

**MARE ISLAND NAVAL SHIPYARD  
RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES  
HELD THURSDAY, FEBRUARY 26, 2009**

The Restoration Advisory Board (RAB) for former Mare Island Naval Shipyard (MINSY) held its regular meeting on Thursday, February 26, 2009 at the Mare Island Conference Center, 375 G St., Vallejo, California. The meeting started at 7:08 p.m. and adjourned at 8:55 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)
- Kenn Browne
- Michael R. Coffey
- Wendell Quigley
- Paula Tygielski
- Chris Rasmussen

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

- Michael Bloom (Navy Co-Chair)
- Julian Granirer (Navy)
- Hamlet Hamparsumian (Tetra Tech ECI)
- Steve Farley (CH2MHill)
- Dwight Gemar (Weston)
- Cris Jespersen (Weston)
- Gil Hollingsworth (City of Vallejo)
- Carolyn D'Almeida (USEPA)
- Chip Gribble (DTSC)
- Paisha Jorgensen (Water Board)
- John Kaiser (Water Board)
- Neal Siler (Lennar)
- Jim Mitchell (Touro)

**Community Guests in attendance:**

- Dijj Christian
- Russ Farnell
- David Mercury
- Mike Miller
- Richard Perry
- Jim Porterfield
- Lester Rich

**RAB Support from CDM:**

- Carolyn Moore (CDM)
- Doris Bailey (stenographer)
- Wally Neville (audio visual support)

**I. WELCOME AND INTRODUCTIONS**

CO-CHAIR BLOOM: All right, everybody. Welcome to the February 2009 Mare Island RAB meeting. We'll start with introductions. I am Michael Bloom, the Navy Co-Chair and the BRAC Environmental Coordinator.

CO-CHAIR HAYES: I'm Myrna Hayes, and I'm the Community Co-Chair from Vallejo, California.

MR. JORGENSEN: Paisha Jorgensen, I'm with the Water Board.

MR. GRIBBLE: Chip Gribble with DTSC.

MS. D'ALMEIDA: Carolyn d'Almeida with EPA.

MR. JESPERSEN: Cris Jespersen with Weston Solutions.

MR. BROWNE: Kenn Browne with the Solano Group of the Sierra Club.

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

MR. QUIGLEY: Wendell Quigley, RAB member from Mare Island.

MR. HOLLINGSWORTH: Gil Hollingsworth representing the City of Vallejo.

MS. TYGIELSKI: Paula Tygielski from Benicia.

MR. FARLEY: Steve Farley with CH2M Hill.

MR. RASMUSSEN: Chris Rasmussen from Mare Island.

MR. RICH: Les Rich, Historic Ships Memorial at Pacific Square, Battleship Iowa Project.

MR. FARNELL: Russ Farnell, Historic Ships Memorial, Pacific Square, Iowa Project.

MR. MILLER: Mike Miller, Vallejo citizen.

MR. SILER: Neal Siler, Lennar Mare Island.

MR. GEMAR: Dwight Gemar with Weston Solutions.

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

MR. HAMPARSUMIAN: Hamlet Hamparsumian with Tetra Tech.

MR. GRANIRER: Julian Granirer, project manager with the Navy.

MR. MITCHELL: Jim Mitchell, Touro University.

MR. MERCURY: David Mercury, Benicia.

MS. MOORE: Carolyn Moore with CDM.

MS. CHRISTIAN: Well, I feel unconnected tonight so I'm going to say that I have some good comments about the preserve.

CO-CHAIR BLOOM: Okay. Our first presentation will be given by the Navy, Julian Granirer, and also with Hamlet Hamparsumian with Tetra Tech, our consultant. It's going to be on Building 742, the Former Degreasing Plant. We're going to be given an update on the project.

**II. NAVY PRESENTATION:** *Building 742 Former Degreasing Plant – Investigation Area (IA) C2 Update*  
**Presentation by Mr. Julian Granirer, Navy and Mr. Hamlet Hamparsumian, Tetra Tech ECI**

MR. GRANIRER: Hello, my name is Julian Granirer, I'm a new project manager with the Navy, and this is my first Restoration Advisory Board meeting.

MR. QUIGLEY: We can tell him anything.

MR. COFFEY: That's right. Rookie.

MR. GRANIRER: This evening the Navy and with Hamlet Hamparsumian of Tetra Tech, Incorporated as contractor, will present an update on Building 742, Former Degreasing Plant investigative area C-2. I'll describe the site's background, and Hamlet will talk about the recently conducted Engineering Evaluation and Cost Analysis.

MR. QUIGLEY: Fancy.

MR. COFFEY: Do you have pictures of your kids too?

MR. GRANIRER: No, I'll spare you that.

CO-CHAIR HAYES: Your dog?

MR. GRANIRER: This presentation will describe the site background including a summary of previous investigations consisting of a site inspection and the extended inspection that indicated the need for a removal action. The recently conducted Engineering Evaluation and Cost Analysis of Non-Time Critical Removal Action Alternatives. A draft report which was issued in December and is currently being reviewed by regulatory agencies. And a schedule of activities for the path forward. The Former Degreasing Plant was located adjacent to Building 742 on the east side of Mare Island. This site map shows Building 742.

MR. HOLLINGSWORTH: I like the other one.

MR. GRANIRER: The Former Degreasing Plant Manhole D1-C85 and the sewer line associated with this manhole that runs along in front of the building here. Building 742 was constructed in 1941 and used as an ordnance machine shop until 1972. The Former Degreasing Plant also operated in the early 1940's to the 1970's, and was used to clean metal parts generated at the adjacent machine shop. Wastewater from the metal cleaning activities was discharged to four drains connected to two sumps. In addition to these sumps, the Former Degreasing Plant had included two degreasing tank pits and two lye tanks. The tanks were removed and the pits were filled in 1971. The status of the sumps is not known and they may persist below grade.

During the initial site inspection, the source of volatile organic compounds detected in Manhole D1-C85 during a 2001 cleaning of the storm water system was investigated. Historical operations of the Former Degreasing Plant appear to be the primary source of these volatile organic compounds. Manhole D1-C85 was identified as a secondary source of groundwater contamination. To illustrate some of these features in detail, this slide shows the southern edge of Building 742, the location of the Former Degreasing Plant indicated by the lighter colored concrete, a trace of the adjacent sewer system, and Manhole D1-C85. To build upon the initial site investigation, an expanded site investigation was conducted during 2004 and 2005. This was done to evaluate potential sources of volatile organic compounds including the Former Degreasing Plant, and assess whether the storm water system was acting as a conduit for movement of contamination, and confirm presence of previously detected metals and polychlorinated biphenyls. The expanded site investigation concluded volatile organic compounds are present beneath the Former Degreasing Plant and along the nearby storm water system. The Former Degreasing Plant at Building 742 is identified as a potential source of this contamination.

Additionally, other sources of contamination upgradient of the site may also discharge to the storm water system. There were also previous investigations that indicated concentrations of volatile organic compounds greater than action levels were detected in both vapor from within the soil, and groundwater beneath the Former Degreasing Plant. The concentrations of vapor beneath Building 742 are below action levels. Additionally, low concentrations of polychlorinated biphenyls were detected at one location fourteen feet beneath the Former Degreasing Plant, and in the vicinity of Manhole D1-C85. The sources of these polychlorinated biphenyls are thought to be historic discharge to the storm drain and imported fill material. These polychlorinated biphenyls are not related to the use of the Former Degreasing Plant. Petroleum hydrocarbons at concentrations greater than compaction criteria were detected at a single sample of groundwater. These petroleum hydrocarbons are likely from a nearby abandoned Fuel Oil Pipeline and not the Former Degreasing Plant.

As part of the expanded site investigation, a screening level Human Health Risk Assessment was conducted to evaluate potential health risks from contaminants. This assessment concluded that volatile organic compounds, vinyl chloride, is the primary contributor to both cancer and non-cancer health risks from vapors that could emanate from soil and groundwater. In summary, these results indicated the need for a Non-Time Critical Removal Action. To assess removal action alternatives, an Engineering Evaluation and Cost Analysis was recently conducted. Hamlet will now provide an overview of the Engineering Evaluation and Cost Analysis that was recently conducted. Hamlet?

MR. HAMPARSUMIAN: Good evening. My name is Hamlet Hamparsumian, I'm with Tetra Tech ECI, and I'm here to present to you the Engineering Evaluation and Cost Analysis that we recently prepared. The draft of it was submitted to the agencies in December.

The purpose of the Engineering Evaluation and Cost Analysis is basically to evaluate options for addressing the remediation of contaminants at the site. And for that, the first thing that's done is Removal Action Objectives are developed. And in this instance the Removal Action Objectives were to address vapor intrusion concerns associated with volatile organic compounds in groundwater and soil gas at the site, and to minimize the risk to human health posed by inhalation of volatile organic compounds released from the groundwater that could migrate into the indoor air of an occupied structure, and the inhalation of volatile organic compounds from the subsurface soil gas that could migrate into the indoor air of an occupied structure. Various response actions were evaluated. And from those, several of them were identified and were expanded on. And those would include the three alternatives; the no action, excavation and in situ bioremediation of groundwater and the third alternative was excavation and in situ chemical oxidation of groundwater.

In Engineering Evaluation and Cost Analysis the no action alternative is always evaluated as a basis for the evaluation of the other alternatives. Alternatives two and three include excavation of the soils within the footprint of the Building 742 Former Degreasing Plant area, and in the vicinity of the Manhole D1-C85, and the excavation of the crushed storm drain pipeline there, which is about 340 feet long. Groundwater would also be treated in the excavation areas by either in situ bioremediation, which is alternative two, or in situ chemical oxidation which is alternative three. All of these alternatives are evaluated against certain criteria including effectiveness, implementability, and cost. Alternative two -- which is excavation and treatment of the ground water -- via in situ bioremediation, was recommended as the most efficient treatment for

groundwater at the site given current site conditions, contaminant concentration, and removal monitoring levels.

Of course, the recommended alternative is subject to regulatory and public acceptance. The general details of what the recommended alternative includes is excavation within the footprint of the Building 742 former degreaser plant, and the removal of the secondary sources of the contamination that might be some of the infrastructures that might have been left behind excavation and removal of the crushed storm drain pipeline -- again, it's about 340 feet -- excavation and removal of soils adjacent to Manhole D1-C85, treatment of the groundwater in the excavation area by adding oxygen releasing substrate to the water and to the bottom of the excavation and, in addition, monitoring wells would be installed upgradient of the source area. And groundwater samples would be collected and soil gas samples would be collected following remediation activities to monitor the effectiveness of the removal action.

In addition, the grinder foundation sump area near the Former Degreasing Plant will also be inspected, and petroleum hydrocarbon contamination in the groundwater would also be addressed. This picture in the handout, which is an eleven by seventeen figure, kind of shows you the extent of the excavation at this point, the highlighted green areas. This is the footprint of the Former Degreasing Plant. This is where the manhole is located and the extent of the excavation around the manhole. And this is the storm drain pipe which is about 340 feet, starting at this point extending all the way past the manhole to the next manhole which is, I believe, D1-C84. Basically this shows a brief summary of the schedule for the activities that will be conducted. The Draft EE/CA was submitted sometime in December. The Final EE/CA is expected to be submitted sometime in spring of this year.

A thirty day public comment period is planned sometime for spring and summer depending on the finalization of the EE/CA. A Draft Action Memorandum will also be prepared subsequently, and it's expected to be submitted sometime in June of this year, the Final Action Memo in September. The public notice announcement again in late summer. And there will be a work plan that will summarize the activities for this remediation, and that will be submitted sometime in July -- I'm sorry. And we are expecting that the field work will start sometime in the fall. It's pretty much a short duration project, about maybe at the most forty days to complete the work that I currently describe.

CO-CHAIR BLOOM: Any questions?

MR. HAMPARSUMIAN: Any questions?

MS. TYGIELSKI: Please remind us what EE/CA stands for?

MR. HAMPARSUMIAN: EE/CA is Engineering Evaluation and Cost Analysis.

MS. TYGIELSKI: Thank you.

MR. HAMPARSUMIAN: It's like a feasibility study.

MS. TYGIELSKI: Thank you.

MR. HAMPARSUMIAN: Yes.

CO-CHAIR HAYES: I'm not -- I'm trying to keep track here of what's there and what you're doing with it. You have an alternative two, you have groundwater would be treated in the excavation area. So let's just go through this recommended alternative and I'll just ask you some girl questions,

I guess. What are you going to excavate in Building 742? It says remove all secondary sources of contamination. What is that going to be, and how did you determine where those secondary sources of contamination are?

MR. HAMPARSUMIAN: Well, there was an extended site evaluation conducted a while back. And in the extended site evaluation there was no risk associated with the soils actually. The only contaminant that was there that risk is associated with is that vapor intrusion from the vinyl chloride particularly. A screening level Human Health Risk Assessment was conducted, and that was identified in there. We have done an additional risk assessment in addition to that to develop risk based concentration. And basically that's all specified and described in the EE/CA. As far as the sources of contamination, there used to be sumps in that area, and those sumps were removed; however, there might be remnants of those that could be contributing to the soil vapor concentrations that were detected. We don't know. That was one of the recommendations that was made in the extended site investigation, to excavate that area, and that's how it was developed to this stage.

CO-CHAIR HAYES: Okay. And then you'll remove the soils, actual soils adjacent to the manhole. And then you'll treat the groundwater in that area. And is that in that excavation area by the manhole or is that in both the building and the manhole area?

MR. HAMPARSUMIAN: Yes. All the areas that you see the excavations.

CO-CHAIR HAYES: You'll toss some oxygen releasing stuff in there?

MR. HAMPARSUMIAN: Yes. In this area that's kind of highlighted in green. And within the storm drain pipe area, and around the manhole since there's some contaminants related to TPH and PCBs in there, very minor concentrations, we would be excavating around that area. And while it's open will also add oxygen releasing compounds to it. It's --

CO-CHAIR HAYES: Okay. And then you're talking about the alternative that you prefer is the in situ bioremediation.

MR. HAMPARSUMIAN: Correct.

CO-CHAIR HAYES: So does that constitute adding this oxygen releasing substrate to the water?

MR. HAMPARSUMIAN: Correct.

CO-CHAIR HAYES: And then how long between your application of that product and your collecting of the groundwater and soil gas samples to monitor the effectiveness? How long will that be in situ?

MR. HAMPARSUMIAN: We will be collecting samples prior so we'll have some kind of a baseline. And once we add the substrate to treat the water, afterwards we'll do sampling again. You have to give it some time to work itself. In situ bioremediation is a little bit slower and the release is a little bit slower versus, for example, chemical oxidation with its more rapid treatment. But we think that would be more effective in the long run. So we probably would do more sampling around three months afterwards.

CO-CHAIR HAYES: Okay.

MR. HAMPARSUMIAN: Of course, the detail of all of that would be explained in the work plan.

CO-CHAIR HAYES: Sure.

MR. HAMPARSUMIAN: The EE/CA provides you a general description of what will be done.

CO-CHAIR HAYES: And on the last bullet it says, "Address petroleum hydrocarbon contamination in the groundwater." What does that mean? What are you -- I mean, how are you going to address it, or do we have to wait until the work plan is out?

MR. HAMPARSUMIAN: I think we'll be addressing that when the work plan is out.

CO-CHAIR HAYES: You're just going to do that for sure? Okay. All right. Those are my questions.

MS. D'ALMEIDA: I've got a follow-up on the same lines that Myrna had asked, because that's one of my questions too as I'm reviewing this Draft EE/CA -- and I should have comments for you probably within a week, I just got some from my contractor and I'll be adding mine to it as well. But one of the questions that I have been wondering about is your objectives for this groundwater remediation project. You have to have a reason for why you're doing it.

Here at Mare Island, groundwater is not used for drinking or any other source, so it has no -- there's no -- you don't need to protect the groundwater for the sake of the groundwater, but you do have concerns with vapor intrusion, and you also have concerns with protecting the Strait. And the question that's coming up in my mind -- and this is from attending various workshops put on by ITRC with regards to reductive dechlorination or in situ chemical oxidation or bioremediation technologies -- what I've seen in these case studies when these technologies are employed, the objective usually is you have some kind of a Non-Aqueous Phase Liquid, NAPL, free product, that you can't pump out, so the objective is to use some of these treatment technologies to break them down so that they can become more mobile so that you can extract it down the line somewhere else. And my question here is that, you put whatever reagents you're going to use in the groundwater to treat the groundwater, and you're breaking down the contaminants into their daughter breakdown products, and this generally means that you're making them more soluble and more mobile.

So how are you going to prevent these products that have been now become more soluble and mobile from getting into the Strait, unless you're putting in also some kind of an extraction system to keep it from getting into the Strait?

MR. HAMPARSUMIAN: Well, one thing, if you realize, the concentrations in this area is very low, we're not talking at very high concentrations. The data we have for vinyl chloride, for example, the highest vinyl chloride concentration you have is 48. And we're hoping by treating it we are, ORC treatment or Oxygen Release Compound treatment, those would pretty much be gone. We've very few areas that you see concentrations in that area within the footprint.

MS. D'ALMEIDA: So you've done some chemical and transport modeling to demonstrate that this is going to be appropriate and it's going to be broken down before it's going to reach the strait?

MR. COFFEY: Which is only three hundred feet away.

MR. HAMPARSUMIAN: Well, in the EE/CA we did some additional risk assessment to come up with risk based concentrations, and some of that is explained in the appendices there.

MS. D'ALMEIDA: Okay. I'll take a look at it. It's in where?

MR. HAMPARSUMIAN: I think it's appendix E of the EE/CA.

MS. D'ALMEIDA: Appendix E?

MR. HAMPARSUMIAN: Yeah.

MS. D'ALMEIDA: Okay. I'll be sure to take a look at it.

MR. HAMPARSUMIAN: But if you have any questions --

MS. D'ALMEIDA: That's a comment that I'm starting to realize is going to apply to the IR-15 that you're doing, that CH2M Hill is working on as well too. Okay. So that was my question.

CO-CHAIR BLOOM: Any other questions? All right. Thank you, Hamlet.

MR. HAMPARSUMIAN: You're welcome. Thank you.

CO-CHAIR BLOOM: Thank you, Julian. All right. Next up will be Steve Farley with CH2M Hill for Lennar Mare Island, and he will talk about the Proposed Remedial Action and Installation Restoration Site 3.

**III. PRESENTATION: *Proposed Remedial Action at Installation Restoration (IR) Site 03*  
Presentation by Mr. Steve Farley, CH2MHill/ Lennar Mare Island**

MR. FARLEY: Okay. Packed house tonight, couldn't even find a parking space outside. I'm going to talk about an interim action that CH2M Hill is going to perform at site IA-C1, Investigation Area C-1 which is just about 500 feet south of where we are right now. The subject of this Interim Removal Action is Fuel Oil Pipelines that are inside of a site called IR-03, or Installation Restoration Site 3. The actual Interim Removal Action Workplan was submitted to the agencies in January. The agencies turned their comments around rather quickly, and CH2M Hill definitely thanks both the Water Board and DTSC for turning those comments around. Thirty days is fast, and it really makes a difference for us. So the work plan with the agencies is on the 8th. We've got comments. The scope of the work that I'm going to talk about tonight doesn't yet incorporate any changes that we might have to make based on agency comments.

So what we're going to talk about tonight is what we're hoping we're going to end up doing, it may have to change somewhat based on agency's comments. I didn't see anything in the comments that indicated it was going to be a wholesale change in the scope, although some things might have to change. So the actual scope we're going to implement will be based on our responses to agency comments and further discussions with the agencies over the next few weeks or month.

A brief history. The bottom line here is the Navy used this as a fueling facility up until about 1994. There are six FOPL segments. FOPL stands for Fuel Oil Pipeline. There are about 45 or 46,000 feet of Fuel Oil Pipelines or FOPLs out here that carried fuel oil all over the place. And the fuel oil out here was a rather heavy end, it sort of has the consistency of honey, may be a little bit thicker than that. It was a very, very heavy end type of petroleum. In fact, if I understand correctly, you guys in the back might be able to help me. In order to actually use this material it had to actually be heated up in order for the material to actually flow -- yeah, I'm getting the nod. So that gives you an idea of how thick the consistency of this material is. In the nineties the Navy cleaned and flushed the pipelines and did some removals. In '97 and then in 2002 through 2007 CH2M Hill performed various investigations, removals of soil, removals of pipelines. And in February, 2008 we put in a couple of trenches to look for Light Non-Aqueous Phase Liquid or LNAPL.

Now, what Carolyn was talking about before when she mentioned NAPL, there's two basic types of NAPL. There's either dense phase, which tend to be sinkers; or there's light phase which tends to

be floaters. This material tends to be a floater. It's a petroleum type product, it's less dense than water, and it tends to float on the water surface.

In January of this year, as I mentioned, we went ahead and submitted an IRA work plan for the FOPL source area in IR-03. And that work plan addresses -- it presents the scope of work for addressing the TPH related soil and groundwater contamination in IR-03. And as I mentioned, we had the comments just recently. So we have six FOPL segments within IR-03. IR-03 is a rather large area. It's actually outside the footprint of this image. The six FOPL segments are shown in these various shades of blue lines across this image, and the FOPL names are shown here. Here are the six FOPLs. For reference, it's a funny name, isn't it? Funny word, isn't it?

The Bay Link office is right here, Bay Link is right down here. It's where the ferry maintenance and refueling facility is. And there's something on there, a little more than a thousand or fifteen hundred feet of Fuel Oil Pipeline in this area. And we probably won't be talking much about these specific names as we go forward, I thought it was rather interesting to maybe point out to everybody that there's a rhyme and reason to these goofy numbers and names. I1/6/B473A and B. Or my favorite, I1/4/BE3BE8. Okay. What that refers to is -- there's total logic to it. There's a grid system that applies to Mare Island, and it has a letter and a number, and it's universal. All the quad maps, all the storm sewer maps, all the electoral maps, everything is based on that quad system. And so this is in quad I/1. So if you wanted to find out something about what was going on, say, relative to storm sewers around these pipelines, you would go to the quad map for I/1. The second number is the diameter of the pipeline. So in this case there's one pipeline or two pipelines that are six inches in diameter, these three are four, and this one here is only an inch and a half in diameter. The last series of numbers and letter refer to the buildings. So here is B477 is right here, and Building 477 is right here. I'm not aware that it's universal that it indicates the direction that the pipeline fed to or fed from, but it's usually -- well, almost always it's related to a building that the pipeline was connected to in some way or another. So just a little bit of Mare Island trivia, FOPL trivia, I guess it would be.

Okay. Just to sort of jump to the end, and then we'll talk about some of the details. These are the planned removal areas, this area right here. Bay Link office sits right here. We're up in this area up here. There are two areas that are planned for removal. And if you look here closely what you'll see is they're basically along or include portions of Fuel Oil Pipelines -- like you can see here -- and there's a dredge line that runs through here that we're also going to do excavation around. These red dots refer to areas where we've had soil borings that have concentrations of one or more constituents above what's called Tier II screening levels. The Tier II part refers to the -- it's sort of a sequencing of evaluation of site data. There's a Tier I evaluation, a Tier II evaluation, and a Tier III evaluation. A Tier III evaluation is what we typically do for fairly extensive elaborate human health and ecological risk assessments. And a Tier I is, simplistically, a list of criteria that the State of California has published for both -- well, there's about, I don't know, fifteen different tables in the ESL document. And it basically provides some sort of starting point guidance, conservative guidance on what kinds of cleanup levels might be appropriate for a certain site. We've done the Tier II analysis which basically takes the Tier I criteria and refines it based on site specific information. So, for example, how close are we to the strait? How deep is the contamination? Those kinds of things.

So based on these locations where we've had exceedences of the Tier II screening levels for diesel and motor oil, we're planning on doing excavations in those areas. And one important issue here is that most of the contamination that we see is associated with pipelines or other utilities that have

backfill around them. A lot of the Fuel Oil Pipelines out here don't have any backfill surrounding the pipelines; they're just buried in dirt. But a lot of the utilities have some kind of coarse screen backfill surrounding the pipelines. So they're sort of a rat's nest of pipelines and backfill and different kinds of subsurface features that are affecting the migration of this contamination. And we're going to go in and do some removals.

One thing that's extremely important to keep in mind is this is considered an interim action. This is not considered to be necessarily -- although we hope it would be -- it's not necessarily considered to be the final action. And I'll talk for a second when we get to the end. But the final action is going to be based on, in part, the data that we get back from this and the observations we make, and what we evaluate following that. And that will all be presented in the C-1 Remedial Action Plan which is later on this year. One other thing to point out here, there's a series of above ground storage tanks. I think they were about ten or twelve feet high. They were very large aboveground tanks, and they've all been removed. There's a cross-section. So the strait is over here, you can see a -- no, you can't really see a ferry. The water is over here, and this is going to the west, to the left. These areas numbered here, one, two, and three; these are numbers that came from the actual Interim Removal Action Workplan. They were developed as a way to sort of break the site down into various pieces and parts to evaluate the data in a little more logical way. They're not that important for our discussion tonight, but this cross-section came from the report, that's why they're shown here.

The important things are that we've basically got a number of pipelines that are lined up, in this case east-west. You can see here there's a pipeline that's on the figure here it's perpendicular to the viewing orientation -- so this is where the dredge line is oriented. And the other thing is that there's this whole series of structures that are out here. There's a wharf system, an old wharf system that used to reside right in here. This is referred to as the six inch wooden deck, but I'm not sure it's six inches, although I'm pretty sure it's wooden. But there's a number of tie backs and this is actually air here. Underneath the ground surface, if you walk down here, although I think it's all pretty much fenced off now, but a lot of the areas along the waterfront, there's actually air underneath that ground surface. It's some kind of a suspended platform, whether it be wooden or steel or something. But there's air underneath there, and this is one of the things that we have to consider when doing this work is "Where is this whole structure as we do this work? "

So the nature and extent of contamination is summarized here. Basically the constituents that we have detected in the soil and groundwater were primarily TPH, Total Petroleum Hydrocarbons, in this case diesel and motor oil, which is not a surprise considering these are Fuel Oil Pipelines. Those are sort of the heavy end members of the TPH fraction that you would expect to see. PAH's or Polyaromatic Hydrocarbons. Those are the semi-volatile compounds that are usually in small concentrations in the TPH, they're naturally occurring, they're part of the whole mixture of petroleum, but what's important about them is they tend to have relatively low cleanup levels. These things were detected in both soil and groundwater. And we think the most likely source of those constituents in the soil and groundwater are the Fuel Oil Pipeline segments, not necessarily all of them, but certainly some of them. The highest frequency of detections of TPH, as I said before, is around those pipelines. So not just the highest frequency, but also the highest concentrations in the utility backfill, and then beneath this wooden decking that I mentioned before.

Groundwater samples generally have a decreasing trend in the concentrations of the diesel and motor oil and the PAH's. And as I mentioned before, the delineation areas were defined in the

workplan, and those delineation areas and the evaluations that we did basically resulted in the selection of those two removal areas that I showed you a few slides ago.

The focus of the IRA is not equally soil and groundwater. The focus of the IRA is primarily soil, and within the site, soil around these two FOPL segments and/or contamination that came from those FOPL segments. We're going to remove the soil in the areas between the buildings and the soil from above the wooden decking, and our hope is that by addressing the ongoing and current source of -- or TPH in the subsurface, that that's going to benefit the groundwater.

Now, if we have to do something relative to groundwater after this that will be addressed in the RAP. But our hope right now is since we already have some downward trend in the data for groundwater, that by doing this work and getting rid of the ongoing source of TPH to the groundwater, that will have a sufficient beneficial impact on the groundwater that we won't need to actually take an active remediation for the groundwater. The objectives are to remove the soil impacted by diesel and motor oil at concentrations above Tier II. So the Tier II numbers are the screening levels that we use to identify quote "the problem," and we're going to use those Tier II numbers as the cleanup levels for this action.

Now, the real difficulty about this site is the wooden platform. That whole structure -- and this occurs in a number of places along the Strait. That thing is tied into all kinds of different structural features out there, and going out and just ripping that thing out helter-skelter isn't what we want to be doing. So one of the most important aspects of this evaluation is to better understand the relationship between the contamination that we see above and below that structure, and the actual structure itself. Is the structure some type of mechanism for migration of the material or is there a different source that's underneath? And, quite frankly, Paisha's comments on the workplan focused a fair amount on the issue of what does that structure look like, where is it relative to the contamination, how are the wells screened above and below that, and concerns on both the agencies parts about the monitoring that's going to go on after the work is done relative to that structure. So, you know, the message is very clear that we've got to pay particular attention to that structure as it relates to this action.

These are the cleanup goals that I mentioned. These are the Tier II numbers. And you'll see here that there are different cleanup levels for different depths. And this is, in part, driven by, as in the case here of the zero to three feet, you can see these numbers are lower than at the deeper intervals. This is, at least in part, driven by things like odor nuisance kinds of concerns. So if somebody were to -- if we left levels at these concentrations at shallower depths, there's a higher probability of some odor nuisance kinds of concerns.

So this is sort of a ten thousand foot level look at the different elements that we're going to implement during the work. All the soil that we're going to excavate is going to be hauled off-site. There's nothing that's going to be reused. We're not going to try and treat it and put it back in the ground, dig it up and get it the heck out of here. Then we'll perform confirmation soil sampling along the bottom and side walls of the excavation. And the exact number of soil samples is really going to depend on the dimensions and size and, you know, a number of other factors. For example, if the excavation is only three or four feet deep, one side wall sample may be sufficient. But if the depth is ten or twelve feet or more, there may need to be multiple side wall samples. So the exact number of these will vary depending on the size of the excavation. The confirmation samples will be analyzed for diesel and motor oil. The reason that it's only diesel and motor oil is because the PAH's were below the Tier II screening levels, and so we don't have to worry about

analyzing the confirmation samples for that. Now, if we encounter something that looks rather strange and points to the need to do PAH's, we'll do the PAH's. But right now the plan is that we won't do those because the existing data suggests that there's not a problem relative to PAHs. And then the other thing is that, you know, anytime you embark on one of these subsurface excavations, you always have the chance of the box getting bigger.

So our goal right now is to basically continue the excavation until we achieve those cleanup levels. You know, with the caveat that, you know, if we start seeing that there's some structural problems or issues related to that wharf system or adjacent buildings, we'd have to back up off and then address those issues, potentially in the RAP, which would be the document, the Remedial Action Plan, which would be the document that would identify the final remedy for the site. And then after the work is done -- and I think two of these wells have actually been abandoned. I'm not a hundred percent certain -- we're going to end up abandoning a couple of wells. And then after the work is done we're going to put those wells back in. There may be additional wells, depending on the things I mentioned before based on agency comments and the concern about the wharf, there may be some places where we need multiple wells at single locations. But to conduct quarterly monitoring for a year at -- I think it's going to be on the order of twelve wells based on the number of wells that are there and the wells that we'll end up replacing. And those wells will be analyzed for diesel and motor oil. And then we'll also analyze the groundwater for PAH's, because there was one PAH detection that was naphthalene that was identified as a COC, a contaminant of concern for groundwater, but it wasn't identified as a COC for soil. So we will include PAH's for the groundwater sampling.

So what's the path forward? As I mentioned earlier, the work plan was submitted in January, we have agency comments. And we are literally, right now -- it's one of the reasons I was late -- actually preparing responses to the agency comments. Continue coordination with the tenants in preparation for mobilization. The site out here, it has everything from nothing going on in one building to across the street there's an active business that has lots of issues and lots of lay down areas needed and lots of traffic and so sometimes it takes a lot of coordination. And because some of this work will occur within the footprint of the Bay Link office and the whole ferry operation, it's like coordination on steroids. It requires a lot of work to make sure that we don't interrupt their operations. And I don't know if you've ever tried to get into the Bay Link area, but it's not easy.

CO-CHAIR HAYES: Lots of security.

MR. FARLEY: And you have to respect what they're doing over there and stay out of their way. So coordination is a big deal right now. We hope to implement the workplan sometime in spring. And then, as I said before, if there's additional work that's needed, we will address that when it comes time to prepare the -- in preparing the C-1 RAP. So I think that's all I have for tonight. I'd be happy to answer any questions.

MR. QUIGLEY: I have one. On this pier -- on these wooden pilings, has anyone checked to see what kind of -- how structurally sound they are?

MR. FARLEY: Yeah, we actually have construction drawings of those. I'm not aware of any actual -- I'm not aware of any actual engineering evaluations that have currently been done describing their current condition, but based on how they were constructed and the construction drawings, it's not trivial. These are not just a bunch of boards lying around out there that somebody used to walk around on; there are all kinds of tie backs. And if you look at that one figure, you can see that there are pilings going in different directions so -- for stability and such.

MR. COFFEY: Steve, how old are those and how expansive is that wharf system?

MR. FARLEY: Oh, you know what, that's a great question. Hang on here.

MR. COFFEY: Also, are they encapsulated? Are they buried?

MR. FARLEY: Oh, yeah. Yeah, in fact, I was talking with Dave Godsey about some of these things related to IR-15, which is down just north of the ways one and two down near the dry docks. And Dave indicated that -- Dave Godsey, former Navy employee, been around a long time, knows a lot of sort of subtle pieces of information -- and Dave was pretty clear that these piles were driven and constructed in a way that was based on the friction force. So they were driven until they achieved a design criterion that was established to support certain kinds of loads on that wharf system. I don't know exactly what those engineering considerations are, but I do know that it's not a trivial system, it's not just a bunch of boards, you know, yeah. Real quickly, that structure, if you look here, this brown line, this represents the portion of that wharf system within this area.

MR. COFFEY: How old are they?

MR. FARLEY: Oh, God. It's got to be -- it's got to be well over 75 years or so. I mean, that was the ground surface at one time. Okay. Thank you. Oh, Myrna.

CO-CHAIR HAYES: No. No. I just wanted to point out that we went through that property a few years ago and determined that that's generally where the original air strip is for Mare Island running east and west from the river to the end. I could show you that on some maps.

MR. FARLEY: I'd love to see that.

CO-CHAIR HAYES: And at that point it is, it's in the 20's, so it's just marsh that they've put a little fill in, and they threw up a canvas, wood frame canvas little covers. And they were making a big effort to make Mare Island a naval air station. And they actually have a totally fascinating article from Sunset magazine from 1927 where Mare Island and the City of Vallejo did all kinds of blackballing things to U.S. Senators and all kinds of things to prevent Alameda from becoming NAS Alameda, attempting to get it secured at Mare Island. But that is definitely the -- we figured out where the flights came in and, again, just going east and west.

MR. FARLEY: Interesting. Okay. Thank you all. Oh, Carolyn.

MS. D'ALMEIDA: I was just wondering if you were going to be relocating Bay Link when you actually get out there and do that excavation?

MR. FARLEY: We don't think that's going to be necessary. We think we're going to be able to work around them. I mean that's certainly our hope. The real problem is going to be if the excavation has to grow for some reason for another.

MR. COFFEY: It's not a security risk?

MR. FARLEY: They're very concerned about security issues; they're very security conscious, if you will.

MR. GRIBBLE: I was wondering, what is the definition in this case of below ground surface? So you have the walking surface, and then in some areas below that you have air?

MR. FARLEY: Yeah. Typically when we refer to below ground surface, it's grade. So it's the ground surface out here, because in most cases there is dirt from the walking surface down. If we have a circumstance -- like we do here -- where we have air underneath here, we'll still use the

walking surface, if you will, as the datum for referring to things like depths. Does that -- is that what you're getting at?

MR. GRIBBLE: Yes, it is. So I'm just wondering, and given that on the cleanup goals, did you take that into account in developing your cleanup goals?

MR. FARLEY: Yeah. The thing about the cleanup goals along -- if we end up having to excavate that far to the east, then we'll have different problems because the ground surface out there is actually below that wharf. So we're not planning on going below that wharf. So if you look at the area from the west side of the wharf across, we're not going to go below that wharf for this action. So in some ways the definition of where's the zero point is really relevant only to the area to the west of the wharf area and above it.

MR. COFFEY: Is there any marine life living in that air space?

MR. FARLEY: No, not in that air space.

MR. COFFEY: You sure about that?

CO-CHAIR HAYES: Unless you call marine life rats.

MR. COFFEY: Mussels.

CO-CHAIR HAYES: With mussels you mean? I just wanted to note also that because of that strange little configuration for public trust purposes, the river actually starts further back underneath that deck, and then it extends the hundred and fifty feet in I think the agreement with State Lands. So it's kind of an interesting thing again.

MR. FARLEY: Okay. Thank you.

CO-CHAIR BLOOM: All right. Our next presentation will be given by Myrna, our RAB Community Co-Chair, on the Mare Island Preserve.

**IV. PRESENTATION: *Mare Island Preserve*  
Presentation by Ms. Myrna Hayes, RAB Community Co-Chair**

CO-CHAIR HAYES: Well, sometimes it's been, I guess, our imagination that every now and then we should give a little update on some of the uses of the properties that have been environmentally remediated and cleared for transfer and for reuse. And, of course, we know that Lennar and about their work to prepare the land for reuse as housing, and some of the areas that have already been cleared for transfer that include Touro University and the housing areas and St. Peters Chapel, those kinds of areas. But from time to time I like to give you an update on the use of cleaned up land that's for public purposes.

So Steve Farley came out in January to our second Saturday that Arc Ecology hosts. And we had beautiful weather that day, and we ended up with over 250 people. And we had started out with three people coming last April on our second Saturday. So I want to thank the City for allowing us access there, and we've been very, very appreciative of the public's response. So Steve spent the morning taking some photos. And I like some of his perspectives on something that gets photographed a lot, like the cemetery. He was able to capture those great morning scenes with the trees. And we've had a tremendous interest from Plein Air painters, people who come out and try to paint live. I guess Monet was big on that, maybe kind of the father of Plein Air painting, Vincent Van Gogh, some of those folks -- and none of them have been over to the park yet that we

know of. But these are certainly talented people who draw down some big money out of your bank account when you are compelled to buy one of their paintings I can assure you.

The woman on the upper left, JoAnn Karbely, her husband Len Karbely is the great grandnephew of the lighthouse keeper at Mare Island for 35 years, Kat McDougal. So you never know who you're going to meet out there.

Flowers in bloom. A few weeds and all invasives over here. And then I think that's an imported Cotoneaster. But we have a great combination there of both the native plants. We just had the Native Plant Society out on the second Saturday in February, the Willis Jepson Chapter, the Solano County Chapter, and they were really delighted with the native plants that they were finding in amongst all of the invasives that we do have.

The folks came out that particular day. The woman in blue I know is from San Francisco. And they bring dogs, children, strollers, kites, painting. There's Wally. Anybody can come out.

And these are some of the remnants of architectural elements that, I guess, we're unearthing or uncovering. My neighbor found this a year ago; it's a fish pond that was behind the ruins of this house here. And a neat story about this property is -- I suppose I'm supposed to use this little thing. and I don't know how is my problem.

This property turns there's just the ruins of the foundation of a house, and it turns out by meeting the woman who -- one of the people who grew up at the Naval Ammunition Depot in the housing there from 1930 to 1952, we're going to meet with her tomorrow again in Sonoma, and hope to sometime have a Podcast for you to download from our website. But she told us that the people who lived in this house, the man who lived in the basement of the duplex, was the mail carrier for Mare Island, and the people who lived above were the Rowsers. And there was another Myrna who lived in this park, and Myrna Rowser was one of three children in that household. She was in charge of all the landscape for Mare Island.

So you'll see this very unusual historic cultural landscape around these houses or this particular structure. And he would have built the fish pond. And then between the house and the fish pond in a Japanese style was a covered lattice we're told of rhododendrons, azaleas, and fuschias. So it was very, very beautiful grounds at one time and, of course, just little remnants and a great structure in the pond. And the ordnance reservoir as well. And going back to that ordnance reservoir -- but I don't know how to go backwards, the arrow up -- this structure here, or the whole pond, I recently read that it's very common in Mexico to have these crude kind of earthen dams built, which this was definitely showing on maps in the 1860's shortly after the property became the Navy's. And then they build what are called -- the same thing that this pond has which are called contoured filling ditches. They would dig ditches on the contours of the hills, and those would bring rain water in as the rain harvesting or rain collection system. They do that even now in Mexico where they have a very short amount of water and not the resources to pump.

So I'm beginning to think that maybe this is a remnant of something the Spanish built long before, because we know they used the island as early as 1776, long before the Navy was there. That's a little interesting thing to explore. And Steve picked a great day to take some great photos. It's usually not all that clear.

The lady who I've been mentioning, Laurie Palmer Seward, lived in this apartment or this duplex right here. Again, her parents lived there from 1924 to 1958. So it's very, very interesting to meet

with her, totally fascinating woman. And she believes maybe she's the only person living who lived at Mare Island before, during, and after World War II.

And I know the people on sandy beach that call this a shopping cart, but I think it's become one of the most talked about elements of the Shoreline Heritage Preserve built by William Wareham. And when he found out that -- as a tribute to Mare Island workers, and it was a part of a competition commissioned by the City of Vallejo, the City of Benicia, and the Navy Yard Association. When he found out that he was the winner of the competition, and that he was also responsible to transport it, it suddenly shrunk in length so it would fit a 40 foot truck bed. So that's why I think it looks -- why I think it's a little bit funny in size. But it certainly is something that enchants people.

And I'm glad I don't live on the top or the bottom of that slide. Again, Steve found some great geological elements. And probably those of you who are geologists in the room can tell us how, what these things are.

MR. COFFEY: They're rocks.

CO-CHAIR HAYES: They're rocks.

MR. FARLEY: It's the panoche sandstone.

CO-CHAIR HAYES: Panoche sandstone. But what's the red stuff in the middle of it?

MR. COFFEY: Red rocks.

CO-CHAIR HAYES: Red rocks. Well, I didn't make the slide show, so I cannot take credit for being called the leader of the pack. But it was a pretty fun day. I've been guiding tours once a day on the second Saturday. And we have a wide range of people interested, again from Sacramento, Benicia on this particular tour. And the dog. And we've been delighted -- I mean, I don't get to go on all the outings and go out all day long, it's kind of like the festival, but I see from these photos that there's just a wide range of uses. So I hope that some of you who have worked so hard and so long on the environmental cleanup at Mare Island will be very, very, very thrilled to see what good use the property is being put to. Oh, boy, that's sort of hard to see, that photo of that beloved dog. Okay. That's it.

Thank you very much and here are a couple of things for you. These cards have next year's Flyway Festival's dates handwritten on them, but the important thing for you for now is the second Saturday dates, and the website on this back side for the park.

And then we have a couple of other flyers over here on the table that give you some of the special things that we're doing on the second Saturday, like on March 14 happens to be the 125th anniversary of the death of Annike Turner. And I figured that out one day by looking at her grave a little bit too long. Weird stuff. You know me. And she was the wife of a U.S. Congressman, Daniel Turner, and he's the only Congressman buried in Solano County. He was from North Carolina, and his father was the Governor, the 12th Governor of North Carolina. And they brought slaves with them to Mare Island, who would have been automatically freed once they crossed the California border. They did arrive on September 16, 1854 with Commander Farragut. And they had eleven children, some of whom are buried with them. So it will be kind of fun to have the -- and she has a marker there put by the daughters of the American Revolution, the local Sequoia chapter at the Bicentennial. So you just kind of never know what you will find at that property and any other part of Mare Island.

And one of the things you will find on the April 11th second Saturday is that we're going to have an Easter egg hunt, and any golf balls found can be traded in for an Easter egg, and then we'll sell those golf balls back to the golf course for a huge donation to the Preserve. And then I also want to note that in June, Weston Solutions will be working with members of the community and volunteers at the park to spruce it up. I think -- I mean we're tentatively planning to work with them on that day, they have a national managers conference and they're going to be trying to work with us to get a big team of folks out to work real hard. So come out on the second Saturday of the month. And Kenn Browne's going to be giving his tours to the south shore too beginning again in March. So there you go.

MR. RASMUSSEN: Myrna, what do you think is the expectation regarding the park, and having -- being able to get it to be open more than it is?

CO-CHAIR HAYES: I would say that through Arc Ecology, through our work we just believe that the more volunteers we have the more days that we would be able to arrange to have it open. In terms of, you know what long range plans are, you have a city that's bankrupt, and a master developer that would have been a key player is bankrupt, and so I think that --

MR. COFFEY: And a nation that's bankrupt.

CO-CHAIR HAYES: So I think there are opportunities through the stimulus package maybe, if you can figure out how to get stimulated by it. But in general I think it's just going to be the people, the people just bringing to bear their own goodwill and good works. So it will be interesting to see how it evolves. Anything else?

MR. COFFEY: I had a question. You had a photograph there of the top of the hill of the people sitting on the benches. It looks like the grasses had been mowed. Who's maintaining the grass or the weeds up there from overtaking the hill?

CO-CHAIR HAYES: Well it depends, the most recent mow and the only mows, as far as I know, have been done through the tremendous generosity of Weston Solutions just prior to the 150th of the Naval Ammunition Depot, and then again before the 150th of the cemetery. And those mows are so important; one, for view; but also because they are allowing native plants to appear, because that fennel has gone crazy, you know, it's totally invasive to California. I don't know what the hell they do with it in Italy where it's all native, but here's it's a menace. But that mowing has been very important, and anybody who wants to come out with, you know, their hand held scythe or whatever and get on it, that would be great.

That's one of the challenges right now. We're in sort of a no man's land. We want to try to do no harm before we do good. That's my philosophy. So that's why I would like to see the native plant people out, see them put some monitoring packages together, and be able to define where some of the treasures are before we go just whacking on everything. But I don't think fennel you can risk, you know, you can worry about killing. But that's why we would recommend no pesticide, no herbicide use. And once in a while it appears that someone comes up and does a little of their own spraying just for the hell of it, and we'd like to discourage that.

MR. GRIBBLE: In Italy they use fennel for an ingredient in what we call spaghetti sauce.

CO-CHAIR HAYES: Oh, there are lots of good uses for fennel. It's what the torch was; a fifteen foot version was actually carried by the Romans as a torch. But don't get me started on the uses of fennel.

CO-CHAIR BLOOM: Thank you, Myrna. Okay. We're in our first public comment period. Is there any public comment?

(NO RESPONSE.)

CO-CHAIR BLOOM: If not, we'll go ahead and take a short break.

(Thereupon there was a brief recess.)

## **V. ADMINISTRATIVE BUSINESS (Myrna Hayes and Michael Bloom)**

CO-CHAIR BLOOM: All right, folks, back to business. First on the agenda is administrative business and announcements. I would just say if anybody has any comments on the January 29th meeting minutes, please get them to Myrna or myself. Do you have any announcement? No, okay. We'll go ahead with the focus group reports. First is community and Wendell.

## **VI. FOCUS GROUP REPORTS**

### **a) Community (Wendell Quigley)**

MR. QUIGLEY: We had nothing to focus on. Thank you.

CO-CHAIR BLOOM: Okay. Natural resources, Jerry. Any news?

### **b) Natural Resources (Jerry Karr)**

(NO RESPONSE.)

CO-CHAIR BLOOM: No. Okay. Paula, technical.

### **c) Technical (Paula Tygielski)**

MS. TYGIELSKI: I actually don't have a focus group report, but I do have a question because I was in the coffee shop this morning, and I got approached by another customer of the coffee shop asking me what's going on with the TPHs and the offshore sediments. And I had no clue of how to answer that question. And perhaps we need a focus group meeting about that or maybe a RAB presentation about that issue.

CO-CHAIR BLOOM: The total petroleum hydrocarbons, that's what they were asking about?

MS. TYGIELSKI: Yeah, or -- and the offshore sediments.

MS. D'ALMEIDA: Steve just gave one.

MS. TYGIELSKI: That wasn't offshore though.

CO-CHAIR BLOOM: Well, we will be having a presentation on the offshore sediments; we just finished our field work. But TPH, I'm not sure what they were --

CO-CHAIR HAYES: Or PCB?

MS. TYGIELSKI: Maybe it was PCBs. You know, come on now, alphabet soup.

CO-CHAIR BLOOM: We will be having a presentation, probably I'm going to guess April.

MS. TYGIELSKI: Let's just say offshore contaminants, so whatever kind.

CO-CHAIR BLOOM: Got it. It's on the list. Thank you. Gil, City.

### **d) City Report (Gil Hollingsworth)**

MR. HOLLINGSWORTH: Nothing to report.

CO-CHAIR BLOOM: Steve with Lennar.

**e) Lennar Update (Steve Farley)**

MR. FARLEY: Okay. There's a handout over on the table. I'll go through this relatively quickly. There's four photos. They show various excavations they are performing in UST 231. Some interesting geology you can see there in the upper left-hand corner. Building 386 area you see some of the pipelines and manholes. It can be very interesting when you start digging some of this stuff up. So just -- and it's a brick manhole, you know, it's not concrete, it's brick.

MR. COFFEY: So that's old.

MR. FARLEY: So it's old, right. In the lower right, just an example of some of the surface obstacles that we encounter just when we go out and try to do a small excavation, you know, railroads and lots of subsurface structures associated with those railroad tracks, you know, ties and all kinds of stuff.

And in the upper right corner a nuclear density gauge used to determine when you have achieved compaction goals. So that's kind of an interesting tool.

A couple of things real quick. Sort of in the center near where it says H2, there's a few USTs, 231, 243, it's an area where we've been doing some fairly extensive soil excavation as shown in the upper left corner. We have a lot of work going on there. There's more excavation going on, soil gas, monitoring wells, and a lot of work going on there. And the IR-15, just to the right of that where it says UST 225 and IR-15, we have a major, major document coming out within the next month, it's the IR-15 Feasibility Study/ RAP, the FS/ RAP or Remedial Action Plan for the groundwater. It's primarily a groundwater problem site.

CO-CHAIR HAYES: Is this where you did that pilot?

MR. FARLEY: It's where we did the pilot study, that's right. And some of the things that Carolyn talked about earlier relative to the treatments and dechlorination, and all those things that you were mentioning relative to the Building 742 area are certainly relevant also to the work that we're doing at IR-15. And my hope is that it will adequately explain those things, it's a fairly comprehensive document.

And then the other thing is in the triangle area we had the Black Granular Material or BGM, FS/ RAP that is approaching a public comment period, probably within the next couple of months or so. And then in terms of the environmental site closure status, we had two additional UST sites close, so we're really honing in on the USTs. You know, 91 of 112 is really getting there, so we're really happy with that. And we want to thank the agencies for everything, they're really making progress for us and it's appreciated. Any questions?

MR. GRIBBLE: Yeah, Steve, I have a question. It looks -- I'm not sure I follow that. In the triangle area, that's -- you are breaking that out separately from the rest of C-3, is that --

MR. FARLEY: Yes, we're preparing a Feasibility Study/ RAP specifically for the Black Granular Material that is pervasive across the site.

MR. GRIBBLE: You mean the triangle?

MR. FARLEY: In the triangle area, yeah. It's in other places. For example, this Black Granular Material, we find it in a few other places, but it's not as extensive laterally or vertically as it is in the triangle area. We find it, for example, underneath Building 225. So we'll be doing some remediation, i.e., excavation of that material as part of the IR-15 FS/ RAP. But in the triangle area we found it initially in a number of different borings. And as we looked at it a little more closely, it became apparent this stuff was widespread, and was most likely used as general fill across a large portion of that area.

MR. COFFEY: And what was that stuff?

MR. FARLEY: Yeah, it's -- Chip is laughing because it's black and granular and it's material. It looks like it's a combination of things that have some sort of common themes. It looks like it might have some coal in it. It looks like it may have ferrous --

MR. COFFEY: It doesn't rust?

MR. FARLEY: It's not red granular material, it's black. So it has -- from a chemical characteristic it has PAH's, and it typically -- TPH. It has metals in it. It looks like ferrous slag.

CO-CHAIR HAYES: Is it coke?

MR. FARLEY: No, it's not coke, but it may have some coke in it. It's really a weird conglomeration of stuff that was used apparently as general fill, either localized underneath, you know, one or more buildings, or like in the case of the triangle area, over large areas. And it's not clear in the case of the triangle if it was one event where they laid it out or if it was, you know, over thirty years or more.

MR. COFFEY: What danger does it pose?

MR. FARLEY: It's just got high concentrations of some constituents that pose a potential unacceptable risk primarily to construction workers, that sort of thing, if they encounter it while they're doing some kind of excavation. Thank you.

CO-CHAIR BLOOM: Steve.

CO-CHAIR HAYES: Steve, this isn't on your assignment here, but on the Building 84 that we visited on the RAB tour, the brig, I read in something recently, some history channel -- no, some publication done by someone -- that that was used for a time as a paint, a paint shop or a paint -- a paint manufacturing thing. Would that explain some of your stuff -- before the Marines moved back in?

MR. FARLEY: I've not heard that. The building itself has had about four generations of construction and remodeling. The brig itself, the original brig is about 30 percent of -- maybe even less of the actual entire --

CO-CHAIR HAYES: Well, I know, but don't you have problems in all, in several different areas --

MR. FARLEY: The primary problem is PCBs inside.

CO-CHAIR HAYES: Well, I can get you that source; it's a marine history thing that was for some mitigation for something.

MR. FARLEY: I'm not aware of it, although the other people on the team might be. But I'd love to hear about it just in case they haven't.

CO-CHAIR HAYES: Sure.

CO-CHAIR BLOOM: Okay. Next is the Weston update. Cris.

**f) Weston Update (Cris Jespersen)**

MR. JESPERSEN: Thanks. We have a handout as well. And first off you can see the status of a variety of documents that were either submitted earlier this month or are currently under agency review. Next off is an update on the soil excavation in area IR-05. And right now the Navy and Weston are continuing to wait on a biological opinion that's being developed by the Fish and Wildlife Service. And this opinion will allow us to excavate the remaining soil hot spots within the pickleweed habitat portions of site IR-05. And given the recent rainy weather that we've had, once we obtain the biological opinion on it, it won't be likely that the excavation will occur until things dry out a little bit later in the spring. And the soil that will be removed during these excavations will be consolidated within the H1 containment cap. And then we complete the consolidation and capping of that landfill later this summer. Next is an update on the Investigation Area H1 wetland mitigation.

We just submitted our first annual monitoring report for the area H1 wetland mitigation area. And this report is required to be prepared for each of the first five years after the wetland mitigation area was graded and planted, which occurred in 2007. And we have to do this again for the first five years or until the final performance criteria are met. And the fifth year performance criteria require a minimum of 90 percent cover of native wetland plant species, pickleweed, salt grass, fat hen, alkali heath, etcetera. And a minimum 60 percent cover of pickleweed, and a less than five percent cover of non-native plant species, with a one year incremental goal at a minimum of ten percent coverage; 25 percent coverage after two years; and so on. We have been relatively successful in that after one year the measured coverage of native wetland plant species was over 30 percent. So we're ahead of schedule on that, which is good. And you can see the photograph of the wetland area there on the top right. And then, finally, another update on the Investigation Area H1 containment area.

Since we've had the recent rains we've had a more typical winter site condition which kind of inhibits our construction activities when it gets wet out there. So the field activities related to the remaining portion of the engineered cap. We have eighteen acres that remain to be capped. It should be likely to begin in late spring, probably June- July timeframe. Again, that's to allow the site conditions to dry out, and also to allow the soil that we're planning on consolidating from area IR-05 below the cap to dry out.

Also an update on the groundwater extraction system. It continues to operate normally and discharges the effluent within the Vallejo Sanitation and Flood acceptance criteria. Extraction rates have been below five gallons a minute, which is quite a bit lower than we've experienced. But again, that's what the landfill capping system is designed to do is to prevent the infiltration of rain water into the groundwater. So just based on the results that we're seeing, the remedial solution is doing what it's supposed to be doing. So, and again we've actually extracted over 24 million gallons from the extraction trench and discharged it to the Vallejo Sanitation and Flood system. So that's it for update. Are there any questions?

CO-CHAIR BLOOM: Thanks, Cris. Regulatory update is next. Chip? Carolyn? Paisha?

**g) Regulatory Agency Update (Chip Gribble, Paisha Jorgensen, Carolyn D'Almeida)**

MS. D'ALMEIDA: Well, I've got the microphone so I guess I'll go first. I don't have anything specific to report on Mare Island. However, Myrna mentioned the stimulus package, and I was just

reading my e-mail today, and there was a general e-mail announcement that came in from the administration about how much money we're going to be getting, and there's going to be a lot of money coming in. And according to the e-mail there's going to be about a hundred million available nationally for Brownfield redevelopment grants. Now I don't know anything about applying for them or deadlines or anything like that, but if you got that in mind, start looking for it because it's going to be coming quickly. They're asking us to spend it as quickly as possible or make it available as quickly as possible. So get your proposal together.

CO-CHAIR HAYES: Does Mare Island qualify under Brownfield?

MS. D'ALMEIDA: I don't know.

MR. GRIBBLE: I don't have an answer to that either, but keep in mind that part of Mare Island is private property, it's not federal property.

CO-CHAIR HAYES: Brownfield doesn't require --

MR. GRIBBLE: So you can answer your own question.

CO-CHAIR HAYES: No, I can't. I know nothing.

CO-CHAIR BLOOM: Go ahead.

MR. GRIBBLE: We've been focused on IR-17, working through issues on that to get that removal action off the ground, offshore sediments and all the documents listed on the Weston update sheet and the Navy update sheet. As I was looking at the Weston update sheet, the first document they list is the annual RCRA facility landfill groundwater monitoring report. If I were somebody who resided on Mare Island over by the Farragut Village area where you guys are, that would -- I would be, I think, reasonably interested in reading those on a routine basis. Because I think it's not that Weston isn't doing a good job, I think Weston actually is doing a fine job with that, but given the concern that I think is warranted that government could fail and forget about that at some point and not keep up with it, especially after an earthquake or something like that, it's really important that somebody keep watching that to ensure that the appropriate monitoring is taking place and that the containment continues to function as it was intended to function. I think it's just an appropriate thing for the public to focus on in perpetuity.

MR. JORGENSEN: So I've been focusing a lot on CH2M Hill, on Lennar's deliverables. Mainly I have stacks of FOPL closure requests and some UST requests which I'm working through. They've also told us that they're going to be sending us a bunch of very large documents, and they're starting to come in. So I'm looking forward to all those. On the Navy's side, like Chip said, IR-17 and the offshore stuff that we're working with the Navy. And then also I just finished reviewing the Building 742 EE/CA which Julian presented on tonight. And I will be getting the Navy my comments next week on that. But other than that, that's about it.

CO-CHAIR BLOOM: Okay. Thank you. Next is the co-chair's report. Myrna.

## **VII. CO-CHAIR REPORTS**

CO-CHAIR HAYES: I'm basically going to use my time to just thank lots of people for the tremendous assistance they gave at the San Francisco Bay Flyway Festival. And that would include Weston, as our host sponsor this year, and its team who worked, seemed to me, constantly getting me out of some sort of jam. That's what they do well at festival time. Either refueling the generator or finding a PowerPoint -- whatever you call these things, projector -- because I locked

the one that CDM gave us in a room for safety and couldn't get in. So thank you Weston and Cris and Dwight and your entire team. And I want to thank CH2M Hill, Steve Farley and his team who came on really strong this year as sponsors at a major sponsor level, as well as just contributing a ton of really nice handouts, you know, a map of the island, beautiful displays in the entry area that just really made it come alive with wildlife from Mare Island. And then the -- some of the volunteers who are in the room tonight, including Kenn Browne and Wally Neville and Dijji Christian -- even Chip helped, can you believe that? It's on the record here.

MR. FARLEY: So is your query about can you believe it.

CO-CHAIR HAYES: Yeah. No, I mean it was great. He came around and he was tremendous, offering a lot of support for the Mighty Midget team over there too at that boat, cute little boat. Jim Porterfield, who's here tonight. And Mike Miller, who was here earlier, who -- somehow or another we lost all our power in all receptacles, and Mike spent time with the Forest Service checking out the generator and figuring out how we could bypass some of our failed systems to make the hot dog cooker still work. So again, thank you to absolutely everybody who participated in the festival. I know the Navy had a nice booth but I won't steal their thunder because I think that's part of their report. And to the city particularly for giving us a derelict building yet again to host such a great festival in. So thanks, Gil, for all that backup that you did for us too. And I promise I will get it cleaned out one day.

CO-CHAIR BLOOM: Okay. For the Navy we, as Myrna said, a few of us, myself and Julian were up at the Flyway Festival in our booth.

CO-CHAIR HAYES: Julian helped too.

CO-CHAIR BLOOM: Yeah, we had a lot of people come by to give us their names, which is good. We added them to the mailing list. As far as field work going on, I mentioned this at the last RAB, but we have begun our petroleum work in the Investigation Area A-2 area, the Former North Building Ways. Pretty much what's been done so far there is the consultants have gone out and surveyed the areas, prepping for when it gets a little bit drier to go out and start removing the soil in those seventeen small areas in A-2. We also just recently completed our offshore area sampling. Investigation Area K was in the second phase, which was from February 11th to -- do I have another date? -- February 11 to February 19th. Our investigation was to characterize the vertical and horizontal extent of the contamination. So, Paula, we should be getting the results back and validated around the April timeframe. So it could be for an April RAB meeting, if not, definitely May to talk about that.

We've had various different meetings with the agencies dealing with the Time Critical Removal Action areas, the Paint Waste Area, Site 17 among two that I can think of. We had our BCT meeting today. And we've received comments, as you can see on the back page; we submitted one document since last month which had to do with IR Site 4, where we performed a removal action in the Time Critical Removal Action area at IR-04. We submitted the completion report for that and the agencies are looking at that right now. And we've received comments from DTSC, EPA, and the Water Board mainly having to do with Site 17 over the last month. Any questions?

CO-CHAIR HAYES: Is that your pile of dirt, and is it clean or dirty, near A-2?

MR. GRANIRER: Yes, and clean.

CO-CHAIR BLOOM: It's fill material for when we begin the excavations.

MR. COFFEY: It's potting soil.

CO-CHAIR HAYES: Potting soil.

CO-CHAIR BLOOM: Okay. With that, we'll go into our second public comment period. Is there any public comment?

(NO RESPONSE.)

CO-CHAIR BLOOM: If not, we will adjourn. Thank you, everybody.

(Thereupon the foregoing was concluded at 8:55 p.m.)

### **LIST OF HANDOUTS:**

The following handouts were provided during the RAB meeting:

- Presentation Handout – Building 742 Former Degreasing Plant – Investigation Area (IA) C2 Update – Navy
- Presentation Handout – Proposed Remedial Action at Installation Restoration (IR) Site 03 – CH2MHill/Lennar Mare Island
- Presentation Handout – Welcome to the Mare Island Shoreline Heritage Preserve
- Mare Island Shoreline Heritage Preserve Second Saturday Access Flyer
- Features within the EETP – CH2MHill/Lennar Mare Island
- Mare Island RAB Update February 2009 – Weston Solutions
- Navy Monthly Progress Report Former Mare Island Naval Shipyard February 2009