FINAL
MARE ISLAND NAVAL SHIPYARD
Restoration Advisory Board (RAB) Meeting Minutes

HELD THURSDAY, DECEMBER 3, 2009

The Restoration Advisory Board (RAB) for former Mare Island Naval Shipyard (MINSY) held its regular meeting on Thursday, December 3rd, at the Mare Island Conference Center, 375 G St., Vallejo, California. The meeting started at 7:05 p.m. and adjourned at 9:09 p.m. These minutes are a transcript of the discussions and presentations from the RAB Meeting. The following persons were in attendance.

RAB Community Members in attendance:

- Myrna Hayes (Community Co-Chair)
- Michael R. Coffey
- Jerry Karr
- Wendell Quigley
- Paula Tygielski
- Chris Rasmussen

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

- Michael Bloom (Navy Co-Chair)
- Heather Wochnick (Navy)
- Marie Dreyer (Navy)
- Ryan Wensink (Battelle)
- Neal Siler (Lennar)
- Steve Farley (CH2MHill)
- Ed Aromi (CH2MHill)
- Cris Jespersen (Weston)
- Dwight Gemar (Weston)
- John Kaiser (Water Board)
- Erich Simon (Water Board)
- Elizabeth Wells (Water Board)
- Janet Naito (DTSC)
- Joshua Bernardo (Solano County)

Community Guests in attendance:

- Lance Burris
- Russ Farnell
- Susan Nichols
- Bill Stephens
- Jim Porterfield
- Cindy Porterfield
- Joe Railla
- David Godsey

RAB Support from CDM:

- Carolyn Moore (CDM)
- Doris Bailey (Stenographer)
- Wally Neville

I. WELCOME AND INTRODUCTIONS

CO-CHAIR BLOOM: All right, everybody. We'll go ahead and get started. You ready, Steve?

MR. FARLEY: Too many people for introductions.

CO-CHAIR BLOOM: Well, we're still going to do them. All right, everybody, thanks, and welcome to the December 3rd, Mare Island RAB meeting for 2009. Would have been, whatever it was, Thanksgiving Day, but we moved it a week. So glad to see we have a good crowd. Start with introductions. I'm Michael Bloom, the Navy BRAC Environmental Coordinator and -- whatever I am -- and Navy co-chair of the RAB.

CO-CHAIR HAYES: And I'm Myrna Hayes, the Community Co-Chair of the Restoration Advisory Board, and I live in Vallejo.

MR. KARR: Jerry Karr, Napa Solano Audubon Society, Vallejo.

MR. JESPERSEN: Cris Jespersen with Weston Solutions.

MS. NAITO: Janet Naito with DTSC.

MR. FARLEY: Steve Farley with CH2M Hill.

MR. QUIGLEY: Wendell Quigley, Vallejo.

MR. COFFEY: Mike Coffey, RAB member from American Canyon.

MS. TYGIELSKI: Paula Tygielski from Benicia.

MS. WELLS: Elizabeth Wells, Water Board project manager.

MR. RASMUSSEN: My name is Chris Rasmussen, I'm a Mare Island resident.

CO-CHAIR BLOOM: Is there a mic? Oh, there's no mic. Speak up.

MR. KAISER: My name is John Kaiser. I'm the DOD Program Manager for the Water Board, San Francisco Bay region.

MR. BURRIS: Lance Burris, interested in Mare Island.

MS. NICHOLS: Susan Nichols, resident of Mare Island.

MR. FARNELL: Russ Farnell, HSMPS, Iowa group.

MR. RAILLA: I'm Joe Railla, architect. I'm also with the U.S.S. Iowa group. And I am a resident -- a resident of Mare Island.

MR. PORTERFIELD: Jim Porterfield, ex-Mare Islander.

CO-CHAIR HAYES: Former.

MR. PORTERFIELD: My daughter Sidney.

MS. PORTERFIELD: Also interested in Mare Island.

MR. BERNARDO: Josh Bernardo, Solano County Resource Management Haz Mat.

MR. AROMI: Ed Aromi, CH2M Hill.

MR. SILER: Neal Siler, Lennar Mare Island.

MR. GODSEY: David Godsey, a resident of Vallejo.

MR. GEMAR: Dwight Gemar with Weston Solutions.

MR. WENSINK: I'm Ryan Wensink with Battelle.

MS. DREYER: Marie Dreyer, Project Manager with the navy.

MS. WOCHNICK: Heather Wochnik, lead RPM for BRAC, Navy.

MS. MOORE: Carolyn Moore with CDM.

CO-CHAIR BLOOM: All right. Thank you, everybody. We'll go ahead and get started with our first presentation. It will be given by Marie Dreyer with the Navy and Ryan Wensink with Battelle. It is on Investigation Area K, which is the Offshore Area. And it is a Remedial Investigation update.

II. NAVY PRESENTATION: *Investigation Area (IA) K, Offshore Remedial Investigation Update*

Presentation by Ms. Marie Dreyer, Navy
Mr. Ryan Wensink, Battelle

MS. DREYER: Well, good evening, everyone. Again, my name is Marie Dreyer. And in conjunction with Ryan Wensink of Battelle, we'll be giving you an update of the Investigation Area K Offshore Remedial Investigation.

In tonight's presentation I'll be giving you an overview of Investigation Area K as well as giving you an overview of the CERCLA program. And CERCLA, of course, stands for Comprehensive Environmental Response Compensation and Liability Act. I'll also be giving you an overview of what a remedial investigation is and where it fits within the CERCLA process. As you may know, the Navy released its draft remedial investigation just last month, so it's important to go over what the purpose of that remedial investigation was and where it fits into our process. Then I'll turn it over to Ryan who will discuss the findings of the RI report. And then finally we'll round it out by stating the conclusions and path forward at this investigation area.

IA-K extends the length of the Mare Island Strait and rounds out to -- excuse me -- extends the length of Mare Island Strait and a portion of the Carquinez Strait. This 308 acres have been divided into 66 cells. And certain sections of these 66 cells have been named for their historical onshore or offshore uses or just simply its location within the strait. So if you'll pull out your big map on the second page, you'll see cells one through ten is the Fleet Reserve Pier Area. 11 through 16 is the Former North Building Ways Area. 17 through 22, Berths 1 and 2. 23 all the way down is the North Mare Island Strait area. And then down here is the South Mare Island Strait area. And then, of course, the South Shore Area.

CO-CHAIR HAYES: How many acres?

MS. DREYER: 308. As I mentioned, the Navy released its Draft RI last month, and the goals of it or purpose of a remedial investigation are three-fold. First to determine the risk and extent of contamination. So, what chemicals are we dealing with and where are they. Then to evaluate the potential risks to the environment. And then, lastly, we perform an RI to build a solid foundation on which future remedial actions or remedial decisions can be made. The important

distinction here is that actual alternatives are made in the next phase, which is the feasibility study.

Right now we're at this phase, the remedial investigation. For data interpretation purposes we've had to break up the six different areas that I mentioned earlier into four evaluation areas. In this -- these evaluation areas are as follows. Area 1 encompasses the Fleet Reserve Piers, Former North Building Ways, and Berths 1 and 2. Area 2 is North Mare Island Strait area. Area 3 is the South Mare Island Strait. And then Area 4 is the South Shore Area. Now I'll go ahead and turn it over to Ryan to review the findings of our RI.

MR. WENSINK: Thanks, Marie. First off, I kind of wanted to let everybody know that the general scope of the presentation that I'm going to give today is very much focused on the data. There's a lot of components to an RI report. And I've brought it here just so that everybody could see just the general size and the level of effort associated with it. And there's a lot of components. When we initially pulled this presentation together, we wanted to give an overview of the report and let everybody know what was going on. But when we did that we found that we weren't doing a good enough job explaining any one thing. And the input that I've had is that folks want to see the data, they want to see what chemicals we're interested in, what chemicals we detected, and where. So generally this presentation, while we have some overview slides called conceptual site models at the end, it's going to be pretty focused on the data, and more so than I would typically present at a RAB, but the feedback I've gotten is that everybody is pretty interested in seeing the data, so that's kind of -- that's the context if you have any questions along the way, let me know.

The first slide here, I just kind of want to go over a few ground rules, the types of concentrations that we use to frame up our understanding of the nature and extent. These are all regulatory approved values that were worked out during the RI Work Plan, and they've kind of -- there are tools to understand what these concentrations mean and which ones are high, which ones are low, which ones are consistent with what we'd expect in other areas of the bay that don't have -- where we wouldn't expect anthropogenic or manmade inputs to sediment.

The first one is San Francisco Bay Ambient Concentrations. Now, these are values that are based on a 1998 Water Board study. And these are really important because essentially what it means is the Water Board wanted to understand if we weren't at a site in the bay where you'd expect contamination, what would the ambient concentration be? Because there's so much mixing, there's so much development around the Bay that some of these chemicals are just inherently everywhere. And so these tell us which chemicals are maybe associated with the Navy, and which chemicals are associated with ambient conditions.

The next concentrations that we're going to use to understand our data are Ecological Reference Values, and these are called Effects Range Low [ER-L] and Effects Range Medium [ER-M]. Now, these are quite simple. Basically if you have a concentration above an ER-L, the Effects Range Low, there's a low potential for adverse ecological effects. An adverse ecological effect could be something like decreased growth, decreased reproduction. The ER-M is a slightly higher concentration, slightly more conservative, and it corresponds to a moderate potential for adverse effects to an ecological receptor.

And the last point that I wanted to make here is these are box and whisker plots. They're on every figure. And they're important because we'll be able to see generally how conditions change with depth. And I don't want to get into them too much, but basically this is a way to

kind of understand the big picture of the data. The central box there, that's where most of the data is occurring. I think you'll probably understand it better on the next slide as I get into the nature and extent. There's a lot going on in these figures.

CO-CHAIR HAYES: Could you explain the background of the words box and whisker plots?

MR. WENSINK: Yeah, I can. I didn't want to get into it too much because it's details, but let me explain. It's a good question. These statistical outliers, these stars they're basically concentrations that are inconsistent with the rest of the data, they're either higher or lower than what the rest of that data distribution is telling us. This box right here, that's where most of the data is occurring. These whiskers are basically the top 25 [percent]. So the highest 25 percent of the data that we saw, and the bottom whisker here is the bottom 25 percent of the data that we saw. And you'll see it -- it will make more sense when we get to the slides that actually present the data.

CO-CHAIR HAYES: That makes sense.

MR. WENSINK: Okay. So let me go -- are there anymore questions?

The general frame we have a big area, we have a lot of chemicals that we looked at and the best way that I could think of to kind of demonstrate what's going on is to pick some of the chemicals that were present at higher concentrations more frequently than others. Generally I tried to pick a one organic and one inorganic chemical that were present at higher concentrations than others. So the things that are maybe exceeding their, the ER-M values or exceeding the ambient concentrations more frequently. The first that we're going to start off with is mercury. And just so that everybody gets their bearings on this --

CO-CHAIR BLOOM: Ryan.

MR. WENSINK: Yes.

CO-CHAIR BLOOM: Could you explain the handouts? Like how the first slide and then the bigger one?

MR. WENSINK: Yeah, I'm sorry. Okay. Every handout has you'll see a slide that matches what I'm presenting up here. And the following page, it will be two pages if it's a large figure, it's basically an eleven by seventeen version of the slide, and it will give you something legible to look at as I'm going through the data here up front. So is everybody good? Okay. The first map that we're looking at is mercury in the Fleet Reserve Pier, North Building Ways and Berths 1 and 2. To just give everyone a frame of reference, if you look in the upper right-hand corner you can see the general location where we are.

Basically if you look at the box plot we see that most concentrations are generally consistent with ambient conditions. We do have some elevated concentrations here in the shallow zone, and those are depicted in red. Because the way that this data was collected we're talking about a lot of data, a lot of places at multiple depths. And so what we've done is essentially we've assigned a small circle to shallow samples, and we've sequentially made that depiction increase in size with depth. So you can kind of see the depth profile along each sample. What we're concerned about here, I'm going to kind of hit on some of the higher concentrations, the red, or the concentrations that exceed the ER-M.

So, again, this is mercury. And what we saw when we looked at mercury was in Cells 4, 6, and 8, right here, we had mercury in the shallow subsurface with the 0.5 to 5 foot depth interval at

concentrations that exceeded the ER-M. As you can see here in the box plot, most of them are pretty close, they're not gross exceedences of the ER-M. We did have one detection that was a little bit higher than the others. I'm going to keep going. Cell 12, 14, and 16 also had exceedences of the ER-M. And we saw some concentrations above the ER-M at Outfalls 2, 3, and 4. So if you look here at your map, we have Outfall 2 right here, Outfall 3 right here, and Outfall 4. And all I'm doing is kind of pointing out where the red or the higher concentrations are. So that's mercury. I'm going to move onto total -- yeah.

MR. KARR: I'm guessing when you're saying below grade surface, is that what sample depth is there?

MR. WENSINK: Yeah, it's below --

MR. KARR: Is that the top of the mud you're calling grade?

MR. WENSINK: Yeah, I'm sorry.

MR. KARR: It is?

MR. WENSINK: Yeah, when I say depth, I mean below the top of the sediment surface or where that mud starts. The next slide that we're going to look at here is in the same location, it's in the North Building Ways, the Fleet Reserve Pier North Building Ways and Berths 1 and 2. And we're looking at total polychlorinated biphenyls, total PCBs. Generally speaking in this area we have total PCB concentrations that exceeded the ER-M. You can look here at your box plots and see that we have some in the surface and the shallow subsurface. And the primary locations where we saw them were around Outfalls 4 and Cell 2 and Cell 5. Everybody following that?

CO-CHAIR HAYES: You might not ever get through your presentation, but what I'd like to know is when we look at these dots on the map here --

MR. WENSINK: Yeah.

CO-CHAIR HAYES: -- are we looking at just a single sample?

MR. WENSINK: You're looking at a single boring. So along that boring multiple cores -- multiple samples were taken so we could understand how the concentrations were changing with depth.

CO-CHAIR HAYES: So within that whole cell you'll just have like one, two, three borings, one at shallow, one at --

MR. WENSINK: Depending on -- well, it differs from location to location. You can kind of see here, just as an example in Cell 4 we have one at two and a half to five feet, and then one from five to ten foot depth range. And the main purpose of these slides is to be able to show you how things are changing with depth.

CO-CHAIR HAYES: Right. But I'm also saying that these are only like one core sample in that whole geographic cell.

MR. WENSINK: Right.

CO-CHAIR HAYES: So are you making conclusions based on that single core sample within -- that will that you just hit the right spot, and that that is representative of the entire cell?

MR. WENSINK: Right. Well, that's a valid question. I mean, what has been done out here in total there's almost 880 sediment samples taken throughout the entire Offshore Area. And the Navy has worked for many years conducting investigations and trying to ensure that it was comprehensive. And you're right, what we see here is what was collected.

CO-CHAIR HAYES: And is this data from just the last collection or is this --

MR. WENSINK: This is all the data.

CO-CHAIR HAYES: Everything?

MR. WENSINK: This is everything.

MS. DREYER: Just to clarify that point, if I could also add, it's also data that is part of this RI has also been collected as part of other investigation area studies, such as F1, F2, and C-2. So it's data that's been taken from the offshore project when Tetra Tech still had it for the past ten years, as well as data from other investigation areas that other contractors have had over the past years.

MR. WENSINK: Okay. I'm going to keep going through. I'm going to, just for the sake of time I'm going to go through to -- I have another slide here for the Fleet Reserve Pier, North Building Ways and Berths 1 and 2 that presents the distribution of total DDx, that's the sum of pesticides DDD, DDT, and DDE. Generally the distribution of total DDx, these pesticides matched what we saw for PCBs. We saw them around Outfall 3, and we saw them around Outfall 4. And everywhere else, as you can see, is pretty much consistent with the ambient concentration.

CO-CHAIR HAYES: So the source of that would have been?

MR. WENSINK: Well, the outfalls were connected to the storm water system and the storm water system did -- you know, the whole purpose of the last round of sampling was to conduct an outfall investigation. Outfalls tended to be areas where you'd expect to see higher concentrations because historically, the storm water system, it was combined. Until 1950 it combined sanitary, industrial waste, and storm water. In 1950 a separate sanitary sewer system was developed. And then in the seventies a separate industrial waste system was developed. And so the reason that we look around the outfalls is because historically we would have seen waste around them. So we're trying to find the places where we expect to see contamination. Okay. I'm going to keep going.

We're jumping into the area immediately south of the Fleet Reserve Pier, Berths 1 and 2 and North Building Ways. This is the North Mare Island Strait. It's a relatively long area, so if you look in the upper right-hand corner of your figure you can see we're kind of in the middle of the Mare Island Strait. We have filed, if you can kind of see, we have two maps here, and they're meant to kind of line up right next to each other and fill in that whole area. What I'm showing you here is a slide that demonstrates the distribution of nickel as the metal. You know, generally speaking we have -- if you look at your box plot, you see that concentrations are generally below ambient concentrations throughout the North Mare Island Strait. And what we saw in general throughout the entire North Mare Island Strait were conditions looked pretty good with the exception of a few isolated hot spots.

I'm going to -- the next slide will be a presentation of total chlordanes in -- and again, the purpose is just to pick the chemicals that are the worst case scenario; that the rest of the chemicals are honestly -- everything's pretty much consistent with the ambient. We've picked chemicals that are the worst case scenario where we do see exceedences of the ER-M, just to

kind of demonstrate where we're seeing high concentrations, and also to show that, in general, things looked pretty good out there. Total chlordanes is a pesticide. And the area where we saw this isn't a very interesting slide because there's not a whole lot to present. If you look at your box plot we only have two exceedences of the ER-L, everything else is consistent with ambient. The location where we saw these exceedences was near Outfall 30. Again, samples collected around outfalls because we would expect to see some of the higher concentrations there. So they have total chlordanes.

The next area that we're going to get into is a little bit more interesting than the North Mare Island Strait, it's the South Mare Island Strait. We're going to talk about mercury. Because, in general, if everybody's -- I don't know if everybody is familiar with some of the historic activities around the South Mare Island Strait, but we had historically a sandblasting material area right in this region here, and so the purpose of presenting the mercury slide is to show that in general we have concentrations that are consistent with ambient, but within the sandblasting material area you can see that we have the very focused area of concentrations that exceed the ER-M. I'll keep going.

Total DDx. Again, I kind of explained this one the last time we talked about it. But again, this is a pesticide, and it's the sum of DDD, DDE, and DDT. Generally same type of thing, everything is very much consistent with ambient concentrations. We have a few exceedences of our ER-M, and they're all focused in two areas, Outfall 33 and Outfall 100. Now, the South Shore Area is probably, of all the areas, the least interesting because there was nothing --

MR. COFFEY: So to speak.

CO-CHAIR HAYES: Sort of.

MR. WENSINK: -- there was -- I mean, in terms of chemical concentrations, there wasn't a whole lot out of there. All right.

MR. COFFEY: There you go.

CO-CHAIR BLOOM: That's the way to say it.

MR. COFFEY: Qualify that statement.

MR. WENSINK: Well, it's the least interesting from the perspective of this report where we're looking at chemical constituents in sediment. I picked copper. I mean generally, like again not a whole lot going on in terms of metals contamination. But as you can see, this is one of the worst ones. And concentrations are well below ambient in both the surface and the shallow subsurface interval. And of all of the constituents that we looked at, there were no exceedences of the ER-M with the exception of nickel. Which -- actually in the case of nickel, the ambient concentrations or the concentration you'd expect anywhere in areas where you wouldn't see contamination, that ambient level in the bay exceeds the ER-M, so you'd expect it.

Total PCBs, I also presented for the South Shore Area. Same story. Low concentrations. Everything's generally consistent or below ambient. And the two exceedences of the ER-L that we see right here, they're very close and generally would pose very low potential for ecological effects. Again, I apologize for painfully going through each of these areas, but the point was to kind of give everybody a flavor of some of the data and show you what some of the worst chemicals were, and to show that, generally speaking, we have focused areas where we have exceedences of the ER-M, but in general things look pretty good.

CO-CHAIR HAYES: We were particularly interested in the data on the North Mare Island Strait, particularly around some of the outfalls on the pier -- I mean at the dry dock areas. And we were particularly focused on PCBs. And you did not give us anything about the PCBs on the North Mare Island Area.

MR. WENSINK: Let me go back to the -- I'm sorry, that's a good question.

CO-CHAIR HAYES: And I think there was a whole lot of conversation about this, I'm surprised that you haven't at least showed us that.

MR. WENSINK: I'm going to go back to the nickel slide to demonstrate the point. There was -- there was a very high concentration of PCBs, Aroclor 1260, I believe, detected around Outfall 22 right here. It was detected at 34 to 35 feet below sediment surface. And to answer Myrna's question, the main reason we didn't present PCBs -- PCB Aroclors is because -- I gotta kind of explain something about PCB analysis. There's two ways to look at PCBs here. You have method one, which is a very refined way. It gives you really good detection limits. It gives you a really good understanding of what kind of PCBs are present. And then there's method two, which is the method that was used and which is this detection that's at Outfall 22 was observed.

Now, the problem with method two, it's called Aroclor analysis, is that it has a higher detection limit. And because the detection limit was higher, in most cases we didn't see PCBs using that method. And so it was a very low frequency of detection. Now, the thing about it was, using that analysis, that was the analysis which at Outfall 22, where we had that deep hit, it was 1,180 milligrams per kilogram for PCBs.

Now, if you look, I think the next, the next highest hit that we saw was 6 [milligrams per kilogram], which is -- it's just a high reading. It was a valid detection, it made it through validation. So, I mean, it's a data point. And Myrna's right, it's high. But the thing that it's at 34 and a half feet below ground surface but I guess my -- I'm trying to kind of explain to everybody where that was. Myrna, do you -- does that make sense?

CO-CHAIR HAYES: I have no clue what you just said. I think you just danced around a Navy contract.

MR. WENSINK: Okay.

CO-CHAIR HAYES: You don't have a PCB map, a map that shows the PCB concentrations for the North Mare Island Strait Area. You have one for nickel and other things. You've just -- we had -- I can't believe that Navy staff did not direct you to make sure and present that particular piece of data on a map for us. What's going on? Maybe I can talk to the Navy directly and not put you on the spot. But what's with this, you guys?

MR. WENSINK: I mean, I can, like I said --

CO-CHAIR HAYES: We've waited for this data for months. It was supposed to have been presented to us in October. We had some major decisions that were made in this community through our planning processes, our decision-making processes regarding a business that that data would have been useful to us to have in the mix, and we were told it couldn't be put together for us yet, and now -- and that it would be presented in the December meeting. So where is that map?

CO-CHAIR BLOOM: It's in the RI.

CO-CHAIR HAYES: Well, let's get it out of the RI and show it to us.

MR. WENSINK: Myrna's got a good point.

CO-CHAIR HAYES: I do?

MR. WENSINK: Let me say, the one thing, I do not have a figure that shows that today, and I apologize for not having it. You know, the main reason I didn't was because --

CO-CHAIR HAYES: You were instructed not to?

MR. WENSINK: No. No. It was because -- it was like very low detection frequencies for that particular type of analysis and --

CO-CHAIR HAYES: 1,100 and did you say eighty?

CO-CHAIR BLOOM: What he's saying by low frequency, he's saying that one particular hit that you're talking about, 1,180 obviously was detected, but the next highest hit that Ryan was saying was, like, you said 6?

MR. WENSINK: Yeah.

CO-CHAIR BLOOM: And so what you would see on the map, I believe, would be that one hit at Outfall 22 for the PCB map, and -- but there wouldn't be -- wouldn't be any others other than that 6.

MR. WENSINK: Yeah.

CO-CHAIR BLOOM: So --

CO-CHAIR HAYES: It just doesn't matter. We had a long, long, long, long, long controversial conversation where almost every member of the Restoration Advisory Board, certainly the community members, talked about that topic. If you couldn't go back to those notes and then go over them and bring that data to us in a cogent and meaningful way, then all these other numbers immediately look suspect. And just because you had one hit that you say was at 30, minus 35 or whatever, so what? It was a high hit.

MR. WENSINK: Yeah.

CO-CHAIR HAYES: And did you go in and try to do additional investigations at that particular site even? We want to know about this. Why should I have to remember this? Why should I have to be the conscience and then be the capital B about it? Why don't you just do what you promised you would do and completely put our mind at rest. That PCB got there when the native Americans put it there 3,500 years ago at 35 foot depth. It just got there with a previous culture. But that could well have been a Navy chemical of concern, not an ambient.

MR. WENSINK: I'm not saying that.

CO-CHAIR HAYES: No.

MR. WENSINK: I'm just making -- it's a very high hit.

CO-CHAIR HAYES: Sure it is.

MR. WENSINK: It is very high, and it's higher than anything else that we saw.

CO-CHAIR BLOOM: Well, we did go out and sample in that area again, and we didn't find any high hits. That's what he was saying. So what we were trying to do was present the data where there were the majority of the high hits and the specific chemicals.

MR. WENSINK: Now one of the other things about the presentation today. We're trying to focus on the nature and extent. We have an Ecological Risk Assessment, we have fate and transport, and they're all very important parts of the RI. And I think because of the time constraints we're not getting into 'em too much. We wanted to kind of show everybody the data. But I would love to come back and talk about the Ecological Risk Assessment, give you a slide that shows the data point that Myrna is talking about, because it is very important and it's relevant, and I apologize for not having it today.

The last couple slides of the presentation are the conceptual site models. These are pretty high level, just big picture understanding of each of the areas that we just talked about. The first one, Area 1 is the Fleet Reserve Pier Former North Building Ways and Berths 1 and 2. Generally what we're showing here -- and again, because of the time we wanted to really get into the data and we didn't want to kind of delude ourselves by focusing on ecological risk, but like I said, we'd love to come back and talk about that. We're showing some of the receptors that were evaluated, we're showing some of the potential sources of contamination, and we're just giving a general overview of the nature and extent. Within the Fleet Reserve Pier, North Building Ways and Berths 1 and 2 we had elevated concentrations above the ER-M around certain outfalls, and we have the mercury detections in -- the mercury detections in some of the near shore cells.

Area 2 is the North Mare Island Strait. We have -- throughout most of the North Mare Island Strait most concentrations were consistent with ambient. However, there were a limited number of areas where we had exceedences of the ER-M, one of which was directly adjacent to Outfall 22 -- as Myrna pointed out. But, in general, things looked pretty good throughout most of the North Mare Island Strait.

Area 3 is the South Mare Island Strait. Generally speaking with the exception of the sandblasting material area where we had elevated concentrations of some metals, including antimony, cadmium, chromium, lead, mercury, nickel, and zinc, everything looks pretty good. We also had some elevated detections around Outfall 33 and Outfall 100.

And the last of the four areas that we looked at was Area 4, the South Shore Area. And, again, things looked pretty good. We didn't have elevated concentrations, we had no exceedences of the ER-M with the exception of nickel which is the case where ambient concentrations are higher than the ER-M.

And to give you just an overview of of what the Navy is doing. The results of the risk assessment, which we didn't get into today, showed that there was pretty low risk. We saw that wildlife receptors were not being exposed to chemicals at high concentrations. We saw that benthic risks were localized, so the areas where we had concentrations that exceeded the ER-M there's a potential for localized risk to benthic life, you know, to worms and clams and things that would kind of dig around in sediment. And based on the results of the remedial investigation, the Navy has recommended to undertake a feasibility study, which is the point at which you kind of take all the data and you frame up your remedial action objectives and start thinking about how you're going to evaluate alternatives to address potential risks and elevated concentrations. So with that, I'll take questions.

MS. TYGIELSKI: I'm concerned about Outfall 22.

CO-CHAIR HAYES: I guess you gotta use your microphone, Paula.

MS. TYGIELSKI: The high concentration of PCB at Outfall 22. And you said it was at a great depth.

MR. WENSINK: Uh-huh.

MS. TYGIELSKI: And people keep saying, oh, that one is at a great depth, it's making us think that, well, it's ignored because it's very deep. And I'm not sure we should ignore a high concentration just because it's very deep.

MR. WENSINK: Your concern is -- it's a good question. And I guess my answer would be that the first step in the RI process is to kind of understand where concentrations are high. And we understand that there's a high concentration there. One of the objectives and one of the recommendations of the RI is to move forward with the feasibility study to evaluate alternatives to address high concentrations in areas where we have them, specifically around outfalls. So it wouldn't be ignored, it's being -- it will be addressed.

CO-CHAIR HAYES: Well, I guess going back to these cells, how large an area are each one of these cells where you did these borings on average out of this 308 acres divided by what, 66 plots or cells? How many --

MR. WENSINK: Each of the cells -- I mean, they vary in size, but I would say -- you know, they vary anywhere between 250 and 300 [square] feet. And let's assume that not all of them are squares but --

CO-CHAIR HAYES: Cubic feet.

MR. COFFEY: Square foot.

CO-CHAIR HAYES: So you would have -- like -- one sample?

MR. WENSINK: It kind of goes for -- each area depends on -- well, let me first clarify. You know, we wrote the remedial investigation. We took data that was generated and wrote the report. Now, yeah, you're right what you see are the samples that were collected. In some cases there are less samples than others. But, in general there are over 880 samples throughout the entire area, and we're seeing the same story in most of the samples. And in the areas where we looked to try to find contamination around outfalls, we did see it in the Navy's undertaking of feasibility study to evaluate alternatives.

CO-CHAIR HAYES: Well, I'm just looking at the North Building Ways Area, and that doesn't indicate that those -- I'm looking at mercury --

MR. WENSINK: Yeah.

CO-CHAIR HAYES: -- just as an example. This doesn't indicate that these are anywhere near outfalls. They are quite some distance off of the shoreline. And you have A-2 that you're, you know, the Navy's doing work on now to attempt to have ready for transfer, but you don't know, just if you have those three high hits, whether you don't have a much broader level of contamination across those cells. How do you --

MR. WENSINK: I mean, you have a valid concern, it's a good question.

CO-CHAIR HAYES: Well, how do you address that in your research? I mean you -- everybody, all the professionals in this room are addressing this issue, tell us how it gets done. And I don't care who answers the question.

MR. WENSINK: Well, you know, I'll tell you right now --

CO-CHAIR HAYES: You're not going to go and just clean up that one -- that one little circle within that cell.

MR. WENSINK: No, but --

CO-CHAIR HAYES: But how do you know where your contamination continues within that cell? How broad it is, how extensive it is, how deep it is? Just could you answer that question or could somebody else who's in this business answer it?

MS. DREYER: I would say that's part of the next step is to identify how -- first identify which cells are problematic, and within those cells which outfalls in particular are problematic. And then from that point perhaps, and I'm not sure this is quite the direction we're going, but it's likely, in the feasibility study phase, we would then take that particular outfall and perhaps do a step-out kind of fan shaped sampling approach to see how widespread it is, how widespread the contamination is from the mouth of the outfall. That would be one approach. Again, like I said, we're not quite there, we're not at that remedial design -- remedial action phase yet. We're just kind of collecting all the data and putting it together and trying to figure out what is there and where.

CO-CHAIR HAYES: Going back to that 35 foot level with that high hit of PCBs, we were told by -- that you had interviewed, I think, Godsey -- Dave Godsey when he worked for the Navy told us that you had interviewed the dredging -- that you, yourself, even maybe knew the dredging protocol, that you had dredged to that depth to minus 38, that everything was actually clean in the river. So -- because there was so much maintenance dredging. So what I'm curious about is how, how this -- how you even detected this, this here. Where did it come from? Did it come out of that outfall maybe during the cleaning of those outfalls, like where that one worker or more than one worker was overcome a few years ago when the cleaning was being done and, you know. And then how could it have gotten down to 35 feet, you know, was it -- these are curious things that would be interesting to know.

MS. DREYER: There's a couple things going on with that 1,180 sample. I might have mentioned it back in, I think, August when it first -- the issue first arose. The 1,180 sample was taken, indeed, at a depth of 35 feet. On the way we went back and looked at the geologist's notes who actually took the core, and he noted in his log that at 29 feet he had hit refusal. He busted through the refusal and continued on, and then eventually grabbed a sample at 35 feet. What that means to us, what it means to hit the refusal at 29 feet, it means -- to us it meant that it was at a depth that was lower than the depth that we had ever historically dredged. Cause typically you would not find refusal had you consistently dredged at that depth. So, I mean, I don't want to speculate, but Myrna you were talking about Native Americans, native chemicals whatever. I'm not saying native Americans --

CO-CHAIR HAYES: I don't think PCBs are native.

CO-CHAIR HAYES: It's not arsenic.

MS. WOCHNICK: Sure, hitting refusal is typically not typical of an area that was dredged like that.

CO-CHAIR HAYES: Refusal could have been --

MR. COFFEY: A filing cabinet.

CO-CHAIR HAYES: -- a filing cabinet, thank you very much. A piece of concrete that got shoved of off of something, fell off a barge somewhere along the way. There's a lot of stuff disposed, especially probably right around -- the base closure maybe was handy to dump something over, I don't know, you know. But you better think about it and give us a pretty good explanation. Not that it was maybe native PCB, that probably won't work.

MS. DREYER: There was actually a description of what the refusal material was, and it was not metallic in nature. He described it as -- and I'm going to -- I don't know if I'm saying this right -- ingenious rock.

MR. COFFEY: Igneous.

MS. DREYER: Igneous, thank you. I'm sorry.

MR. KARR: Pig Latin for Hard Rock.

MR. GODSEY: Marie.

MS. DREYER: Yes, David.

MR. GODSEY: I can elaborate a little bit on the sample. We took the sample as part of the Building 742 investigation. We wanted to see whether or not PCBs from that site had migrated into the strait at the Outfall 22. So we asked the contractor to go out and sample down to what the Navy had dredged in its lifetime, which was minus 35 feet plus a couple feet of overdraft.

CO-CHAIR HAYES: Like 38 or something.

MR. GODSEY: So it was tasked to go down there and dredge minus 37, below mean low water. We went out and sampled actually 33 feet below the sediment layer. And since there's like ten to fifteen feet of water over the sediment, he was actually sampling at a much greater depth than the Navy had ever sampled. He was well into native sediments. Now, we came up with the hit, there was nothing above it, and obviously this is material that the Navy had actually never seen in its own discharges that could have led to the contamination. So we were left basically with speculating as to how the contamination might have gotten to that depth when there was surface at the bottom that was never exposed to Navy contamination that was ongoing.

CO-CHAIR HAYES: Well, I know we have another topic, but maybe what we ought to do, because, I mean, I'm thinking that, you know, did you have some sort of a well or something that you had drilled somewhere and it was going down into some groundwater or some hole down in the great earth down there near China is what you're saying. But it's just -- if you only had that one hit, and it's still PCBs, it's not -- it's not arsenic or some more naturally occurring material.

MR. GODSEY: It's a modern chemical that's derived by human action.

CO-CHAIR HAYES: Yeah. Probably by Navy human action, in fact.

MR. GODSEY: Absolutely. What it probably was the result of is when they were building Dry Dock 4 they had to construct a cason that you can actually dig out to put the dry dock in. To do that they were probably hammering in casons down into the sediment to that depth. Chances are

they dragged a little of the contaminated surface center down to the depth, and we hit upon it at the time when we sampled. So it's an anomaly. It's not really indicative of a general contamination at that point, and it certainly -- there's 30 feet of clean sediments on top of it, so it has to be presented in that light as to whether or not it is, in fact, a threat to any receptors on the surface or in the water around it.

CO-CHAIR HAYES: And also if you're going to dredge to get these cruise ships or whatever, other special ships we're going to be having coming in here anytime soon, you might be dredging and accidentally, you know, stir up a hornet's nest down there is what I'm wondering, maybe not even in our near lifetime, but maybe the next one when --

MR. GODSEY: You couldn't dredge any deeper than the Navy has dredged before, otherwise you threaten the stability of the structures of the piers because they themselves are piers that are resting in the mud, and so if you dredge too close to them and too deeply you undermine their capacity to support the structures above them.

MS. DREYER: Absolutely. And just for comparison, I did want to clarify, the Navy has taken a look at the dredging proposals in front of us as you're referring to a few of them. We've gotten them too. And at least the depth that Allied Defense Recycling is proposing, just to let you -- just to picture this, they will -- the hit of 1,180 is 25 feet deeper than where they want to dredge.

CO-CHAIR HAYES: Okay. Well, we can just go on all night, let's try not to do that. But maybe what you can do, because you said that you were just scratching the surface, so to speak, on this topic, is that this might be a good time to do one of our study sessions, and get into more depth, you know. Somebody buys the pizza or Chinese food or whatever, and we talk about this stuff. Because just telling me that a ship dismantler has a certain, you know, depth that they're going to dredge to and, therefore, we shouldn't worry about a hit of this large of PCBs that's, you know, down there somewhere where people aren't --

MR. COFFEY: No man has gone before.

CO-CHAIR HAYES: Yeah, this is just -- let's get it resolved in a more eloquent way than, you know, just this sort of sparring and this lack of information or misinformation or whatever. That's what we were hoping to see is a data gap completion, you know, on not just this parcel, but on some of your other parcels as well.

MS. DREYER: Sure, I understand. I actually -- I saw Michael shaking his head, so that might be a consideration in the future.

CO-CHAIR HAYES: Shaking like or nodding?

MS. DREYER: Like yes. Like yes, Nodding.

CO-CHAIR BLOOM: Was I doing this or doing that?

MS. DREYER: I did want to --

(Thereupon occurred simultaneous discussion.)

CO-CHAIR BLOOM: I'm too close to --

MS. DREYER: Michael, if I could, I just want to reemphasize something David Godsey had mentioned earlier. There are two parts to the risk assessment; first, nature and extent of course,

and then the next is risk. And we have to really figure out what the risk is to a sample that's now -- will, may potentially be 25 feet deeper than the dredge limit that ADR intends to dredge to.

CO-CHAIR HAYES: But again, we're not cleaning up for ADR, hello.

CO-CHAIR BLOOM: Okay. We will --

MS. DREYER: It's three, four feet now.

CO-CHAIR HAYES: You don't know what the future holds.

CO-CHAIR BLOOM: We'll go ahead and, as you said, we'll -- I guess that would be the technical focus group. Yeah. So Paula will set up a focus group meeting to do that, look at this more in depth, to talk about.

CO-CHAIR HAYES: Jerry has a comment.

MR. KARR: I just had one question for Ryan. Just pick any figure and help me understand the concentric circles.

MR. WENSINK: Okay.

MR. KARR: Are those, you know, like a boring along various depths along that core?

MR. WENSINK: I'm sorry, I didn't do a good enough job explaining that one when I first started. If you look right here on any one of the figures, you'll see that the depth of the sample, the size of the symbol was varied so that you could see the profile. So that some of the deeper samples had a bigger symbol, so that you could see what color they were underneath the shallower samples.

MR. KARR: Oh, I understand. Is that what these concentric circles are telling me, that each one is a different point along that column?

MR. WENSINK: Yeah, it's a different depth along the exact same core.

MR. KARR: Okay.

MR. WENSINK: Yeah.

CO-CHAIR BLOOM: Okay. Thank you, Ryan.

MR. WENSINK: Thank you.

CO-CHAIR BLOOM: Thanks, Marie. Neal.

MR. COFFEY: You're up.

CO-CHAIR BLOOM: And don't say what you normally say by following the Navy.

MR. SILER: Oh, no.

CO-CHAIR BLOOM: Okay.

MR. SILER: I'm definitely saying it, because this has got to be about the third or fourth time this year that the Navy has been a tough act to follow. And all you guys are getting from me is a lump of coal for Christmas, that's it.

CO-CHAIR BLOOM: Well, at least let me introduce you.

CO-CHAIR HAYES: Where did you find the coal?

MR. COFFEY: 34 feet down.

CO-CHAIR BLOOM: 34 feet down.

MR. COFFEY: That's right.

CO-CHAIR BLOOM: All right. Neal Siler with Lennar Mare Island will present Installation Restoration Site 15, the Feasibility Study/ Remedial Action Plan in Investigation Area C-1.

III. PRESENTATION: *Installation Restoration (IR) Site 15 Feasibility Study/ Remedial Action Plan (FS/RAP), Investigation Area (IA) C1 Update*
Presentation by Mr. Neal Siler, Lennar Mare Island

MR. SILER: Okay. What I'm going to talk about tonight is one of the last of the large sites that we tried to get through in 2009. And we're hoping to get this in front of the public and do a public presentation sometime in early 2010, hopefully in January sometime. But what they're going to do when they actually get to the public presentation portion of the submission, they're going to talk about the history of the site, the previous investigations. You can see here what they're going to talk about. I'm not going to talk about all these things tonight because there just isn't enough time. So, I'm going to --

CO-CHAIR HAYES: Plus, we've already talked about this site a bunch of times.

MR. SILER: A number of times we have, yes, correct. So we're giving you an early preview tonight of something that's going to be coming up in the near future. What I'm going to concentrate on is the history of the site, some of the features of the site that tell how the contamination got there, and concentrate on the remedial alternatives, and also the proposed remedy for the site.

Okay. Just so you know where IR-15 is located. It's located in the southeast corner of Investigation Area C1, which is in the northwest portion of the Eastern Early Transfer Parcel. This site is essentially -- and I'll take a look at the next slide -- covers an area of about four acres. As you can see, it's an area that's heavily industrialized in the past, covered by buildings and asphalt. The main components of the site are this building right here, Building 225, which was actually constructed in 1918. This was a place -- and I'll show you on a slide that comes up a little bit later -- where they actually did cleaning of metal parts in preparation for chromium electroplating. And there were a number of underground storage tanks [USTs]. There was a chromic acid storage tank.

You can see right over here UST 225. You can see the dip tanks were here. I'll show you a slide that shows you the dip tanks a little bit later. There was another underground storage tank here, 225B and 225. Okay. Just to get you back in the site features. This is a view of the site from the strait looking back. This is Building 273 right here. 225 is this building right in the back right here. This is Building 101. But the majority of the activity and the remediation is going to occur out in this area out here between the strait itself and Building 273.

So, as I was mentioning, this is Building 225 here. You take a look in here, you have these little purple boxes. This is where these dip tanks were located, these chlorinated solvent tanks. In here, this is going further back into Building 225. This is where this chrome dip tank was located right here. And these electroplating activities and the associated underground storage tanks 225 and 225B.

And then also, I should note, that if we went back and looked at the slide -- let me go back one more. In Building 101 over here, they actually used this as a pipe cleaning facility and they cleaned pipes in here. So this potentially could be another source that we're seeing of the chlorinated solvents that we're seeing in the groundwater that goes out from this area right here in IR 15.

Here's a photograph of inside Building 225. You just get an idea, a feel for it, what it looks like. And then investigations have been ongoing at this facility since 1983 to the present. And there's so many investigations, there's about fifteen of them, and you're going to see some slides a little bit later. I'll show you some of the actions that took place here. But there was an initial assessment study back in 1983. In 1986 and '87 there were investigations around the underground storage tanks. There was removal of underground storage tank 225B, and that was a hexavalent chromic acid tank, overflow tank. In the nineties, early nineties there was a remedial investigation at this site. In '93 and '94 in Building 225, which you saw, there was a removal action for UST 225 and the floor drains. In 2002 and 2003 there was additional soil and groundwater sampling to try to characterize the nature and extent of contamination in both the soil and groundwater. In 2004 there was additional investigations in Buildings 225 and Building 101.

One of the other things -- you'll see it later on a slide -- there actually was a cooling water loop where they actually had a loop where they had an intake for water to cool the old power plant, which is Building 121. And because there's a lot of underground utilities in this area, one of the concerns was that some of this hexavalent chromium and potentially these chlorinated solvents got into this cooling loop with the backfill around it. But we did an investigation and it doesn't appear to be that that was the case. We did quite a bit of that.

And in 2008 there was a lot of pilot tests to see if the potential remedy could actually be feasible at this site, a lot of slug tests, a lot of insulation of a lot of wells. And that one slide I showed you -- and I'll go back to it real quick here -- it's this slide right here. If you go out there now, you probably can't go, you know, eight feet in any direction without finding a boring or a well out here. There's probably about sixty to seventy borings out in this location if you take a look at it.

So we've really characterized this. Characterized it in the artificial fill that underlies this area, the natural sediments underlying the area, and also the natural bedrock that's below that.

So just to give you an idea of some of the photographs of some of these investigations. In '83 the Navy began. '93, '94 they started cleaning the building, removing the source areas, overexcavating some of the tanks. There's UST 225, the chrome dip tank, right here. Here they were actually cleaning up some of the Building 225 floor drains. Here's in 2003 where CH2M Hill did some further excavation, removed some additional contaminated material around the floor drains in Building 225. Here again in 2004, here's the chrome overflow dip tank, UST 225B. Again some additional overexcavation, remove some additional contaminated soil around the tanks.

And then as we go forward and try to come up with a plan, this area has an interesting geology, hydrogeology. There are three principal units, I've already mentioned them to you. There's the artificial fill, there's the unconsolidated natural deposit, and then there's the bedrock. The unconsolidated fill -- as you can see the bedrock here as it falls off toward the strait, this is the strait out here -- it ranges anywhere from a foot back in the area of Building 225 up to about a

thickness of about 25 feet as you get out to the strait. These are the natural sediments, unconsolidated sediments right down here. You can see those. And then here's the bedrock right here. There's generally kind of a weathered interface as you go down toward the strait, you come into solid bedrock down here. It's sandstone, silt stone. The fill tends to be silt and clays. Has a lot of brick, has a lot of metal debris. You can find old anchor chains in there, you know, Aunt Sophie's old washing machine, file cabinets. Anything you can think of, you can find in there.

Now, one of the problems with this area is that this is the quay wall right here, and you can see there's a lot of underground utilities -- it's very, very complex -- that go actually, you know, from east to west here and north to south. And then one of the major things that we really need to consider, this is the dead man tieback for the quay wall, and this is the quay wall right here. So you can't really do anything to disrupt these without having some real structural issues with the quay wall at that point.

MR. FARLEY: And Neal, there are multiple of those tiebacks that go perpendicular to the strait, so it's not just one; right?

MR. SILER: Yeah. I'll show you the plan, and there are some tiebacks, and I can't tell you about how many feet apart they are, but there are just numerous tiebacks as you go that actually hold that quay wall back from actually losing its structural integrity. Okay.

The main constituents of concern that we're looking at here, there's some in soil and some in groundwater. In soil we have some metals. Those metals tend to be arsenic, sporadic localized. We have some cadmium that's probably associated with the past electroplating activities at the site. We've got total and hexavalent chromium, again probably attributable to the past activities, and some leaks from the underground storage tanks and associated sumps and piping. And then lead. And that tends to be in the fill materials, at least concentrated in the fill materials where we see the highest concentrations. And it may or may not be related to the past operations at the electroplating facility. And then we also have some chlorinated solvents, volatile chlorinated organic compounds. And the one that we usually see here underneath the floor drains in Building 225 is trichloroethene or TCE. So we have that in the soil also. And then, accordingly, we have that, what I usually call the Silicon Valley cocktail, and I don't know how it got up here to Mare Island, but it's obviously up here at Mare Island.

Usually things like tetrachloroethene, which is PCE, trichlorethene which is TCE, one two dichloroethene, 1,2-DCE goes down to vinyl chloride at that point. So you see a little bit of everything. What those are actually a natural progression. The PCE is usually the solvent that they use, and as it breaks down, it breaks down and you have the chlorine stripped off all the time. PCE is perchloroethylene or tetrachloroethene, so you've got four chlorines. Trichloroethene, you obviously have three. Dichloroethene you have two. So you're stripping off the chlorines as it goes down, as it degrades in the environment.

There's also, because we have these volatile organic compounds, and the principal transport mechanism is volatilization, there's a potential for indoor air in this area so, you know, we want to look at soil vapor, want to look at risks to the future occupants of Buildings 225, 273, and also Building 101. Now, in groundwater, because we had this and they had those -- that chromic acid tank, we do have hexavalent chromium in the groundwater. But as it actually moved toward the strait it tends to become trivalent or actually trivalent chromium, and it comes into a more stable state, so it's not as large of an issue for us from the contamination standpoint as the hexavalent chromium is. That's related to the historic chromic acid leaks or releases from UST 225.

We have a number of wells. There's about 21 monitoring wells that are right along the strait, andI'll show you some pictures as we go on. We've never seen an exceedance of hexavalent chromium in any one of those 21 monitoring wells as long as we've been monitoring out here.

And then, again, we also have these chlorinated solvents, you know. It moves toward the strait. It tends to be in the lower section of the unconsolidated natural deposits. It's right along that interface with the bedrock where we see a lot of the higher concentrations. The source, again, is the former floor drains in Building 225. That seems to be the primary source of the chlorinated solvents that we're seeing in the environment.

So our objectives, you can see 'em right up here. We want to demonstrate that the concentrations of tetrachloroethene, and its breakdown products i.e. vinyl chloride, in groundwater do not pose an unacceptable risk to human health and the environment. We want to demonstrate that concentrations of lead and soil do not pose an unacceptable risk to human health and the environment. We want to maintain those site groundwater concentrations of TCE and those breakdown products so that they do not unacceptably affect the current and future beneficial use of the water coming from the -- the groundwater coming from Mare Island for fresh water replenishment into the strait. We want to monitor the natural attenuation of hexavalent chlor -- chromium -- excuse me -- to make sure that it does not continue or become a risk to human health and the environment as the water gets to the strait. And we want to restore the site, to the extent necessary, to support the existing and the future commercial industrial reuse of this site.

So I've just put a few of these up here just so you can take a look and see what the maximum concentrations are that we're seeing in the soil and groundwater. Again, the principal constituent here is lead in the soil. We do have some TCE, but you can really see where the tetrachloroethene, trichlorethene, dichloroethene, and vinyl chloride, and the cleanup goals as you go along here. Now, when we started this process, this lead number right here, eight hundred [milligrams per kilogram], that was the regional screening level. It's probably going to come down lower here. And there's some -- we're talking to the regulatory agencies about this, there's a new cleanup level or CHHSL, it's called the California Human Health Screening Level of about 320, and that may ultimately be the cleanup level that we actually had for lead at this site.

So what this tells you is a little bit about the extent of the PCE plume. You'll see this is the outer extent. And this was at 120 microgram per liter or part per billion cleanup level. You can see it right here.

Okay. So what we looked at in the summary of the remedial alternatives. We looked at no action. We looked at institutional controls. And then the other things that we looked at were basically a variety of excavation, monitored natural attenuation, enhanced in situ bioremediation. I have here a permeable reactive barrier, that should be a passive reactive barrier. That's my mistake up there, just so you know.

CO-CHAIR HAYES: That you make mistakes.

MR. SILER: I make mistakes, Myrna, just like all human beings.

MR. FARLEY: I think that's my mistake, but nevertheless.

MR. COFFEY: We hold you to a higher standard.

MR. SILER: That's right. That's right. And then excavation. So as we went through the analysis of this, here it just gives you a little bit of a -- kind of a chart just looking at the analysis of it. You can see that these two, alternative number six which is monitored natural attenuation of the hexavalent chromium plume, you have enhanced in situ bioremediation, and you have this downgradient passive reactive barrier that would put in, that's one of the ones that most meets -- that meets the criteria. And then if you look at alternative seven where you have excavation, monitored natural attenuation, removal of some of the material, and then you have this downgradient passive reactive barrier.

As you can obviously see, the cost of this one is about $2 million less than this one. And this excavation and removal downgradient would be a real problem because there is some of this in the sediments as you go downgradient because of all the underground utilities and then trying to get into the tieback. So what the proposed remedy is alternative number six here.

So a description of the alternative. There will be removal of shallow soil that have offending metal concentrations that exceed the proposed cleanup goals in Building 225. Those will be excavated and disposed of off-site. The ground water contaminated with the hexavalent chromium and the groundwater contaminated with the chlorinated volatile organic compounds that will be treated with monitored natural attenuation. In addition to that, we're going to have this downgradient passive reactive barrier in the plume core area. We're also going to have enhanced in situ bioremediation, both upgradient of the passive reactive barrier, and also downgradient of the passive reactive barrier, to deal with some hot spots that are still there. And then you'd have -- a site specific land use covenant would be recorded and that really would -- you could not disrupt this barrier, or you also could not upset any of the monitoring well network that would be in place in that area, because you're going to have to monitor groundwater for a long time after this gets taken care of. If you look at the next two slides, you're going to see an in plan view, and you're also going to see a cross-sectional view of the proposed remedy. So here is the passive reactive barrier right here. We're going to actually do some enhanced bioremediation, actually upgradient in a hot spot.

CO-CHAIR HAYES: When you say passive, whatever it was, barrier; what is that?

MR. COFFEY: Passive reactive.

CO-CHAIR HAYES: What is that material or how are you going to install it or whatever?

MR. SILER: It's zero valent iron. And so what happens is the bacteria that we were counting on to actually break down these compounds, they actually use this as a substrate.

MR. FARLEY: Simplistically it will be in a trench. So we'll dig a trench, put the stuff in in the saturated zone, and as the water moves through, there's a reaction between the iron, the bacteria, and the CVOC.

MR. SILER: And probably what we're going to have to do is actually dig this thing in casons, because we're going to have to dig one, install part of it, dig another cason, install it, dig another cason, and move it down, because of the fact we've got all these underground utilities, and we've got the tiebacks that we have to deal with. So here's the passive reactive barrier. Here is the upgradient enhanced in situ bioremediation. And this area down gradient, this is also the downgradient enhanced bioremediation area. And if you look at it in the cross-sectional view --

MS. WELLS: I have a question.

MR. SILER: Sure, Elizabeth.

MS. WELLS: The figure says that the green upgradient is a hot spot thermal remediation area.

MR. SILER: Yeah, that's not right. It's enhanced bioremediation is what it is. So if you look at it in cross-section, here's again the passive reactive barrier, here's the upgradient hot spot treatment area, here's the downgradient hot spot treatment area.

CO-CHAIR HAYES: Didn't you already do a pilot on this?

MR. SILER: We have done that.

CO-CHAIR HAYES: Why didn't you mention that maybe tonight, or is that just one of the too much to present?

MR. SILER: That's one of the, you know, one of the investigations that had been done.

CO-CHAIR HAYES: Right.

MR. SILER: What the pilot study did is we looked at a number of different substrates, they looked at molasses, they looked at certain vegetable oils --

CO-CHAIR HAYES: High fructose corn syrup.

MR. SILER: High fructose corn syrup.

CO-CHAIR HAYES: Pure cane sugar.

MR. QUIGLEY: From Hawaii.

MR. SILER: And they wanted to see which would actually work better here to break down, use the substrate by the bacteria to break down the chlorinated VOCs.

CO-CHAIR HAYES: And then you had also some concerns or issues with something converting to poly vinyl chloride.

MR. SILER: Vinyl chloride.

CO-CHAIR HAYES: Vinyl chloride.

MR. SILER: Yeah, it's vinyl chloride.

CO-CHAIR HAYES: And can you just --

MR. SILER: What's interesting is that usually that train from PCE to TCE to DCE, they have similar toxicity. When you get to vinyl chloride, actually the toxicity goes up a little bit so it's a little bit -- and plus the reaction to break it down changes. You have this reduction to break it down when you go from PCE to TCE to DCE. When you get to the vinyl chloride stage, that's an anaerobic process, you really have an aerobic process, so you have to have oxygen there. Now, it appears from everything that we've seen, and the empirical data, as you get closer to the strait the water gets much more oxygenated and tends to break down the VOC, I mean the vinyl chloride.

MR. FARLEY: One of the ways we can tell is that we're seeing ethene, which is actually the last step in the whole process. We see the ethene concentrations going up; so the vinyl chloride going down, the ethene going up. It's more of what Neal's talking about in the next sequence.

CO-CHAIR HAYES: So that pilot that you did was able to help you zero in on an alternative that would become your preferred alternative?

MR. SILER: Part of it that's enhanced in situ bioremediation. Part of it, even as we looked at that we were seeing that it wasn't breaking everything down enough, so that's why we have this polish, okay, with the downgradient passive reactive barrier that helps break it down also.

So coming forward with some of the key milestones. Right now the regulatory agencies have a draft of the public review FS/RAP. We're hoping to get agency comments this month sometime so we can actually a schedule a public comment period starting sometime in January. And get this thing finalized in February to March. And then be able to implement this remedy starting in late spring, summer of 2010. And then once we do that, groundwater monitoring will go on from that point on. So with that, anybody has any questions, please feel free to ask them.

CO-CHAIR HAYES: Janet wants pie. I think the only thing that I might suggest is that I know that primarily, up until now my perception has been that the environmental cleanup has been focused on dig and haul, and -- or dig and bury, haul and bury like at the landfill. You mentioned tonight monitored natural attenuation and in situ bioremediation. And those are processes that are interesting, I think, to the public, and possibly not so well understood. And often have asked, well, why don't you just do an in situ? You'll say, oh, it takes too long or this or that. I think that would be another interesting topic for a technical focus group to discuss, you know, when you have chosen, either economically or technically, to use those, and how they work. I think those are very interesting processes, and merit our better understanding of them in a little bit different venue.

MR. SILER: Certainly. Anyone else? Chris?

CO-CHAIR HAYES: I might just add, especially since these are things that are going to be taking place over a long period of time, you may actually be gone and they'll still be doing their little thing. And I think it's going to be important for the public to understand why you would, you know, kind of leave stuff behind.

MR. SILER: Sure.

MR. RASMUSSEN: Kind of on the same general subject, is there a timeframe over which one might expect, based on your experience doing this sort of work over a period of many years, that you would expect this sort of material to just -- this problem to just sort of go away through the natural forces that you expect to be working here?

MR. SILER: Well, some things -- like -- depends on the environment they get that they get into. You know, if you went out and you tried to sample in the strait for PCE, TCE, DCE, vinyl chloride, anything, you could take 50 million samples and you'd never detect it. And the reason for that is because you've got such a high dilution factor. But I can tell you it's there and it's getting to the strait. So we have to do something to make sure and stop that. Now, potentially if you give it enough time you probably would break it down. That's not something that's reasonable though, and we don't want to leave things, you know, that take, you know, hundreds of years or fifty years to break down. We want to do something to see if we can do that in a much more reasonable timeframe. But eventually if you probably left it alone, you removed the source, it would probably break down either, you know, one of the ways it would break down would just be by dilution, just like I said, or any kind of a natural process, whether that be mineral or biotic or abiotic, it probably would break down.

MR. FARLEY: Chris, if I could add one thing, just I think Neal's got a pretty good handle on the site conditions and such. But there's one particular example that I think is pretty amazing. There's a well that's, without giving all the name, it's Well 106. And that well had on the order of 100,000 micrograms per liter of PCE in it. And we did some most recent tests and it went to non-detect. And that is not a function of dilution, because you could see the daughter products popping up. But it's pretty dramatic, it works pretty well. The -- even though the remedy is not selected, the pilot test -- the testing that we have done is a -- it shows that that technology works pretty well. And the way I look at it -- and the engineers in the room may not look at it the same -- but the passive reactive barrier, as Neal was talking about, is sort of a polisher. But we've got to get the concentrations upgradient of that wall down sufficiently so that the passive reactive barrier works properly. If we had too high of concentrations it would end up going through that barrier and it wouldn't work. And there's a whole bunch of pH changes and a whole bunch of other things that go on. But that's kind of the step function between the ISB, the in situ bioremediation and the passive reactive barrier. They're really working in or will work in concert. And obviously the goal is to get the system working quickly so that all that's left to be done is do some monitoring to show that the system on the five year review cycle is working, if the remedy is the right -- is the selected remedy. Myrna, we can add some of that discussion to the focus group.

MS. WOCHNICK: We've used treatments like this at other bases. And depending on the concentrations and the amount of substrate that you use, you can knock the concentrations down very quickly. And usually you do a couple applications, and within a year to two years it's either non-detect or very low concentrations. So, depending on the concentrations and how much their design includes for substrate, you could see a pretty significant reduction pretty quickly. So you're not looking at fifty years or --

MR. RASMUSSEN: That's the idea, exactly the kind of answer I was looking for based on the timeframe, what you've seen before.

MR. SILER: I can't guarantee you it's going to be one or two years, you know. It's not going to be overnight. It's going to take some time period, and we'll know better as we actually start putting it, installing it, and actually start monitoring it, how fast the concentrations are going to go down. So it may go down in one or two years, it may take five years, it may take ten years, but hopefully it will do that a lot faster than five or ten years.

MR. FARLEY: The other thing I'd like to add is that since there's a -- again, all I'm referring to and talking about, it all assumes that this is the remedy. The remedy hasn't been selected. We still have to go through the public comment process. But in the event that it is, one of the nice things about the way the project has been structured so far is we have a number of injections that will be coming up if it's the remedy, but we've also done some previous injections through the pilot testing, and so we have a time period between some of those earlier injections, and now we have a time period after that before we do the next series of injections that will give us some idea about things like rebound and those types of things, what kind of monitoring do we need to do, all of those kind of things can be factored into the design, not just the feasibility study, but the design so that we have the right amount of substrate. Do we have too much? Is the pH going down? What are the other things that are going on. So there's some real value in having that time period. And our hope is that with that information we can make the agencies comfortable that the system is working properly.

CO-CHAIR HAYES: And the public?

MR. FARLEY: And the public, of course. And, of course, the RAB.

MR. SILER: Do you have any other questions? Then, no, thank you all very much. Happy holidays. Let's eat some pie, like Janet said.

CO-CHAIR BLOOM: One minute.

MR. SILER: Hang on, hang on -- except for Marie, she gets a lump of coal.

MR. FARLEY: Looks like you're getting a lump of coal now.

CO-CHAIR BLOOM: Thank you, Neal. Next is our first public comment period. Is there any public comment?

(No response.)

CO-CHAIR BLOOM: Now we can eat pie. And thank you, Jim, I believe, Jim, for the pie, and maybe your daughter, I'm not sure. But at least you, Jim, thank you.

(Thereupon there was a brief recess.)

IV. ADMINISTRATIVE BUSINESS (Myrna Hayes and Michael Bloom)

CO-CHAIR BLOOM: All right. Next is administrative business and announcements.I would say if you have any comments on the October minutes, please get them to myself and/or Myrna. Myrna, do you have any other announcements?

(Shaking head.)

CO-CHAIR BLOOM: Nope. All right. We're going to move into our focus group reports. And the community, Wendell.

V. FOCUS GROUP REPORTS

a) Community (Wendell Quigley)

MR. QUIGLEY: I have nothing to report. The pie is excellent.

MR. COFFEY: He did his report on TV.

CHAIR BLOOM: Okay. Jerry, natural resources.

b) Natural Resources (Jerry Karr)

MR. KARR: Happy holidays.

CO-CHAIR BLOOM: Thank you, same to you. All right. Paula, technical.

c) Technical (Paula Tygielski)

MS. TYGIELSKI: First of all, I'd like to thank you very much for the Mare Island tour.

MR. COFFEY: Yes.

MS. TYGIELSKI: Yes. It was very informative.

CO-CHAIR BLOOM: Thank you.

MS. TYGIELSKI: And I'd also like to say it's good to see Jerry looking healthy.

(Applause.)

MR. KARR: It's good to be seen.

MR. COFFEY: Unless you're Tiger Woods.

MS. TYGIELSKI: And a couple of times during the presentations in the first half of our meeting it was talked about we should have technical focus group meetings. And watch your e-mail, because I think Michael is planning to send around prospective dates. And we'll have two of them, one for the offshore, you know, to discuss the offshore measurements, and the other one to discuss the in situ treatments.

d) City Report (Gil Hollingsworth)

CO-CHAIR BLOOM: Paula and I talked at the break trying to get that going. Okay. Next, Gil is missing with the city report. So we will move on to Steve, Lennar update.

e) Lennar Update (Steve Farley)

MR. FARLEY: Thank you, Michael. I have a handout over on the table, grab one before you leave tonight. If you look at the main part of the figure you'll see a number of labels in blue, a number of them in orange. Those represent sites, PCB sites are in blue, the orange boxes and labels are UST sites. And those are sites that we are currently working on either to do remediation, write reports, groundwater monitoring, etcetera. So there's a number of sort of localized things that we're working on right now. In addition to that, there's an area referred to as B.2-1 if you look in the -- sort of the upper left portion of the figure. That's an area where we're currently preparing an implementation report trying to get through the process to get regulatory closure and certification that we've completed all the work in that portion of IA-B.2. In the upper right corner there's pump station --

CO-CHAIR HAYES: Is that also known as the Crane Test Area?

MR. FARLEY: B.1 is. If you look at the little sort of chair shaped thing, that's B.1. So B.1 and B.2 are the two portions of what was IA B, and then we broke B.2 into 1 and 2. And then the next step is to break B.2-2 into A, B, and C -- no, just kidding.

(Laughter.)

MR. FARLEY: But the reason, you know -- the laughter is for a good reason. The reason for doing this is to get through the regulatory process for some of the simpler areas, and get that -- those areas closed out so that the areas can be redeveloped as the need arises. Otherwise the last -- the last remaining issue holds up 99 percent of the sites. So -- and the agencies have been good about supporting that and helping us work through all those steps.

CO-CHAIR HAYES: I was just trying to figure out where you were talking about.

MR. FARLEY: Which one, B.2-1?

CO-CHAIR HAYES: Whatever.

MR. FARLEY: Well, B.2-1, if you look where the big black --

CO-CHAIR HAYES: Right here?

MR. FARLEY: Yeah. So that area that's outlined in purple is B.2-1. And that's the area where we are writing the implementation report. B.2-2, which is the other remaining part of IA B, that's something that we're still working on.

CO-CHAIR HAYES: B.2-2.

MR. FARLEY: That's not there. And then in addition, up in the upper right hand corner there's a couple of blue dots, and a couple labels that say IW Pump Station 4, that's Industrial Wastewater Pump Station 4. And then next to that is the T2 Oil Water Separator. Those are areas where we've completed some work, we've briefed the agencies, they've requested some additional information, we've provided that, we're waiting for some comments now to go ahead and determine whether or not we can propose closure for that site.

The last two things are the two photos. In the upper left corner, that building in the center is Building 461. That's a location where we've finished up some design documents and we're getting ready to proceed with the actual remediation. Building 461, I'm sure a lot of folks here remember, 461 is the site where there's an old battery shop, and there's a bunch of battery acid precipitate and lead contaminated soil underneath the building, so we're going to remove that. And then the last thing is the area that we lovingly refer to as the Triangle, upper right photo, those are Dry Docks 1 and 2. The area in between those dry docks and the strait we commonly refer to as the Triangle. It's an area where we're going to go in and cap some lead contaminated soil that's across the Triangle. So those are the highlights. Anybody have any questions, I'd be happy to entertain them.

MR. COFFEY: I think I see the RAB tour on the micro bus.

MR. QUIGLEY: I thought they were going to remove that sub.

MR. FARLEY: Neal might know. Isn't the city moving the --

MR. QUIGLEY: Is that going to be up here by this Pump Station 4?

MR. SILER: No. It's actually planned to be moved on Saturday into the Building Way Number 2, which is the southern building way.

MR. COFFEY: Why?

MR. FARLEY: Because of the work we're going to do on the triangle.

MR. COFFEY: Well, yeah, but is it going to stay there?

MR. SILER: That I don't know. That right now is a temporary location, to my knowledge. It may stay there or it may be moved. It depends on the Mare Island Historic Park Foundation, they're getting a plan to find out and let us know exactly what they want to do.

CO-CHAIR HAYES: Good luck. It's being moved from the Triangle because we have to do remediation in the triangle, so they're moving it this Saturday.

CO-CHAIR BLOOM: Are you --

MR. FARLEY: I'm done.

CO-CHAIR BLOOM: Thank you, Steve. Cris, Weston update.

f) Weston Update (Cris Jespersen)

MR. JESPERSEN: Thank you, Michael. First up we'll have an update on the Sanitary Sewage Treatment Plant Outfall. And we just awarded a subcontract for removal of 300 cubic yards of mercury contaminated sediment from the SSTP Outfall, which is located just off the western shoreline of Mare Island. Right now the work is planned to occur in late December. We're going to utilize a three day period when the tides are high enough to access the site. And currently we've got concurrence to do this work from the National Marine Fisheries Agency and the Bay Conservation Development Commission to do the dredging, and we're still waiting on final concurrence from the Army Corps of Engineers, but we expect to have that shortly.

Next up is an update on the Investigation Area H1 containment cap. We've begun the start of geosynthetic material installation for the remaining twenty acres that are within the Investigation Area H1 Containment Area. That started in mid-November and is continuing right now. The installation of the geosynthetic materials and the final soil cover for the cap is progressing from the west to the east across the remaining fill area. Petroleum impacted soils that we've been removing from the Defense Reutilization and Marketing Office, or the DRMO and vicinity property just east of Investigation Area H1 is being consolidated as subgrade material, which would be below the geosynthetic material. And the excavation and consolidation of the remaining impacted soil is right now expected to be completed by the 12th of December, weather permitting, I guess we'll say. And you can actually see the photo there on the left hand column of the geosynthetic subcontractor.

CO-CHAIR HAYES: It looks like a deep sea; doesn't it?

MR. JESPERSEN: It does, especially with the nice sun and the blue sky. Next up is an update on investigation -- or excuse me -- IR 05 soil excavation. Right now we've removed about 15,000 cubic yards of soil that are above the site ecological risk criteria. And we have excavated this material from IR-05 and consolidated it also within the remaining portion of Investigation Area H1 cap. And we did that after this area was checked with magnetometers and identified any magnetic anomalies. The anomalies were removed by our UXO technicians. And based on post excavation sampling, right now all the excavated areas meet with the site cleanup criteria.

And you can see the figure there on the right hand column showing some of the areas we've been investigating. And it's also shown on the figure below you can see where three items that are identified by yellow dots were located. And some munitions items that still contained energetic material which are indicated by red triangles were located within or near berms adjacent to the area that we're excavating, and also in the tidal area that we hadn't previously done a geophysical survey on due to standing water in the area. So we are planning on investigating the remaining portions of the berms, and they'll also be removed as well.

And finally, just an update on the truck traffic on the site, and the volume of material we've been excavating from various sites. During the month of November we had approximately 4,900 truckloads of clean imported fill soil that were delivered to the DRMO site and the vicinity for use in backfilling the sites that we've been excavating. An additional 2,500 truckloads of clean, imported soil were delivered for the engineered soil cap cover over in Investigation Area H1. And each truckload contains about fourteen cubic yards of material, so you can see that that's a relatively large volume of material. In addition to that, we've been using ten offroad haul trucks that load 40 tons of soil each to take material from the various areas that we've been excavating and move them to the H1 Containment Area. And right now to date we have moved a total of

200,000 cubic yards, and consolidated them from the paint waste area, IR-05, at the DRMO areas under the Area H1 containment cap. And that's it for us. I'll answer any questions if I can.

CO-CHAIR HAYES: When you -- let's see. The remaining portion of the berms will be removed and investigated. What were the purpose of the berms? Will they -- will you rebuild them or will that soil be removed that the berms were built with? And what will be the final kind of grade or purpose of IR-05?

MR. JESPERSEN: I'll bounce that off to Dwight, if he doesn't mind.

MR. GEMAR: Well, I'm not really sure, Myrna, what the purpose of the berms were other than at some point in time, you know, they decided to make this area to the left kind of a tidal -- more of a tidal area, and then everything else more of a muted tidal area. So I think the plan right now is once we take the berm apart, there will still be a tidal area in an upland area. I don't think we're going to put the berm back because it doesn't really serve much of a purpose really, because there is an elevation change between the down -- or the tidal and the upland. So I think we'll just kind of spread it out, smooth it off and, you know, I think the areas will maintain their current configuration as far as tidal goes and upland goes.

CO-CHAIR HAYES: So they'll just be -- they'll just be used to make the final grade?

MR. GEMAR: Yeah, I think. Yeah.

CO-CHAIR HAYES: And then the only other question I had on these, on this truck traffic, you have -- your flashing signs say December 30th. You think you'll hit that timeline, weather permitting?

MR. GEMAR: Weather permitting I think we can still make that. So we're hoping for the forecasters to be wrong for next week.

CO-CHAIR HAYES: Sure. Sure.

MR. GEMAR: But, we'll see. We are focusing our backfilling activities on Azuar itself so that we can bring that up to grade as soon as possible. So I'm hoping that by the week after next we can actually be putting in the base rock and getting prepared to place asphalt.

CO-CHAIR HAYES: I saw your equipment working last night on the Paint Waste Area, do you have anything to report on that since our --

MR. GEMAR: The Navy.

CO-CHAIR HAYES: Oh, the Navy's going to do that, all right. And then, can you tell me the difference between fourteen cubic yards and 40 tons?

MR. GEMAR: 40 tons will hold about twenty to 22 yards, so the offroad trucks haul about 50 percent more than the over-the-road trucks cause they're very big.

CO-CHAIR HAYES: Yes. All right. Cool.

CO-CHAIR BLOOM: All right. Thanks, Dwight and Chris. Next is our regulatory update. Janet.

g) Regulatory Agency Update (Janet Naito, Paisha Jorgensen, Carolyn D'Almeida)

MS. NAITO: What happened to the Navy update?

CO-CHAIR BLOOM: We're next after you.

MS. NAITO: I have nothing to report.

CO-CHAIR HAYES: You do nothing.

MS. NAITO: I do nothing -- no, they keep me busy, it's just they each cover what I've been doing in their discussions.

CO-CHAIR BLOOM: Water Board, Elizabeth.

MS. WELLS: I have nothing to report.

CO-CHAIR HAYES: We might have to give you guys a reporting class on how to report.

MR. FARLEY: We'll wait for your report.

MR. COFFEY: Chip Gribble used to take twenty minutes on his own.

MS. NAITO: If you really want I can go ask him.

(Thereupon occurred simultaneous discussion.)

CO-CHAIR BLOOM: Okay. And Carolyn has nothing to report, she's not here. Okay. So we'll move --

CO-CHAIR HAYES: Well, what about Eric?

MR. SIMON: I already declined to report.

CO-CHAIR BLOOM: Sorry, Eric. Okay. We'll move into our co-chair report. Would you like me to go first?

CO-CHAIR HAYES: Uh-huh.

VI. CO-CHAIR REPORTS

CO-CHAIR BLOOM: Or would you like -- okay. I will go first since I have the mic. So thank you, Paula, for mentioning the RAB tour. There's a nice little group shot picture that was taken at the end of the tour. It's actually better larger, but we, you know, put it in there as it is.

MR. COFFEY: There were some munchkins involved too.

CO-CHAIR BLOOM: Yeah, there is, there were.

CO-CHAIR HAYES: Munchkinettes.

CO-CHAIR BLOOM: I actually want to thank, thank you for all the RAB members and some community members that did come out. I think it was -- first of all, we had really great weather based on the day before. And it was a good tour. I definitely want to thank Neal and Dwight for talking about your sites, as well as my team. Very good tour.

As far as the Paint Waste Area, Myrna, that's the next item up there. We're still continuing there. We're removing munitions and explosives of concern, or MEC, and radiological sources that we found there. As of the date, the total didn't actually change from, I believe, the last time I reported, which was 893 radiological items, and nine MEC items. Excavation in the original footprint has been completed. The excavation was stepped out to the south and east and north to confirm the edge of the debris had been reached. And backfilling is expected to begin in December.

We're continuing to work on the closure of the PCB sites located throughout Mare Island. We've submitted 29 site cleanup plans to EPA. And we've started field work on a majority of the sites, of those 29, so far. We kind of mentioned the DRMO or defense reutilization and marketing office petroleum corrective action plan work that's going on.

A total of 103,500 cubic yards have been removed from the DRMO fenced scrapyard area south of Dump Road, and Parcel XVI Area north of Dump Road. The excavation activities on Azuar Drive were completed, and backfilling and restoration is continuing. We just talked about when Azuar Drive hopefully will be reopened, saying later in December. And we continue. We're continuing on the excavation right now on Dump Road. And that is expected to be completed by mid-December pending weather, and hopefully it stays good. We submitted nine documents since the last RAB meeting.

We submitted our Building 742 EE/CA; Our Site 17 Non-Time Critical Removal Action Work Plan. The Draft RI for the offshore; A few PCB site cleanup plans; The Remedial Investigation/ Feasibility Study for the Marine Corps Firing Range; the final TCRA, Time Critical Removal Action Completion Report at IR-04; And a Draft Petroleum Corrective Action Plan for the Tank Site 993-4.

We did get some comments from DTSC on the tech memo for assessing the MEC over into IA K. We received some comments from them on the Ecological Risk Assessment for F1, and on the Site 17 plan that we issued just recently. The EPA gave us comments on site cleanup plans. And we received, for A-2 from the Water Board, the No Further Action for the petroleum portion of A-2. I'll take any questions if anybody has any.

CO-CHAIR HAYES: This final TCRA, Time Critical Removal Action Completion Report on IR-04, that's the Sandblast Area; what does that mean? I thought you still had work to do on that site that you had just done a removal action, but you've still got stuff to do next to it or something like that in the -- in the wetland area.

CO-CHAIR BLOOM: Yeah, this was just for the on shore, the sandblast grit area. And there was a portion that we did to finalize it. Dwight, can you -- the very last part that we did a few months ago?

MR. GEMAR: Well, the most recent was just the debris removal.

CO-CHAIR BLOOM: That's what I --

MR. GEMAR: I mean this is just documents, Myrna, on what was done on the on-shore part of the site.

CO-CHAIR HAYES: So the offshore is still --

CO-CHAIR BLOOM: Right. Right. Right. This is just what we did, actually began in '07.

CO-CHAIR HAYES: When you just did that huge dig.

CO-CHAIR BLOOM: Right.

MR. GEMAR: Right.

CO-CHAIR HAYES: Right.

CO-CHAIR BLOOM: Okay. I'll turn it over to you.

CO-CHAIR HAYES: Okay. Oh, I want to thank again, Cindy, and her dad, Jim Porterfield, for some great treats. We have been lacking in them the last few months. So thank you very much. And I just have two things to let you know about that we're working on. One is the second Saturday access day is December 12 at the Shoreline Heritage Preserve at the south end of Mare Island. And we're open 9:00 to 5:00 because it's wintertime now. And Kenn Browne has a hike from 9:30 to 12:00. And 2:00 to 3:30 we have live music, violin and recorder, traditional Christmas carols in the bomb magazine.

So we're always trying to do something unusual there to get people's attention. There ought to be some really great acoustics and some good goodies, maybe Jim and Cindy will bring pie there too. So I have flyers, posters, and little things if you'd like to share those with other people. And you can go to our website and pick up that information as well. And for those of you who sponsor or participate in any way in the Flyway Festival, that is coming up February 5 through 7, 2010. And that will be our 14th annual Flyway Festival.

So we'll be looking to the Navy for some access, as we usually do, on some of your property. And working with the city to see if we can use a similar building or the same building, in fact. And so, contact me if you want to be a part of it in any way, from volunteering, to giving some type of a presentation, to leading a tour or, of course, always underwriting generously the festival to keep it free so that the four or 5,000 people who come can enjoy Mare Island. And I think that again reminds me that both of these events are made possible because of the hard work that we've been doing here. If we didn't have this property cleaned up, we wouldn't be able to be using it and providing the public with this opportunity to experience the natural and historic treasures of Mare Island. So thank you again.

CO-CHAIR BLOOM: Thank you, Myrna. Next is public comment period. Is there any public comment?

(No response.)

CO-CHAIR BLOOM: All right. If not, we'll go ahead and adjourn. Happy holidays, everybody. And our next RAB meeting will be the 28th of January.

(Thereupon the foregoing was concluded at 9:09 p.m.)

LIST OF HANDOUTS:

- Presentation Handout – Investigation Area K Offshore Remedial Investigation Update – Navy
- Presentation Handout – Draft for Public Review Installation Restoration Program Site 15 Feasibility Study/ Remedial Action Plan – CH2MHill/ Lennar Mare Island
- Features within the EETP – CH2M Hill/ Lennar Mare Island
- Mare Island RAB Update December 3, 2009 – Weston Solutions
- Navy Monthly Progress Report Former Mare Island Naval Shipyard December 3, 2009