess, catch up with some of the back-log documents that the Water Board has. In the area of early transfer, you heard Chip talk a little bit about it. What the Navy and Lennar are attempting to coordinate on with DTSC is for the non-munitions work on the parcels being considered for early transfer, Lennar is interested in getting a competitive bidding for that work from various contractors.

The contractors are interested in talking to DTSC to make sure there is clarity in what is expected for the work at those parcels, and so we expect to do that in the month of April and hope that will move the early transfer along; but we probably won't see much activity, say, for the RAB's purposes, like a Finding of Suitability For Early Transfer, we won't get that out probably till the May or June time frame. And we'll be working with Lennar to help them get their competitive bidding in from their various contractors.

CO-CHAIR HAYES: Can you explain what you are going -- what you mean by non-munitions competitive bids? What are you gonna do with the munitions component of that proposed early transfer of property?

CO-CHAIR DUNAWAY: I believe Lennar has already selected a contractor or has their plan in place for that -- for the munitions work. Sheila, maybe you want to elaborate?

MS. ROEBUCK: Sure, if you like. Sheila Roebuck again. Lennar is working to come up with an approach and a price that we could negotiate with the Navy with Weston.

CO-CHAIR DUNAWAY: For munitions.

MS. ROEBUCK: For the munitions areas.

CO-CHAIR HAYES: So the non-munitions competitive bid is on all the -- all the parcels, including those that have munitions that would be non-munition-related cleanup.

MS. ROEBUCK: It's the parcels that have munitions. The South Shore Area --

CO-CHAIR HAYES: Uh-huh.

MS. ROEBUCK: -- is really what we're talking about, were -- are the ones that we would work with Weston totally on those -- on those parcels. The other parcels in the northern part of the Island we're looking for competitive proposals.

CO-CHAIR DUNAWAY: So that concludes my report, and I don't think I have anything else to add outside of our cleanup work. But I do want to stress that I need to figure out a date for that RAB tour so we can start our planning and get all our ducks in a row for that. Ken?

MR. BROWNE: We have two different dates for August, one in -- one in the flier and one on the -- what you handed out tonight.

CO-CHAIR DUNAWAY: Yeah, the August 17th date is incorrect. That's August 24th.

MR. BROWNE: 24th.

CO-CHAIR DUNAWAY: August 24th is moved back one week from the last Thursday of that month, so thanks for pointing that out. That should be August 24th. Any other questions, comments, anything? Okay. Well, thanks for staying late, and the meeting is adjourned.

(Whereupon, at 9:16 p.m., the meeting was adjourned.)

LIST OF HANDOUTS

The following handouts were provided during the RAB meeting:

- Presentation Handout – Geophysical Surveys for Munitions at the Southern Onshore Sites
- Weston Solutions Mare Island RAB Update March 2006
- Navy Monthly Progress Report Former Mare Island Naval Shipyard March 2006
- Mare Island Deliverable Schedule – CH2MHill/Lennar March 27, 2006