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1 Bethpage RAB - 4/14/04 - First Iteration

2 CO-CHAIR KAMINSKI: My name is Joe

3 Kaminski, soon not to be owner of this property. I

4 have been saying this six seven eight fine ten

5 years. Welcome to this edition of the Bethpage RAB.

6 We have been trying special (legs) to

legislation

7 give this property, we naval air Systems Command,

8 the current owners to the Nassau County for number

9 of years now. In deference to Nassau County, we

10 have only just gotten to point where knows of the

11 hundred five acres, hundred six of them, have been

12 declared clean enough to give to them without any

13 kind of caveats.

14 So we have just begun the discussion

15 of actually turning that property over. We turned

16 over other property that was cleaned about a year

17 and a half ~~ago~~ when we started on this trek ~~in~~

18 96 with Northrop Grumman closed the place in 90

19 eight you think the special (legs) came about, more or

legislation

20 less?

21 What see happened to me, is that they

22 don't' ^{think} ~~see~~ they are taking my money away, my budget

23 away, there is no money for me to keep this place

24 open any longer. For the first couple of years we

25 held it in the hopes of county would take it away

mark-up by Kelly Carper of TENUS 9-9-04 Kelly Carper

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2 we kept it full up running, it cost a couple million
3 dollars a year to keep it open, to keep it running
4 to keep it warm and in all respects ~~X~~ that money ran
5 out and has been sitting cold for a couple of years.
6 It is a shame because the money was spent keeping it
7 warm is like lost. So we are still hoping county is
8 going to take it real soon and turn it into
9 something worthwhile.

10 How far even if the county doesn't
11 take it, I may be with you a whole not longer
12 because the Navy has made a change ~~X~~ within the Navy
13 there advertise only except for places like this,
14 like government-owned facility, there is only one
15 Navy command that owns property. I worked at the
16 naval air station Patuxent River, my headquarters it
17 is there big old build, Naval Air doesn't want that
18 air station fair or that building anymore. There is
19 a new command called commander naval installation,
20 who owns all Navy property, all buildings all real
21 estate. Except a few of these GOCO. We are in a
22 dialogue with command air naval installation if the
23 count is not going to take this property, I'm not
24 going to be involved. Because the chief of naval
25 operations has said that my command, naval air

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2 Systems Command buys airplanes and this other guy
3 that runs property. We don't run property, in fact
4 all my office which used to be forty people is down
5 to less than 10. We don't deal in property or
6 facilities any longer. That will happen not
7 withstanding what happens with the county. We have
8 told the people that would cause this people to
9 occur to leave it alone for now if, we have been it
10 a long time if, we have good relationships going on,
11 let us see if we can finish this transfer or post of
12 that transfer before that change occurs but it is in
13 the offing, within six to eight months. No matter
14 what happens. So we hope we can influence your
15 legislators or your count executives to get on with
16 the transfer. Fold be in your best interest to own
17 this property and let the gave I get out of here an
18 let the be developed to something useful for you,
19 get it back on the tax rolls and stuff like with
20 that, we'll go into the regular type things.

21 That was your welcome. Agenda,
22 you've all read the agenda. Beyond to reread it for
23 you.

24 There was some problems with the
25 minutes. Was that corrected is everybody okay with

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2 the minutes now.

3 A MAN: It was just a little odd.
4 They're always odd.

5 CO-CHAIR KAMINSKI: The minutes went
6 out with classic copy with only half of them and
7 they got redone there was a point in time that we
8 were going to send the transcripts. Did we decide to
9 do that.

10 MR. BRAYACK: For Bethpage we send
11 the full transcript without the minutes.

12 CO-CHAIR KAMINSKI: You got the full
13 transcript except the problem with every other page
14 was missing I read it and said I can't follow this
15 at all I called Ed's office and said straighten them
16 out.

17 CO-CHAIR KAMINSKI: Which is hopefully
18 Bernie have.

19 I have five of these places all of
20 which are coming to a conclusion right now and I
21 cannot spend my time as much as I used to, on each
22 one. So I have not been even been able to look in
23 detail at the minutes or agenda today. As soon as I
24 stop talking I'll turn it over to Jim and that Jim
25 and be quiet for the rest of the evening.

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2 My effort has been with Shelby Cohen
3 and county attorney and county real estate and
4 outside counsel to try to figure out what's going to
5 happen here. While I've entrusted Jim Colter and
6 his command to take care of the balance of the
7 environmental issues.

8 For your information, while I'm going
9 through that, naval air Systems Command current
10 owner but maybe not for much longer, if it goes to
11 count then that's fine but it has to get transferred
12 to naval air installations. Jim works for another,
13 Naval Engineering Command, by the sectary of the
14 Navy and chief of naval operation, to do cleanup for
15 the Navy. Jim is like internal Navy consultant that
16 cleans -- they do other neat stuff, real estate
17 agent, reduction consider agent but also cleanup
18 agent for all of the Navy, this area is the
19 northeast.

20 A WOMAN: Two quick questions on that.
21 Will Jim Colter stay with this project regardless of
22 who owns the project.

23 CO-CHAIR KAMINSKI: They deal with
24 budget and money and everything regarding the
25 cleanup. Yeah.

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2 A WOMAN: The eight acres that will
3 remain as the Navy property, that will be
4 transferred regardless.

5 CO-CHAIR KAMINSKI: That would
6 probably go to this commander naval installations
7 unless we can work real transfer, state New York
8 interested in early transfer. Would you like to set
9 that meeting up for me, like to talk about early
10 transfer give this place to them, otherwise we don't
11 have to cut this funny piece of property out and
12 have let the county.

13 A WOMAN: First you have to complete
14 the OUI remedy out.

15 CO-CHAIR KAMINSKI: Just kidding.

16 MR. COLTER: You can transfer without
17 the remedy in place.

18 CO-CHAIR KAMINSKI: One of the places
19 that used to have government owner contractor
20 operated facility in Toledo, operated by Teledyne,
21 special legs like here to give it to the Port of *legislation*
22 Toledo, it had contaminated by the Port of Toledo,
23 government of Ohio were willing to take it. Before
24 cleanup. They deeded the entire facility to the
25 Port of Toledo, and Teledyne remained as the tenant.

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2 Colleague of Jim out of Charleston. Is working on
3 it doing stuff with local college, it turned into a
4 nice operation while the Navy is still doing the
5 cleanup. That concept was rejected here a few years
6 ago when we tried it in New York and Nassau County
7 wasn't interested. That's too bad because they
8 could have had it.

9 Jim does the cleanup and will
10 continue to do the cleanup. That's what we are here
11 for, the RAB advisory board, on how, and the
12 consequence of that, cleanup operations go, up
13 outreach to the community and let you know how the
14 cleanup is going.

15 We'll answer the questions you had
16 before and bring you up to date on what's going on
17 now. Jim.

18 MR. COLTER: Thanks, Joe.

19 Before we get started I have
20 administrative things I'd like to go over.

21 At the last RAB meeting we had a
22 couple of questions from some of the members on the
23 one question was could we have like a re-cap of the
24 groundwater issue and how did we get to where we are
25 at today. Its not shown on the agenda, but Steve

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2 Scharf from New York State DEC is here and he'll
3 give a brief recap how we got to where we are. The
4 second question that came up was with regards to how
5 effective are the water supply treatment systems
6 especially where there is a potential for a power
7 outage and some other type of scenarios. John
8 ~~monthly~~ ^{Molloy} from the Bethpage Water District is here and
9 he'll give a little overview how the treatment
10 systems operate and some of their secondary
11 redundancies in those scenarios do pop-up.

12 Another item that is not on the
13 agenda is the update of the review of our dry well
14 reports by your third party consultant, which is
15 H2M. Gary Miller and Paul Lageraaen are here and
16 will give us a brief update where they are on that.

17 Jim, did you get an invite to this
18 year's RAB forum.

19 CO-CHAIR McBRIDE: No.

20 MR. COLTER: No.

21 CO-CHAIR McBRIDE: My schedule has
22 been crazy for the past month, it may have made it
23 in and I haven't.

24 MR. COLTER: This year's RAB forum is
25 being held in Salt Lake City. Back in 2001, they

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2 had one in Denver, Colorado. Every two three years
3 they're trying to set one up. We'll talk a little
4 about RAB membership every two years we'll review
5 our roles see who still is interested in being a RAB
6 member, who hasn't come and who needs to be taken
7 off membership also you can review your co-chair if
8 you so desire. The co-chairs are invited to go to
9 this RAB forum.

10 MR. COLTER: It is paid for by the
11 Navy. So we'll talk about that at the end.

12 And anyone from the RAB can go in the
13 co-chair's place.

14 As I understand it, it was pretty
15 informative last time.

16 CO-CHAIR McBRIDE: The last one that
17 I went to, in all honesty, in Denver, is where we
18 got the information. We made the contacts with the
19 people from the Navy that were able to facilitate us
20 getting the third party review. Also all the
21 presentations they put together for all the
22 co-chairs from around the country which is first
23 class, good informative information, on-site
24 assessment, all different types of remediation, you
25 pick and choose different conferences that you

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2 wanted to go to. The Navy did a first class job.

3 MR. COLTER: We'll talk a little bit
4 more about that at the end.

5 The other thing that I have, Jim,
6 again I don't know if you received this. The Office
7 of the Undersecretary of Defense sent out a draft
8 proposed rule regarding some changes to how RABs
9 work and some of the charters.

10 CO-CHAIR McBRIDE: No.

11 MR. COLTER: It is out for draft so
12 you can send in comments. If anyone wants to
13 review this, and send in comments, leave your name
14 with Judy Lamey. I'll make sure you get a copy of
15 this to look at and send in comments.

16 That's it for the administrative
17 remarks.

18 What we have been doing, basically,
19 since we've met, back in November, we have been
20 working were our new fiscal year funding. It came
21 in in January. Some of the plans that I alluded to
22 at the last meeting are now coming to fruition. One
23 of those is the design and installation of the GM38
24 remedy, the hot spot remedy. We have an update on
25 that a little later. One of the things we were able

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2 to complete was the installation of the outpost
3 monitoring wells along the southern boundary of our
4 plume, upgradient of several water supply districts.

5 So we got those installed. We did
6 some preliminary sampling to see what everything
7 looks like. And we are about ready to install
8 dedicated pumps and these wells will then be turned
9 over to Northrop Grumman for water sampling under a
10 long-term sampling program. As you'll recall the
11 wells are put in to be early warning wells, for
12 possible detections of VOCs into the public water
13 supply.

14 I'd like to turn the meeting over to
15 Dave Brayack, from TetraTech NUS and Dave Stern from
16 Arcadis.

17 The Daves, they're going to go over
18 the completion of these wells, where they were at
19 some construction type drawings, and then Dave Stern
20 will go over what we did with some of that data and
21 how we made some cross-sectional views of the
22 subsurface and he'll go over those briefly.

23 MR. BRAYACK: I don't have a
24 presentation for the projector. I have hand-outs.
25 I believe everyone has seen this before so I'll be

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2 very brief on this and then Dave Stern has some
3 cross-sectional data. Most of the detailed
4 discussion on the cross-section we'd like to wait
5 till after the meeting. They're on poster boards.
6 They're very small. We can address the individual
7 questions at that point in time. Different Dave Jim
8 had mentioned there was a series of four clusters,
9 each cluster had two to three monitoring wells in
10 it. These monitoring are located along the bottom
11 of this figure out. If you start to the west you
12 see there was cluster 41, 42, if you go a little bit
13 east and south, there's cluster 31 and 32. Right
14 next to the Seaford Oyster Bay road, you could see
15 Outpost 21 and 22. And then finally to the east,
16 you'll see three wells, 11, 12, and 13.

17 These figures were taken directly out
18 of a report that was submitted in March, the RAB
19 co-chair has it. It has been distributed to the
20 regulators. And most the other people, as well.

21 CO-CHAIR McBRIDE: I was under the
22 impression that any report I received was also going
23 to everybody. That's the way it was working.

24 MR. BRAYACK: I believe you're right.

25 MR. COLTER: I think I did send them

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2 to everybody.

3 CO-CHAIR McBRIDE: Anything that
4 comes to us, there's so few of us, please keep
5 everything going to all the members.

6 MR. BRAYACK: We did that, you're
7 right.

8 CO-CHAIR McBRIDE: Thank you.

9 MR. BRAYACK: As Jim had mentioned,
10 anyway, these were early warning wells, if detection
11 shows up in these wells, there's a possibility
12 within the next five year time period there could be
13 an impact at one of the local water districts. The
14 Levittown Water District, New York Water District,
15 South Farmingdale Water District, they have two
16 different clusters. So those wells were installed
17 they were finished, developed in December. As far
18 as the second page is concerned, we talk about these
19 monitoring wells, I wanted to briefly describe what
20 a monitoring well is.

21 When we install these, we drill
22 straight down. We use a technique called mud
23 rotary. We drill down to the bottom of the well, we
24 set the monitoring well down, the monitoring well is
25 PVC pipe with a slotted screen at the bottom. The

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2 screen intervals are variable, in these case, most
3 of them are about 40 foot in length. AT that point,
4 we pump out all the mud, any of the solids that
5 accumulated during the drilling, we install a sand
6 pack. Sand pack in this area is very close to what
7 the native soils are, which is basically a coarse
8 sand. We put a ^{bentonite}~~ben tin ite~~ seal on it. This is
9 material that goes in dry. When it gets wet, it
10 swells and seals it off. So there's no leakage from
11 the surface up from 100 feet from the ground surface
12 with this ^{bentonite}~~ben tin ite~~, that seals the hole. As we
13 are drilling down, we sometimes go through clay
14 unit. We want to make sure we seal them off so we
15 don't create any type of preferential flow pattern.
16 From 100 feet up, we finish it off with the cement
17 ^{bentonite}~~ben tin ite~~ to solidify it, to keep it solid. We
18 put a well pad and cover over the top of it. That
19 is basically what a monitoring well is. It is a
20 pipe with holes in the bottom for the most part.
21 Some of these wells took a four man crew, six to
22 eight ten weeks to install. These are not minor.
23 These are not trivial. They take a long time to
24 stall. They are relatively expensive.

25 At this point in time, Dave was

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2 briefly going to talk about these posters. There's
3 a lot of detail up here. Any detailed questions I
4 suggest we wait till after the meeting so everybody
5 can walk up and take a look at them, then. Dave?

6 MR. STERN: This figure shows
7 essentially what Dave Brayack has presented to you.
8 Basically it shows the sites and areas and basically
9 where each of the outpost wells were drilled,
10 relative to the associated water district supply
11 wells. What -- what we show here, a lot of these
12 dots here, a lot of other wells in the area but we
13 selected a few of these wells, these key wells, and
14 drew cross-sectional views of them which is
15 basically a slice into the land surface. If you cut
16 that away you would basically get a view of the soil
17 type and texture. Also, if you have any drilled
18 wells, you would be able to see vertically where the
19 wells are relative to each other and relative to
20 different types of *lithology. That is what we did
21 on these cross-section.

22 We did about five of these. These
23 are slices through the earth all the way from land
24 surface, here, all the way down to basically a
25 regional confining bed which is a massive clay unit.

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2 We are talking about the water supply on Long Island
3 occurring in this area, that is the Magothy aquifer.
4 A lot of wells penetrated into the Magothy. A lot of
5 the wells you're seeing here are represented as
6 sticks. You'll see the intervals for the various
7 well. These wells are wells that have already been
8 drilled or used for informational purposes for
9 cross-section. Show vertical profiles, as I'm sure
10 you know the Navy drilled over a number of years,
11 actually shows the outpost wells that the Navy
12 drilled for these purposes of monitoring the public
13 supply wells. Each out post wells shows you the
14 *lithology of the area of the supply well, with the
15 outpost well, and further up to the north, as you go
16 back further to the side. It ties in a lot of how
17 these wells show vertically and laterally with
18 respect to the sites and also where the public
19 supply wells. You can get a feel for the depth of
20 the well and where they are relative to the screen
21 of the public supply well, which draws in the water
22 supply.

23 There is a lot of detail on these
24 figures.

25 CO-CHAIR KAMINSKI: The linear

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2 distance on the cross-section.

3 MR. STERN: Each inch is 500 feet.
4 There is a 10 to one exaggeration so the vertical
5 foot distance is 50 feet. So there's basically
6 these are stretched in this direction, vertically.

7 CO-CHAIR KAMINSKI: 50 times time
8 Dave different 500 to 50, so it is a 10 to one.

9 CO-CHAIR KAMINSKI: What is the
10 linear distance.

11 MR. SCHARF: Show the miles.

12 MR. BRAYACK: This is zero, five
13 thousand feet is here.

14 CO-CHAIR KAMINSKI: Two and a half
15 miles.

16 MR. BRAYACK: This is about two mile
17 along the cross-section. Some are longer some are
18 ~~shorter~~ shorter. On each of these one, it is a key plan
19 relative to the sites and of major roadways kind of
20 where you are. A lot of gray lobes are larger clay
21 areas we've encountered we -- white area is sort of
22 general mixture of sand and silt. Not
23 differentiated on the cross-section, but there is
24 more to it than that, a little bit. We are look at
25 significant clays, where the wells are, relate to

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2 the clays and to each other.

3 CO-CHAIR KAMINSKI: You didn't try to
4 correct the layers.

5 MR. BRAYACK: Where wells are close
6 together, you could see how much distance there is,
7 several mile or more between the two miles, where
8 you have wells together you can make interpretation
9 where you think clays occur at same elevation in two
10 wells relatively close, you can say likely those
11 clays are interconnected. Its common on Long Island
12 you can drive a hole and be 10 feet away you won't
13 see the same lithology, hole to hole.

14 The larger patched area? This is
15 widely studied by the USGS and others, that is
16 considered region wide clay bed which confines the
17 Magothy Aquifer, and it is solid and basically an
18 impermeable zone. Not water productive.

19 MR. COLTER: Any questions?

20 CO-CHAIR KAMINSKI: 600 feet down to
21 the.

22 MR. STERN: Yeah, six and 700 feet.
23 It dips as you go further to the south.

24 CO-CHAIR KAMINSKI: Most production
25 wells are at six.

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2 MR. STERN: Nowadays on Long Island,
3 most production wells are in the deep part of the
4 Magothy, 15 feet below the top of the Raritan unit.
5 If you come up close, you can see a lot of wells are
6 screened at the very same intervals as you get
7 deeper in the Magothy, you get coarser grained
8 material that is more productive. A lot of wells
9 are screened where they are, they produce a lot of
10 water down there. A lot time and effort went through
11 to plot the wells. We tied in the *lithology as
12 best we can. This gives you as best a
13 representation on paper, the three dimensional
14 features of the Long Island geology, hydrogeology.

15 If you have any questions afterwards,
16 I'll be happy to do that.

17 CO-CHAIR McBRIDE: Thank you.

18 MR. COLTER: Thanks, David.

19 Essentially, what we are trying to
20 accomplish, here, are -- is the implementation of
21 the various components of the groundwater ~~*TKREUPL~~ ROD
22 that was produced by New York State DEC and then
23 adopted by the Navy. Again the reason the Navy
24 adopted its own ROD was for funding purposes. We
25 have to show our headquarters a legal type document

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2 to say we need to spend this type of money, doing
3 these activities. Essentially, and Steve will go
4 over this in a little more details, the three -- I
5 guess there's three main components of the ROD. One
6 is to contain groundwater on-site, where the
7 majority of the contamination is. That has been
8 done and continues to be done by Northrop Grumman
9 through that *ONCT, which is on-site containment
10 system. The second component is to protect the
11 public water supply from those contaminants that
12 have already passed the Northrop Grumman southern
13 boundary. That is mainly what this is for. This is
14 to do sentry wells, early warning wells, to give the
15 Navy at least a five year window. If any
16 contaminants are found in these wells, then it is
17 likely that a future impact will happen to certain
18 public water supply and gives us a five year window,
19 to take action, to put a treatment system on.

20 The third component of that
21 groundwater remedy is basically trying to find any
22 hot spots which have been defined as anything over
23 one part per million, which is a thousand parts per
24 billion, delineate it, and try to get as much mass
25 out of that area as possible, to reduce the loading

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2 of the aquifer. That is what I'm going to go over
3 now. Did everyone get a copy? This is basically a
4 schedule of events.

5 CO-CHAIR McBRIDE: One quick one for
6 you, Jim.

7 The containment system that is in
8 place now, the one run by Grumman? Has there been
9 any discussions between the EPA with the Hooker
10 site, over the past -- since the last meeting,
11 whether there's -- what the negotiations are between
12 those two? I think you had told us two meetings
13 past, because I was not here for the last one, that
14 there was talk that Hooker, and the EPA, wanted to
15 use the Grumman containment system also from that
16 plume. Does that affect this in any way, what
17 you're going to discuss.

18 MR. COLTER: No. Not the GM38 area.
19 But the EPA and Occidental Chemical are in
20 constitutional with Northrop Grumman and the New
21 York State DEC on that issue, regularly. The Navy's
22 kind of stayed out of that, out of those
23 discussions. It is basically Occidental Chemical
24 taking responsibility for the amount of chloride
25 portion of the plume. Which could adversely impact

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2 Northrop Grumman's treatment system.

3 CO-CHAIR McBRIDE: That was my
4 concern.

5 MR. COLTER: There is a whole bunch
6 of different scenarios that have been addressed.
7 Occidental has stepped up to do whatever is
8 necessary. I think Steve has more information on
9 that than I do.

10 CO-CHAIR McBRIDE: Thank you.

11 MR. COLTER: Probably get into it.
12 In his presentation, he'll allude to that I'm sure.
13 If not, we'll address it at the end.

14 CO-CHAIR McBRIDE: I thought it was
15 tied in with what you're about to discuss.

16 MR. COLTER: No, this is the GM 38
17 area, the hot spot area, just for reference.

18 CO-CHAIR McBRIDE: Okay.

19 MR. COLTER: Is down in this area
20 here. So you can see how far away it is from
21 Occidental.

22 CO-CHAIR McBRIDE: Okay.

23 MR. COLTER: As you can see on the
24 schedule, we installed a few vertical profile
25 borings, to delineate what is the one part per

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2 billion hot spot. And those 15 through 18 lines.

3 We went into conceptual design phase
4 to layout conceptually what this treatment will look
5 like, what properties are we going to impact and we
6 started some preliminary discussions with the Town
7 of Oyster Bay about utilizing some of their
8 property.

9 Where we are at now, is line 30 and
10 below the actual construction of the remedy. Over
11 the winter time when our fiscal year funding came
12 in, we awarded a contract to Foster Wheeler,
13 formerly Foster Wheeler, now Tetra Tech FW, a
14 subsidiary to Tetra Tech NUS, right now they are
15 working on a workplan to go out and do geophysical
16 studies, take soil samples to design a foundation
17 for a building. They're also -- they're also going
18 to get a surveyor out there, and that is shown on
19 35. Right now we are talking with the Town of
20 Oyster Bay, to get a temporary right of entry
21 agreement with the town, to allow us access to the
22 property to do surveying and some of this other
23 work. That is a temporary agreement.

24 CO-CHAIR McBRIDE: There was
25 discussion six months ago regarding possibly

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2 approaching the water district to see whether it
3 could be sited on their property. Any update on
4 that.

5 MR. COLTER: We gave that at the last
6 RAB.

7 CO-CHAIR McBRIDE: I apologize for
8 not being here the last time.

9 MR. COLTER: That was part of the
10 conceptual design, lines 19 and lower, where we went
11 through different scenarios of where we could site
12 this building.

13 In short there was a lot of legal
14 issues between the Navy that made it impractical for
15 us to either lease or take ownership of water
16 district property. In short, they wanted us to take
17 ownership of it and then give it back to them when
18 we were done. And as Joe alluded to, the Navy is
19 not buying land anymore. We are actually getting
20 rid of it. That posed a problem with us. Spoke to
21 the town of Oyster Bay. As you know we have been
22 putting wells in their highway right of ways for the
23 last six, seven years. They were very receptive to
24 having us utilize some of their land.

25 So the surveyor should be out there

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2 by the end of this months what we are hoping we are
3 expecting temporary access to be in this week. And
4 get the surveyor contract should be awarded this
5 week. He should be out there. One of the key
6 component of that survey, not only is getting legal
7 descriptions that then our real estate folks will
8 turn into a long-term easement, we also want to have
9 a surveyed area to lay out what we think other
10 treatment plant should look like. We want to
11 conduct a neighborhood workshop. I mentioned this
12 last couple of meetings but because of funding
13 delays and things like that, we haven't really been
14 able to schedule it. If all goes well, I would like
15 to have that neighborhood workshop in July. We'll
16 have to talk to the Town of Oyster Bay, we'll send
17 out flyers, and actually go door to door to some of
18 the folks in that area, to get them to show up to
19 the workshop and we'll put together poster board
20 similar to this but it will kind of have a design
21 aspect to it. Folks can come and walk through and
22 ask any questions they have pan man Jim, July is
23 very bad time to have public meetings with everyone
24 on vacation.

25 MR. COLTER: Okay.

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2 A MAN: Do it in June before school
3 goes out or after the second week of September.

4 MR. COLTER: Okay.

5 June is a problem for me personally.
6 But September might not be bad to be honest with
7 you. I was trying -- I know we have been saying we
8 are going to conduct one and I didn't want to push
9 it back too far but maybe you're right maybe after
10 school starts would be a better time.

11 A MAN: That is something that the
12 RAB has to discuss especially being.

13 A MAN: There is so many holidays,
14 September would be good.

15 A MAN: The treatment facility will
16 be close to people's houses. You don't want a call
17 back later on, saying I never knew there was a
18 meeting and you got this thing down the block from
19 my house.

20 MR. COLTER: We definitely don't want
21 that.

22 CO-CHAIR McBRIDE: If you're looking
23 to put a steel tower in the area, it won't be too
24 well received unless the architects really work
25 their magic on it.

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2 MR. COLTER: In that area, if you're
3 familiar with it, it is pretty heavily wooded and we
4 are going to set our building back as far as
5 possible toward the expressway, and keep as much of
6 that buffer as possible. But what we need to do is
7 get that survey of the area and see what it looks
8 like and come up with a proposal.

9 MR. SCHARF: Jim, it may not be a bad
10 idea to have two meetings, one in July to get
11 feedback and have a follow-up meeting and re-explain
12 in September so you can have answers to all the
13 questions the second time around.

14 MR. COLTER: That might work.

15 MR. SCHARF: This way you can keep
16 proceeding with the design unless there is something
17 that is really presented to us as a problem.

18 CO-CHAIR McBRIDE: Are you looking
19 for the community's input or you're trying to test
20 the waters to see.

21 MR. COLTER: It's -- it is going to go
22 there. It is not up for vote, or anything like
23 that. It is basically giving them heads up that
24 there will be construction going on in the area,
25 this is what we think it will look like, this is

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2 how we'll try to mitigate the short term impacts,
3 this is what you can expect to hear or not to hear,
4 things like that. It is basically a heads up of
5 what's going to happen in their neighborhood. We've
6 basically run out of options as far as where to site
7 this. In any other area, it's too heavily
8 residential and now you're talking about miles and
9 miles of piping, which makes the project cost
10 prohibitive.

11 CO-CHAIR McBRIDE: The people in the
12 area who live there, want to have a say in it. If
13 it was in my neighborhood, we would be approaching
14 town officials that there may have to be some
15 concessions on the part of the Navy. They are
16 putting something in someone's backyard that wasn't
17 there.

18 MR. COLTER: We definitely will
19 listen to the inputs. Like I said, we'll do a
20 conceptual of what we think it should look like.
21 Based on comments, we'll make judgements.

22 CO-CHAIR McBRIDE: At the timing of
23 these meetings if people have serious comment, is it
24 going to be at the point where it is already too far
25 into the process to accept these comments.

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2 MR. COLTER: No.

3 CO-CHAIR McBRIDE: That is something
4 from my point of view I would think that the Navy is
5 bound to at least put it to the residents. It will
6 be in their neighborhood so they have an opportunity
7 to have their comment.

8 MR. COLTER: We have been talking to
9 the Town of Oyster Bay officials. Who is on the
10 RAB?

11 A MAN: John Venditto.

12 MR. COLTER: Yes. I've met with him
13 on several occasions. He's walked the site with us.
14 We've met with Steve actually to say this has to
15 happen, it's part of a legal document, we need to do
16 it. He's on board. And it is through his office is
17 where we are getting the easement and things like
18 that. It was at his suggestion that we have this
19 workshop. It is a good idea.

20 CO-CHAIR McBRIDE: I understand the
21 technical side, I understand your need for it but
22 also I do think we have to insure there is
23 compassion for the people that live in the area,
24 that can have input. If there is something that
25 needs to get changed, I look at what the water

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2 district did if the way of, I guess through the
3 Navy, the treatment facility down by the hospital.
4 And unless you knew that that house was a treatment
5 facility, it blends in with the neighborhood.

6 MR. MANGANO: Do you have a date for
7 the hearing.

8 MR. COLTER: It is not a public like
9 meeting it is just workshop. It will be informal,
10 with a lot of poster boards with Navy officials,
11 hopefully Grumman officials hopefully.

12 Steve will show up and we'll answer
13 any questions. We'll have -- like I was saying
14 before, we'll have a poster session. People can
15 walk through and look at the different posters and
16 things which is essentially going to be a draft
17 design. We'll hear the comments and we'll take the
18 input, you know as appropriate.

19 MR. MANGANO: What municipal
20 approvals do you need to actually make it come to
21 fruition.

22 MR. COLTER: All the land we are
23 looking at using is Town of Oyster Bay.

24 MR. MANGANO: Whatever town process
25 and town officials.

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2 MR. COLTER: Right. Right now.

3 MR. MANGANO: Do you have the time
4 frame of that.

5 MR. COLTER: Right now, we are
6 working with the town beginning a temporary right of
7 entry, that's line 35. That is just a temporary
8 permit giving permission for us to send a surveyor
9 in and a driller to get some soil data. Get a
10 surveyor there to survey the area so we can start
11 doing drawings man began July?

12 MR. COLTER: We were looking at July.
13 Line 39 is the workshop an as Mike pointed out that
14 is summertime.

15 MR. MANGANO: That is a tough time.

16 MR. COLTER: That is a tough time.
17 We may move it to September or as Steve suggested,
18 maybe we'll have two workshops whoever can make it
19 in July, we'll listen to some of the comments and we
20 can input them and redo it.

21 MR. MANGANO: If we can do two, that
22 is a good idea. You get initial reaction of the
23 community.

24 CO-CHAIR McBRIDE: When people see
25 equipment going into the area, they want to know. I

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2 would ask too that what you really look at doing is
3 very detailed mailing to all the people in the area.

4 MR. COLTER: Even when the surveyor
5 and the driller are there, we'll put drilling
6 notices out we'll walk the community for the people
7 in the neighborhood to give them a heads up that.
8 Is standard procedure for us.

9 MR. MANGANO: You'll have a site plan
10 at that workshop.

11 MR. COLTER: Yes, that is why we need
12 the surveyor to get in there so we can survey the
13 area and put what we think is our idea of where the
14 buildings should go, where the wells are going, what
15 the piping runs look like, there's a lot of
16 utilities in there we have to locate so we don't
17 mess those up so... Our first priority is getting
18 the surveyor in there to do that. And those
19 drawings will be what is used at the workshop.

20 So we are moving on. We are
21 continuing, we are making progress. Over the
22 wintertime, is a good time when we do all of our
23 plans, and in the summertime, we go out. And do as
24 far as assuming that this all goes well and
25 according to schedule, the first thing we'll do is

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2 actually install the wells. We have done
3 presentations previously on where the, tracks wells
4 are going, and where the injection wells are going.
5 We'll actually be putting those in at the
6 first -- would be one of our first items is it
7 actually putting those in and that will be later on
8 this summer hopefully in July if, if we can we get
9 our access agreements and stuff like that, to get
10 aquifer data, soil data, so we can incorporate that
11 into the design of the treatment building itself and
12 the stripping tower.

13 So we are making progress. We are
14 not moving very quickly but we are moving forward.

15 Three main components of the ROD is
16 the containment system that's operating to protect
17 the public water supply, the sentry wells are in and
18 addressing this hot spot area which we're starting
19 to do now. So we are almost there.

20 At the last RAB meeting we had some
21 questions on we get a lot of information on where we
22 are at today the question came up how did we get
23 here. So Steve Scharf from the DEC offered to kind
24 of do a re-cap of the history of the site, how we
25 got the RODs in place, how we came to the decisions

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2 that we did, to finally come up with the ROD that we
3 are working on.

4 MR. SCHARF: Thanks, Jim.

5 If you don't have one, I made a copy
6 of the presentation that I made. You can -- does
7 everybody have a copy?

8 My name is Steve Scharf, I'm the
9 project manager for DEC or division of environmental
10 remediation, overseeing remediation of the Northrop
11 Grumman^{AVC} Naval Weapons Industrial Reserve Plant. At
12 the request of the Navy, I put together a review of
13 the whole process that we are operating under.

14 On the first page, what we are
15 operating under is the federal law Comprehensive
16 Environmental -- CERCLA -- Response & Compensation
17 Liability Act. That was reauthorized as the Super
18 Fund. The DEC has promulgated their own set of
19 regulations, known as the Environmental Conservation
20 Law, which regulates the clean-up of facilities
21 defined as inactive hazardous waste sites.

22 Just to go through real quickly, when
23 a site is thought to be a hazardous waste site, it
24 goes through a preliminary site assessment. If that
25 shows that there was a problem there, we list it on

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2 the New York State Registry of Inactive Hazardous
3 Waste Sites. If it is a really bad site, we can --
4 we have the option of nominating it to the EPA
5 National Priorities List. We then go to PRP, and
6 negotiate a consent order. We ask them to do an
7 investigation under that order. We do an IRM. For
8 example, Grumman was identified. They contain the
9 groundwater plume emanating from the site we are
10 talking about here, by putting in a pump and treat
11 containment system ~~and~~ ^{that} went in almost 10 years ago
12 and been on line since 1998.

13 The information that is gained in the
14 investigation through a feasibility study is done to
15 screen alternatives, to determine what is the best
16 alternative, to mitigate the problem created by this
17 environmental hazard. And in doing that, we go
18 through a set process as promulgated under the law.
19 Protection of human health, long-term effectiveness,
20 long-term permanence, there's nine criteria that we
21 use to screen the alternatives.

22 Once we look at all the alternatives
23 and we go through the screen ^{process} ~~process~~, we will put
24 together a ^{PRAP} ~~PRP~~ and that is put together in the ROD
25 to the site, and once the ROD is signed, then we

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2 move to the remedial decision and remedial action
3 phase. *dos192*

4 In addition, some sites, for -- like
5 this one, for example, has a long-term operation and
6 maintenance pump and treat system, which will
7 probably be going on for a long time.

8 In particular on this side, under the
9 CERCLA process as an inactive site, everyone here
10 has to remember if you go back just ten years ago,
11 this was a top secret defense facility that
12 manufactured aircraft for the Department of the
13 Navy. As such, they had a lot of processes going on
14 that generated hazardous waste.

15 The other program at DEC that
16 regulates active facilities, essentially is called,
17 the law is called Resource Conservation Recovery
18 Act, RCRA, for short.

19 If you look -- RCRA regulates the
20 active facilities. So in that case, the naval plant
21 was operating both under RCRA and under CERCLA.
22 Once Grumman had announced that they were going to
23 close this facility with respect to manufacturing,
24 they are -- they still have a presence with
25 engineering and design. Then the site switched from

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2 active permitting, to what is known as corrective
3 action under RCRA. And because the facility had the
4 RCRA permit at the same time the investigation was
5 going on, under the CERCLA process, we sort of
6 delegated that the inside of the buildings would be
7 dealt with under the RCRA program and the outside
8 and the groundwater would be dealt with under the
9 CERCLA program. And we are still operating under
10 that today. In fact, I could spend a couple of
11 hours talking about all the corrective actions that
12 were done on the Grumman facility. All the various
13 plants, Plants 1, 2, 3, 5 are the major ones and
14 Plant 12, where they had to decommission the
15 facility, take out all the equipment and identify
16 those areas where has waste were spilled into the
17 environment and corrective action was necessary.

18 So for the most part, the corrective
19 action is now complete. It has been a long process.
20 As Joe was telling you, they first announced closure
21 of this plant back in 1996 and here we are in 2004
22 and we are still looking to finalize the RCRA
23 process for what's happening with the permit to
24 generate, transport and dispose of hazardous waste.

25 That's the regulations, some of the

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2 state regulations, that we operate under here, and
3 that we are here to talk about tonight.

4 I'll give you a quick history of the
5 whole plant. In the 1930s, Grumman first moved here
6 from Baldwin to Bethpage to set up their operations
7 here and begin manufacturing aircraft.

8 In the 1940s, there was a build-up
9 under World War II and they built Plant 3 and 5 with
10 respect to the Navy property. The other properties
11 were Grumman, but Plant 3 and Plant 5 in particular
12 were owned by the Navy and paid for by the Navy and
13 operated by Grumman for the Navy. Hence the GOCO
14 term, or "Government Owner Contractor Operator".

15 From the 1940s to 1990's, Grumman
16 manufactured an enormous amount of aircraft for the
17 Navy up until the time that closure was announced in
18 1996.

19 Since 1996, we have been undergoing
20 the closure under corrective action.

21 Keep in mind even though the plant
22 was an active facility in the late 80's, the site
23 was listed on the DEC inactive hazardous waste
24 disposal site lists, because of problems in the
25 groundwater. We signed an order on consent with

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2 Northrop Grumman and a memorandum of understanding
3 with the Navy to investigate the two sites. Grumman
4 announced they would investigate their properties
5 but not the Navy properties. The Navy agreed it was
6 at that point that they started to try to unravel
7 how the two were intertwined. This is an unusual
8 site. It is both Navy owned and contractor owned,
9 and all contractor operated. So there were a lot of
10 problems that came up because of that, but I think
11 at this point we pretty much resolved most of that.
12 Even if we agreed to disagree, we are moving forward
13 with the remedy that has been selected for this
14 site.

15 Under the CERCLA process or RI/FS
16 process, the DEC first placed the Grumman Aerospace
17 facility in 1987. Again, in 1990, Grumman signed
18 an order with the DEC but said they would only
19 investigate their property. Also at the same time,
20 and as the consultant for Bethpage Water District
21 could give us more detail during his discussion, it
22 was found an air stripper was required at the
23 Bethpage Water District No. 6 -- do I have that
24 right, John, the year?

25 *John John that is correct.

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2 MR. SCHARF: At that time, based on
3 routine sampling as required by the New York State
4 Department of Health, low levels of VOCs were
5 beginning to show up in the water supply. In order
6 to be ^{productive} productive, the water district moved forward
7 with implementing a remedy and then after that point
8 began to enter into discussions with Northrop
9 Grumman, which at the time was Grumman Aerospace, to
10 fund -- reimburse them for what they -- money they
11 laid out for this remedy.

12 So once the investigation began, an
13 enormous amount of testing went on under the DEC, as
14 a Class 2 site, a number of monitoring wells were
15 installed and a number of source areas on the
16 external parts of the building were identified. Out
17 of that information, two RODs were signed. One by
18 the Department of the Navy for sites one, two, and
19 three, on Plant 3 property. And one by Northrop
20 Grumman for a huge TCE spill right across the
21 street, here, at Plant 2.

22 Accordingly those recommendations
23 have been or are currently being implemented at
24 Plant 2. Northrop Grumman is operating a soil vapor
25 extraction system to pull out all the solvents that

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2 remaining in the soils. At the same time, it was
3 found that because of the sandy soils in the area,
4 the groundwater was now contaminated and it was
5 imperative that they do something about it and they
6 went -- Grumman went forward with designing and
7 implementing a containment system. That took about
8 four years from the time they first mentioned it to
9 the design, to the construction, and to the
10 implementation.

11 To get a feel for the time frame
12 here. There's a lot going on, they are closing
13 down, commissioning a 600-acre facility at the same
14 time the investigation is going on, reports are
15 being generated both under the RCRA program,
16 corrective action, the DEC's CERCLA, under the RI/FS
17 program, and thrown into the mix was an Oxy-Hooker
18 Ruco site. Ruco Polymers was bought by Hooker
19 Chemical and Plastics, which was the same company
20 that brought us Love Canal at Niagara. It became
21 the Oxy-Hooker Ruco^{site} It turned out they were
22 running a different type process making plastics,
23 where they were recharging groundwater into these
24 recharge basins that were contaminated with vinyl
25 chloride, they made polyvinyl chloride piping there.

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2 That plume is now reaching, which is what Jim's
3 talking about, that plume is now reaching the
4 Northrop Grumman containment system and we are
5 having to deal with that. Oxy has stepped in and
6 put treatment on the air stream to remove vinyl
7 chloride so it is not emitted into the atmosphere.
8 The *ONCT system went on line. There was an attempt
9 to try to negotiate a groundwater regional
10 groundwater remedy between the Navy, Grumman and Oxy
11 Hooker Ruco and it ^{fell}~~felt~~ apart for a number of
12 reasons. What each does, they came up with their
13 own remedy. Actually Grumman and the Navy got
14 together and jointly funded a study for the
15 groundwater problem, and the single most important
16 part of that, remedy, on that RI/FS process, was the
17 containment system.

18 What came out of that was the ROD
19 that we moved to, at the bottom, in 2001, where we
20 had realized based on testing the plume was far from
21 the property and beyond the containment system. We
22 weren't sure how far but we knew that it was
23 off-site, based on testing that was done. Given the
24 enormity of the plume, full containment of the
25 off-site plume was not a feasible alternative.

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2 Accordingly, we said what are we
3 going to do? There are municipal wells
4 downgradient that may be impacted with these low
5 levels of contaminant in the groundwater. We came
6 up with wellhead treatment, removal of hot spot,
7 and/or hot spots that may be identified in the
8 future, which includes one area to the GM 75 area,
9 in addition to GM38, which the Navy will evaluate as
10 to the need of additional off-site pump and treat.
11 Jim didn't mention that but that is something that
12 is in the work plan.

13 Tracking the plume, and having a
14 contingency plan to put treatment on for any well
15 that needed it.

16 Now the contaminant that we are
17 talking about here, is a VOC. Fortunately, VOCs are
18 easily removed from the groundwater. John ~~monthly~~ Molloy
19 will get into more of that during his discussion.
20 And so we sat down before we signed the ROD with the
21 potentially impacted water district, and said this
22 is the route that we are going to go. They were
23 very concerned, naturally. One of the options that
24 was also put into the ROD was what is called
25 technical advisory meetings, or TAC meetings, which

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1 we are going to have tomorrow morning, to update the
2 water district as to the status of the project post
3 ROD. What is the status? That is some of what Jim
4 talked about tonight: The outpost wells, the sentry
5 wells, on the containment system, there's quarterly
6 monitoring of all those wells.
7

8 And you know, how soon might they be
9 affected by the plume that's moving off-site? So
10 that's -- just to sum it up, under the CERCLA
11 process, the remedy that we signed in 2001, was to
12 have the off-site groundwater for the pump and
13 treat, continued operation of the on-site
14 containment system, continued funding for treatment
15 for the Bethpage Water District, and that's because
16 there are three water districts: Bethpage Water
17 District has three wells downgradient, 4, 5 and 6.
18 Six was paid for by Grumman, four was, Grumman paid
19 for -- eventually, but the water district paid for
20 that upfront initially. Plant 4 was paid for by
21 Grumman and Plant ⁵(4) by the Navy. The Navy stepped
22 forward to the water district and funded the entire
23 construction. NUS came up with a cost, present
24 worth cost, for the 30 year operation and
25 maintenance?

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2 MR. COLTER: Yes.

3 MR. SCHARF: That wasn't the case
4 with the other plants built by Grumman. That is
5 still on the table for negotiation between the
6 districts and Northrop Grumman, am I correct? May I
7 say that.

8 A PERSON: That is correct.

9 MR. SCHARF: To summarize it all, I
10 have not all been a part of this. It has been a
11 long process of bringing to the present. The Oxy
12 Hooker Ruco site RODs were also signed for that
13 site, to remove the vinyl chloride from the
14 groundwater by a biosparging process, and the
15 remainder of the contaminant, when it hits the
16 Grumman containment system, will be dealt with
17 accordingly by that system. It turns out EPA used
18 our remedy anyway, but they were reluctant to write
19 that in their ROD, but they did. I got a comment
20 letter yesterday on the biosparge design. They
21 still have issues that we have to sit down and
22 resolve. So it is an ongoing process.

23 Also the main thing is there's
24 another large component. When I say "large", this
25 is only maybe two-thirds of the site, the area of

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2 concern. These are all the monitoring wells that
3 are in the area, starting in the north, Plant 3, and
4 going to the south, by *Central ~~Area~~ Avenue.

5 Dave, how many would you say, at
6 least 200 wells?

7 MR. STERN: (Nods)

8 MR. SCHARF: A number of wells are
9 sampled quarterly. It is a long process. It takes
10 almost a month to sample all the wells, right?

11 MR. STERN: We sample a subset of
12 those wells, but every quarter.

13 MR. SCHARF: Every quarter. So it is
14 not an easy task. It is ongoing. It is a big
15 expense but we want to make sure we know what's
16 happening real time with the groundwater and the
17 contaminant as they're moving off-site.

18 When we signed the ROD in 19 -- in
19 2001, this was a figure out of feasibility study
20 that was put together by Arcadis, based on some of
21 the real data and a some of the extrapolated data,
22 with groundwater models on the south end of that
23 figure on the left, which is hard to see, is
24 Hempstead Turnpike and the light blue area is low
25 level VOC contamination from operations that were

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2 done on Grumman Navy facilities. And we looked at
3 that. Even at that range -- one thing it doesn't
4 show here, because it has been extrapolated, is the
5 effects of the containment system, which is
6 somewhere to the middle or southern middle portion
7 of the plume, where it is having the effect of
8 cutting off the plume and redirecting it, and the
9 groundwater is starting to clean up. You see it
10 starting to clean up.

11 One other important task of the ROD
12 that the DEC signed, which the Navy signed their own
13 ROD as well, was predesign investigation, which are
14 also no simple tasks. It was a four or five million
15 dollar project, where the Navy, back in 2002,
16 completed I believe it was 15 vertical profile
17 borings, down to the Raritan clay, which is 800 feet
18 deep, taking samples every 10 feet, and looking at
19 the chemistry. Not only the geology, but the
20 chemistry, of the groundwater. And that was -- all
21 that was incorporated into a model as current data,
22 because we hadn't gone that far south before. When
23 we sat down with the water district, we said we
24 think the plume around Hempstead Turnpike, given the
25 model, some of you may be impacted in ten years and

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2 others in 30. Well it turned out, this one is
3 probably -- it is a little difficult to see, I
4 apologize for that, if you see the middle line
5 across the entire white line, Hempstead Turnpike, 10
6 and behold the plume was much further than we
7 thought initially.

8 We realized we had to step up the
9 program and get the outpost wells out. Those
10 outpost wells are now complete. In fact, we have to
11 look at, for Plant 1 of the South Farmingdale Water
12 District which is OU -- 1 or 3? Plant 1, outpost
13 well is three.

14 We have to wait to get Arcadis' data
15 back. Initial sampling shows low level
16 contamination moving to toward the South Farmingdale
17 well. If it does turn up those wells are
18 contaminated, the Department of the Navy will move
19 forward and open up negotiations, with South
20 Farmingdale, to implement a treatment remedy for
21 those wells.

22 One thing I left out, I'm saying the
23 Navy is doing this and Grumman is doing that. Well,
24 it sort -- there is some agreement and some
25 disagreement. We have all aspects of this project

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2 either being taken care of by the Navy, who stepped
3 forward to take care of off-site issues, anything
4 south of the containment systems. They told
5 Northrop Grumman, you keep monitoring and operate
6 your pump and treat system. That's been an ongoing
7 discussion between the Navy and Grumman and they
8 still agree to disagree but I certainly hope that
9 somewhere in the near future that that will all be
10 resolved.

11 A WOMAN: Can I ask a question. The
12 east side of that plume, is that near 135?

13 MR. SCHARF: That is correct.

14 A WOMAN: The lower portion.

15 MR. SCHARF: If you go to the next
16 slide.

17 A WOMAN: Right on top of my house.

18 MR. SCHARF: I've taken the slides
19 from some of the presentations that Arcadis made for
20 the Department of the Navy at previous RAB meetings,
21 and also at those TAC meetings. One thing you have
22 to appreciate, you can kind of see the three
23 dimensions, that once you get south of Hempstead
24 Turnpike, but even before that, these chemicals are
25 sinkers and they're moving -- they are moving down

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2 at a less degree than they're moving out. But
3 they're not in the shallow groundwater.

4 A MAN: Is that good or bad.

5 MR. SCHARF: It is not going to
6 impact your home.

7 A MAN: It will impact our wells.

8 A MAN: Don't dig thousand feet deep.

9 A MAN: First notice that's on the
10 list. Have they been notified.

11 MR. SCHARF: They had a private well
12 there for irrigation or.

13 A PERSON: The *New Island Hospital.

14 MR. SCHARF: Yes.

15 MR. BRAYACK: They have a well for
16 non-contact pooling. They pull the water out and
17 put it right back in and it gets tested all the
18 time. It turned up clean every time.

19 MR. COLTER: We put a test boring on
20 property. We sat down with them.

21 A MAN: They just expanded their
22 facility.

23 MR. COLTER: They know what we are
24 doing and they gave us permission to come on their
25 property to drill a well.

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2 MR. BRAYACK: All the groundwater in
3 this area is not contaminated. If we show
4 boundaries, when you put wells in, you find clean
5 wells as often as you do dirty wells.

6 MR. SCHARF: I'll say this much too,
7 for everybody else here. I'm just scratching the
8 surface, here. There is so many things going on.
9 For example, Grumman was pumping between five and 20
10 million gallons of water a day for various
11 processes. A lot of that acted to contain some of
12 the chemistry. Also acted in terms of recharging
13 it, it was pushing it down further. We have a much
14 better handle on what is happening now than we did
15 years ago back. As we move forward with these
16 remedies, in fact the remedy that Jim was talking
17 about earlier GM38 D2 remedy was pushed for by the
18 water districts, especially Bethpage. You have hot
19 spot areas near our wells, and we have treatment
20 systems designed to handle so much concentration,
21 and we are concerned that this may blow us out of
22 the water. So we looked at that and we agreed and
23 added that in as one of the remedies. So that gives
24 you an appreciation for the depth of the problem.
25 And it doesn't -- but as I said, we are starting to

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2 see the aquifer clean-up especially in the area by
3 Central Avenue. And obviously we've worked on
4 cleaning up all the sources. Now as we enter the
5 long-term operation maintenance and monitoring
6 phase, we have to confirm that. In light of
7 protecting human health and the environment, we need
8 to step up and make sure that none of
9 these -- something being impacted we put the outpost
10 wells and treatment.

11 And another thing that was written to
12 the ROD at the direct request of the water district,
13 is that we put in a treatment system that can
14 produce water that is non-detect. Not such a
15 certain state standard president we looked at that
16 and got Grumman and Navy to agree based on current
17 analytical ^{methods} ~~metal odds~~ which it is down to 500 ^{quantitation}
18 ~~tie down~~ to the parts per trillion, half a part per
19 billion range. So that's good. That's low.
20 If -- I don't think if the near future they're going
21 to examine up with metal odds that do much better
22 than what we have now that being said that's how
23 where we got to today with the groundwater recommend
24 along the way there are other issues that have come
25 up with Grumman and in organics in the groundwater

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2 so we've added all' an under the RCRA cleanup to
3 monitor to make sure areas that were cleaned up for
4 ^{inorganics} in organs, chromium cadmium that they aren't impact
5 G W. We agreed under the CERCLA program it take the
6 responsibility for all that.

7 CO-CHAIR McBRIDE: Steve? I guess
8 between you and Jim there is that one other area we
9 haven't spoken about in a while where you were doing
10 the vapor, extraction and site and you were going to
11 have to scrape up for after the contaminant, is this
12 tied into the groundwater or dealing with the
13 separate issue?

14 MR. COLTER: That's Navy an is main
15 contaminated site on the property. Mainly
16 contaminated with VOCs and PCBs. That was our main
17 source area, which was contributing to the
18 groundwater contamination.

19 CO-CHAIR McBRIDE: Right.

20 MR. COLTER: That is why we went in
21 initially with the air sparging soil vapor
22 extraction system to clean up as much VOCs as we
23 could so that this doesn't ^{pose} ~~post~~ a problem with
24 disposal when we dig up the PCBs that has been
25 completed and we are actually one of the things I

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2 didn't update you on is we are now in the design
3 phase of a soil excavation plan for that. To dig up
4 the PCBs. So our source area, as far as continuing
5 to contaminate the groundwater has mainly been
6 cleaned up over 90 percent.

7 CO-CHAIR McBRIDE: Question came, up
8 over time we stated there are no contact surface
9 areas where a person could be exposed to PCBs. In
10 that are where you've done that extraction, if a
11 person were to walk on that soil, is there any
12 contact concern, any pathway from health hazard?

13 MR. COLTER: Mainly it is subsurface
14 PCB contamination. I don't think we have surface
15 contamination, Dave ,is that's right.

16 MR. BRAYACK: There is low level
17 surface contamination. It has been partially
18 delineated. It is fenced off.

19 CO-CHAIR McBRIDE: From a point of
20 dust moving into other areas.

21 MR. BRAYACK: When we first did the
22 investigation we collected eight or 10 samples and
23 the majority of it wasn't too bad. It needs to be
24 addressed for living there. We found one area that
25 has elevated levels of PCBs and within a couple of

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2 months, we put a soil cover on that as an interim
3 step basically.

4 MR. COLTER: We'll come back and dig
5 it up.

6 CO-CHAIR McBRIDE: Is the whole area
7 with the soil cover.

8 MR. BRAYACK: Just the one hot spot.
9 It was the fence line.

10 MR. COLTER: Its the east end of the
11 plant. It is within the fenced area.

12 MR. MANGANO: We are talking about
13 that part the Navy is retaining title to.

14 MR. COLTER: Right. It is pretty
15 well vegetated, actually. Like I said, most of it
16 is subsurface. It was an industrial leach field so
17 mainly what we are finding is eight to 10 feet below
18 and some areas, even deeper.

19 CO-CHAIR McBRIDE: Has official, has
20 assessment really been done to, if anyone on the
21 other side of that fence line were to say, am I
22 possibly exposed to any of these PCBs or the dusts.

23 MR. COLTER: Back in 1994 we sampled
24 yards adjacent to the Navy property for that reason.

25 CO-CHAIR McBRIDE: If a person came

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2 to you now, and said I'm walking on the other side
3 of the fence if, what sort of assurance could you
4 give them that they're not being exposed.

5 MR. COLTER: We did an assessment as
6 part of our remedial investigation, with the
7 resident, 365 days a year and the on-site worker and
8 the risk assessment for the surface soil contact for
9 the on-site worker, there was no incidental risk
10 within that EPA risk range, that EPA says is
11 satisfactory.

12 MR. MANGANO: Is there a time line
13 now for that particular piece.

14 MR. COLTER: We are in design right
15 now. We should have -- I'll have an internal draft
16 in about a month or six weeks. We'll have -- if we
17 decide to go forward with full excavation, we'll
18 send it to the regulators for review probably in
19 two, two and a half months. We'll get
20 those -- we'll hopefully get comment and things, and
21 revise it. The budget for that isn't identified
22 until fiscal year 2006.

23 MR. MANGANO: Is it you're developing
24 an actual plan and then you need to get it funded.

25 MR. COLTER: --

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2 MR. MANGANO: Then you'll have a
3 finite timeline?

4 MR. COLTER: Because we are coming
5 close to 05, the 05 budget is already set, so, you
6 know, we are actually -- unless somebody falters and
7 fails to implement a big project, then money may
8 become available in 2005. But I have to look, the
9 Navy has to look at the design and the cost of this
10 and the constructibility of it. As I said, in some
11 areas we are down 35 feet and we have to question if
12 there is a need to take an action at 35 feet or not,
13 based on concentrations and things like that. Our
14 ROD says right now, remove everything to 10 parts
15 per million.

16 MR. MANGANO: That takes you to 35
17 feet.

18 MR. COLTER: In columns. It is
19 really weird how this stuff got down there. It is
20 not 35 feet over the whole area. It is just in
21 certain spots. If it becomes too cost prohibitive,
22 we may have to go in with an explanation of
23 significant difference for the ROD and that will
24 take several months to do. Then that, if we are
25 successful in that, if we choose to pursue that line

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2 of action, then that puts us into the 2006 time
3 frame from implementation. One way or the other,
4 I'm looking at 2006 as pretty hard to get something
5 done out there as far as getting rid of most of the
6 PCBs. Whether we go down to 35 or 55 feet is still
7 up in the air.

8 MR. MANGANO: The remediation plan on
9 the remaining property that is scheduled for
10 transfer to Nassau County. Jane Hodack (ph) was
11 going to be here. She's an attorney with Nassau
12 County, she's an environmental attorney. I know
13 Nassau came up at planning meeting and had question
14 or comment. How does that affect the timeline?

15 MR. COLTER: The remediation is
16 complete for the 96 acres slated to go to you, that
17 is our finding of suitability to transfer everything
18 has been done that needs to be done. You can have
19 that property at any time to do commercial
20 industrial type work.

21 MR. MANGANO: As we move toward
22 transfer she's going to have -- I was hoping she
23 would be here tonight but I believe she had several
24 questions that she wanted to raise and have answered
25 or addressed prior to the taking of the property.

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2 MR. COLTER: We met with her two
3 weeks ago and she laid out her questions and her
4 main question with respect to what I do, the
5 remediation, is the use of the decon pad, that we
6 call it, which was the former -- it was a former
7 RCRA permitted drum storage pad, secondary
8 containment. Anything that spills on there can't
9 get released to the environment. Then you can
10 powerwash the concrete, everything goes into a
11 contained sump, so it is a good facility to
12 decontaminate equipment, which is what I need to do.

13 MR. MANGANO: You want to continue to
14 use that decon pad that you're referring to.

15 MR. COLTER: Correct.

16 MR. MANGANO: Throughout at least the
17 2006 process.

18 MR. COLTER: She asked us to look if
19 we could get rid of it sooner could we move the
20 decon operations somewhere else.

21 MR. MANGANO: It comes right out.

22 MR. COLTER: We are asking for an
23 easement to utilize it. We owe her an answer but in
24 short the answer is her one big concern was when we
25 start digging up the PCB. At Site 1, how are we

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2 going to eliminate or mitigate the potential for
3 those contaminants to go into the storm drain and
4 then into the recharge basin? And we are
5 going -- the storm water management plan will
6 address that. That will not happen. If we don't
7 use the decon pad, to decon the dozers, the trucks,
8 and things like that, and we have to construct it
9 near Site 1, then you introduce more of a risk. As
10 I said that decon pad, it is a former RCRA facility
11 which had to be designed in a certain special way
12 with all the safeguards that will ensure that all of
13 the decon material, that we scrub our equipment
14 with, and scrub our trucks with and our dozers with,
15 doesn't get released anywhere except into that sump.
16 Then we pump the sump out and test the water and
17 dispose of the water accordingly. So, you know, she
18 asked us that. We looked at that. I owe her an
19 answer. But basically that's going to be the
20 answer, yes, we would like to use it throughout the
21 2006 remedy. Just to eliminate her big concern of
22 releasing PCBs from decon water into the
23 environment.

24 MR. MANGANO: It has a bearing on
25 what you can practically do with the property if you

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2 come up with site plan to reuse the property.

3 MR. COLTER: This is just me talk and
4 we realize the potential implication toss market
5 ability but our mandate is to clean up the property
6 and to do it in a way that minimizes any potential
7 risk of releasing the contaminants we are cleaning
8 up into the environment. And that's our best area.
9 That thing was specifically designed for that
10 purpose is to contain contamination when you clean
11 equipment. It is in our best interest and the
12 county's interest to use the facility not to
13 construct it somewhere else where -- where it is not
14 designed to do that.

15 MR. MANGANO: I don't want to get
16 ahead of us. It begs the question why take the
17 property, then you can't use it.

18 MR. COLTER: Yes.

19 A MAN: Began when you look to reuse.
20 Should we really take the property if you're not
21 going to be able to reuse it?

22 MR. COLTER: Nods.

23 MR. MANGANO: I'm sure she'll be in
24 touch and some of the questions are more technical.

25 CO-CHAIR McBRIDE: To follow-up on

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2 that Site 1 area. Since you're not looking to
3 excavate you're saying even though there are low
4 levels at surface what sort of low level are we
5 talking about would it be feasible at this point to
6 put as you did on the hot spots, put a soil cap on
7 it fuel 2006.

8 MR. COLTER: It is a big area to dig
9 that soil. The low level we are talking is one to
10 ten. One is a residential cleanup number. Ten is
11 the industrial cleanup number. As everyone knows
12 the reuse of this property commercial industrial we
13 cleanup to 10. So what I'm talking about is, you
14 for, in those areas where we do have surface
15 contamination as Dave Brayack said, that is minimal.
16 It is might earn one but less than 10? Most of our
17 over10 is down deep so adding a soil cover in the
18 whole area, which is about an acre and a half and
19 then to come back and dig it up for the chemical
20 that is on the surface, is really not a good
21 expenditure of money to do that.

22 CO-CHAIR McBRIDE: Steve, from your
23 point of view, do you see any concern if any of the
24 ~~rest-dents~~ residents were concerned about that soil being
25 contaminated on the surface? If something should

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2 be ~~done~~^{done or} is it adequate right now?

3 MR. SCHARF: Are you talking about
4 Site 1 or areas two and three.

5 MR. COLTER: Site 1.

6 MR. SCHARF: Site 1, actually the DEC
7 is now promulgating those very cleanup standards for
8 industrial use and commercial use and residential
9 use. Right now the only thing we have is one parts
10 per million, unrestricted totally. One PCBs. If it
11 is more than that, we look for a soil cover and then
12 if it is ten below then we restrict it saying okay,
13 it's -- you can't use this for residential use.

14 But the ROD that was written will
15 address contamination of PCBs when the DEC will
16 review that when it comes in and we'll make sure
17 that it will meet whatever the current standard is,
18 which is actually under change right now.

19 CO-CHAIR McBRIDE: Right now, I was
20 driving through the area, there's a residential
21 street and homes right across the street. If anyone
22 were to question, is there a health concern in the
23 way it is sitting right now, if I could assure them
24 that there is none.

25 MR. COLTER: The only transport

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2 mechanism as you said would be dust. The area -- we
3 could take a look at -- I don't have data with me
4 but I could take a look at where our surface
5 contaminants are, the concentration. We'll have
6 our internal risk people do a risk assessment for
7 inhalation for the next RAB meeting. It is heavily
8 vegetated so the threat of dust is minimal. Add to
9 that that area is probably one of the areas where we
10 don't have surface contaminants. If we do, they are
11 between one and ten. The risk assessment will show
12 there is no risk to inhalation. But we can show it.

13 CO-CHAIR McBRIDE: I know there is
14 questions about the community park with dust and all
15 that should still extend over here. If they're
16 talking about sure it is a different area, not
17 something part of the RAB but it would seem as
18 though it would be a logical question that ^{residents}~~residence~~
19 may ask that question and I think it would be the
20 right thing to have an answer for them from the
21 Navy.

22 MR. SCHARF: We refer those questions
23 to the health department in terms of public health
24 unfortunately they're not here tonight.

25 MR. SCHARF: We can go back through

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2 and take a look at those numbers when the design
3 comes in, we'll go back and bring up the historic
4 data about PCBs and make sure they address areas of
5 concern that have to be addressed.

6 CO-CHAIR McBRIDE: Thank you.

7 MR. COLTER: Okay.

8 We've gone over how we got here,
9 we've gone over what we've done. Where we are at.
10 We know that our main goal is the protection of the
11 public water supply from those contaminants that
12 have already left the Navy and Northrop Grumman
13 property. And we addressed that through water
14 supply treatment systems. At the last meeting there
15 was a question from the community member, what
16 assurances are there that these treatment systems
17 continue to operate with certain scenarios such as a
18 power outage or other unforeseen circumstances
19 really that is not a place for the Navy to answer.
20 So we asked John Molloy, from H2M, who represents
21 the Bethpage Water District, maybe to say a few
22 words about how the treatment systems operate and
23 what contingencies are in place.

24 MR. MOLLOY: Good evening, everyone.

25 My name is John Molloy. I'm the

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2 president of H2M. We have been the consultant for
3 the Bethpage Water District for a number of years
4 and in the early 90's, I guess up to about four
5 years ago, I was the guy from the office that went
6 to all the meetings with Bethpage, on their normal
7 routine operations, and I was and have been party to
8 this thing now for, I'm now fully gray. When I
9 started, I know was at a minimum prematurely gray.
10 I have been actively involved with this for probably
11 a dozen years myself. And it is still ongoing. By
12 way of a little description, up there earlier in one
13 of the slides, you saw this huge blob emanating from
14 the Grumman site that went all the way down to
15 Bethpage. All the way through Bethpage right up to
16 Hempstead Turnpike.

17 The Bethpage Water District has three
18 production facilities in that area, right within
19 that plume as described there.

20 We have been as a district, the
21 district has adopted for a long time now a policy
22 that they won't use water that has contamination. A
23 little earlier it was presented, plant six the
24 treatment went in in 1990. In fact it was years
25 earlier than that that contamination was found there

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2 and the well was taken off-line. What the district
3 has done is when ever there's been any evidence of
4 anything, they have taken wells off-line and they
5 have done what they needed to do to clean up the
6 water, spending district monies and then doing what
7 they needed to do to get that money back. And
8 that's been an ongoing process now for a dozen years
9 plant six which was the first one that was hit has
10 two wells. We had installed a treatment system
11 based upon what was known at the time and
12 contaminant levels at the time. Very little data
13 was available. During that time frame virtually all
14 the work that was being done was being done on-site.
15 We were deeply involved with Grumman and DEC in this
16 kind of back and forth counter way of saying if we
17 need to go off site we need to go where the plume
18 is, we need to see how far it is. We collectively
19 then moved ahead through a whole series of
20 installing monitoring wells in that whole network
21 you see out there, came well by well, step by step,
22 push by push.

23 But we did install a treatment system
24 at Plant 6 before that went back on -- before we put
25 water back out into the system from that well. At

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2 Plant 4, which is on the east side of the plume,
3 probably not far from where you live, is right along
4 the Seaford Oyster Bay, you see it as you drive by,
5 you see the big silver bullet there, that is a
6 counter current pack tower. We have two wells. We
7 installed -- the district installed the treatment
8 there before there was contamination in the wells at
9 all, because we just felt it was coming, it was
10 coming our way and we want to have it there before
11 it hit there. As its turns out we were right. We
12 already had the treatment system there and
13 operational before anything hit us.

14 The last of the three sites, that are
15 within the plume area, is the one right just north
16 of the hospital it was referred to a little earlier
17 as the one that we put in a residential looking
18 building that is a very effective and efficient
19 treatment system that is in that building, that one
20 there, the plume is I think riding on top of the
21 well. It may be one of those areas that has a lens
22 of clay there so the contamination is not getting
23 down deep enough there.

24 Was a case where treatment system was
25 installed before the problem hit. The case of Plant

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1
2 4, there was an agreement with Grumman man where the
3 money came back. In the case of Plant 5 the Navy
4 came to the table, the district actually did the job
5 and based upon the public bid that is we obtained,
6 we negotiated, I remember going down somewhere near
7 Philadelphia, to work that out, to develop an
8 agreement to repay the district for its capital
9 investment as well as for 30 years. This process is
10 continuing. Internally, I passed the baton to
11 another engineer, and who doesn't have quite as much
12 gray hair as I do, he's on the same technical
13 advisory committee, and he will be there tomorrow
14 representing Bethpage in our ongoing work with the
15 district, of staying on top of this whole situation,
16 as we have for the last dozen years. That is just
17 your water district's role in keeping this thing
18 going, and going in the right way from their point
19 of view.

20 I can remember the 38D from -- I
21 don't want to say how many years ago pressing for.
22 I'm anxious to see that thing installed and
23 operational. It may not have a bearing ultimately
24 on Plant 5 for Bethpage but certainly putting that
25 offsite treatment system in play will pull a lot of

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2 contaminants out of the environment. Even if they
3 pass by Bethpage, they are already moving south of
4 the Hempstead Turnpike. They'll end up hitting the
5 South Farmingdale wells and I think you alluded to
6 that additionally.

7 I understand some questions came up
8 at the last meeting regarding how do you do
9 treatment at the district? How does the district
10 operate it? What type of safeties are involved?
11 So let me address that a little bit. I'll talk in
12 general terms but this is true of all three of the
13 stations that I have. One of the stations has two
14 wells. Another station has one well and the third
15 station has two wells. So we have three plants that
16 treat water that are within that plume area. In
17 each case, we have what's called a counter current
18 packed tower. It is a very simple and I guess in
19 engineering often times the simplest approaches are
20 the most elegant approaches it is based on
21 principals of chemistry, if you run air
22 counter-current to water the contaminants much
23 prefer to go into the air phase than into the water
24 phase. You will take contaminants out of water
25 phase and put it into the air phase. And these

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2 plants are now all designed to handle up to 600
3 parts per billion on the raw water side. If the
4 contaminants in the well got that high, we can bring
5 them down do non-detect.

6 In the case of a two-well site?
7 Means the treatment system there could take two
8 wells simultaneously, and bring it down to the point
9 of non-detect.

10 In the case of the one-well site, the
11 same thing is true for one well.

12 Now let me talk a little bit about
13 what we see in the wells in the raw water.

14 Plant 6 that has two wells, has
15 always been the one that has -- has had the highest
16 values in it. It was the first one that was
17 impacted. The shallow well air, general point of
18 view is run 2 to 300 parts per billion. In fact it
19 is maybe sliding a little lower. The deeper well on
20 that site is relatively clean. It has always been
21 clean. The shallower well essentially in effect
22 screens the deeper well. These wells across the
23 board run anywhere from 500 to about 700 feet deep.
24 Generally speaking.

25 That's Plant 6. So you have a feel

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2 for what the numbers are.

3 The shallow well is about 200 parts
4 the deeper well, there, really nothing in it, and if
5 anything, it is one or two parts.

6 Plant 5 I mentioned earlier, has
7 nothing in it. Maybe the clay is confining it, but
8 who knows. We have more than enough there to handle
9 virtually anything that comes by, at least we would
10 expect.

11 Plant 4, similarly, has contaminants
12 in it now to six, but they are relatively low. When
13 I say "low", like in the teens. We can handle in
14 600 down to non detect. The teens, there ^{is no} ~~is no~~
15 issue, no problem.

16 Let me talk a moment or two about
17 testing. Besides ^{having} ~~have~~ an engineering company and we
18 do the engineering, we also have long done the
19 laboratory analytical work for the Bethpage Water
20 District. So I'm familiar with the programs of what
21 goes on analytically. Each of these wells, and I'll
22 focus in on the kind of Grumman/Navy related items.
23 On volatiles on any of these plants we sample the
24 raw water, the water out of the well, and the
25 treated water, once a month. So it is a routine

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2 monthly test. And we do that for the volatile
3 organics. And just so people are aware, when you're
4 running samples from wells that are this deep,
5 things don't jump and change in major ways. You
6 will notice trends over time. So the monthly
7 sampling frequency is more than adequate to deal
8 with are you there looking at it often enough.

9 The testing that you do for these
10 volatile organic compound, *trichloroethylene, the
11 treatment, and all the kinds of thing you've seen
12 and talked about, limited detection is half a part
13 per billion. The drinking water standard is five.
14 You're considerably away from where the drinking
15 water standard is.

16 We also routinely do all of these
17 wells for heavy metals even though the probability
18 of any of that thing getting that far away that deep
19 down in these wells, is highly remote. But these
20 wells are all routinely sampled for the heavy
21 metals.

22 Probably even more remote but
23 nevertheless part of what is done routinely not at
24 the same frequency is each of those wells are
25 routinely analyzed for PCBs. We do pesticide PCB

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2 scans there's oodles of data for pesticide in the
3 wells and --

4 CO-CHAIR McBRIDE: Never found
5 anything.

6 MR. MOLLOY: Never found anything and
7 the probability of finding anything, is way, I don't
8 think you'll ever find it unless somehow another
9 water was coming down from the surface and there was
10 a problem with the well construction.

11 MR. SCHARF: The state health
12 requires those tests at your discretion to insure
13 potable water.

14 MR. MOLLOY: There is routine
15 requirements and Nassau County, Suffolk County is
16 fairly similar, the testing is probably more intense
17 than you'll find anywhere. There is a good pattern
18 of testing. In addition to having the district
19 testing, a New York State approved laboratory for
20 these tests, the county health department also comes
21 out here and spots and does their own testing so
22 there is other spot tests that go on and the data
23 from us and -- is consistent.

24 I wanted to give you a little flavor
25 for where the numbers are. And the water that is

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2 going out to the system is, you know, crystal, it is
3 excellent. There are no issues at all with the
4 water that is being delivered to the customers.

5 With respect to the treatment system
6 again, it is a count to count PAC tower. It is
7 simple device. All you do is you have a cylindrical
8 tower typically 10 feet in diameter, it has a
9 ~~packed media~~ ^{packed media} ~~backed media (meter?)~~ In it. Very simple. It
10 looks like a wiffle ball for want of a better
11 description, that your kid will play with. It is a
12 piece of plastic that allows water to cascade down
13 and you have a film that develops over the plastic.
14 When I say a film, the water kind of coats the
15 surface and it is trickling down this huge tower and
16 it will have a bed of this stuff probably somewhere
17 between 30 and 40 feet deep. So water comes in at
18 the top, the typical well is about 1,200 gallons a
19 minute and it will be spread out over the top of
20 this tower, and it will trickle down, cascading all
21 the way down to the bottom. As the water is going
22 down, air from the outside is going up,
23 counter-current, in the opposite direction as the
24 water. So physically and mechanically the device
25 that is used and the principles of the chemistry are

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2 very well-known. They are direct and unchanging.
3 It is unlike carbon, which is used in other places,
4 that has a life, the bed gets absorbed and you have
5 to take the bed off-line and regenerate the bed.
6 The treatment device here is simple, straightforward
7 and works very well and is extremely predictable,
8 and reliable.

9 The district's water sites all have
10 emergency power, so you know, if LIPA is down,
11 KeySpan is down, no matter who is down, the district
12 can run its own emergency power on any one of these
13 well sites. And it is adequate to power with the
14 need to run. And they have self-contained power so
15 they are not relying on someone else for what they
16 need it power their emergency equipment.

17 The operation, as I said from a
18 treatment point of view, is rather simple and
19 straightforward. But it does depend upon a few
20 essential things. You don't want to run the water
21 through the tower unless air is running up the other
22 way. And that is a concern. So there is a control,
23 a safety that ensures that the first thing that goes
24 on -- when the system says I need a well. And
25 there's a matrix board, and there's a program to say

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2 what goes on, based on need in terms of the system.

3 But when a demand goes on for a well, say -- say at

4 Plant 5 if, we need Plant 5. You know the first

5 thing that goes is if we need five, the well five

6 cannot start unless the blower motor is energized.

7 So the first thing that happens is the blower motor

8 is energized so the well can not start until the

9 blower is on. The initial phase of any operation

10 when you start off a well, is the first thing that

11 happens, it has a blow-off cycle so the first thing

12 it does is go back into the ground before it goes

13 into the system. So that is one level of safety.

14 You can't run the well unless the blower is on.

15 There is a second safety. When the

16 blower is running, there's -- there's a switch to

17 make sure that actually the blower is pushing air

18 out. Because, you know, blowers run on pulleys that

19 are driven by a motor. And if that breaks, you can

20 have power to the motor and the motor is spinning

21 but no -- again, there is no air moving. So there

22 is a second safety that relates to that.

23 Actually, there is a third safety not

24 only do you have you to have the motor on for the

25 blower and have you to have air coming out of the

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2 blower housing but you also have to have pressure.
3 Because in between the blower and the tower, it is
4 manifolded and it is possible because that is not a
5 hard pipe manifold, it is a soft pipe manifold, that
6 if that ripped or disconnected, you could actually
7 have the blower running and through a rip or a tear,
8 the air could be moving outside. So you want to
9 make sure not only do you have all of that -- so
10 each of these have triple safeties. All of the
11 plant sites, are visited a couple of times a day by
12 the staff. They end up having a tower where they go
13 around checking their own operations, just to make
14 sure things are operating and functioning properly.
15 I think that pretty much summarizes the routine
16 operation of it. There are other things that happen
17 at the plant. I'm not sure your question addressed
18 this, but in -- when you run any plant there are
19 other things that are going on. Any water district
20 supplies chemicals. You add chemicals to the water,
21 the water comes up from the ground acidic, so you
22 add caustic to adjust the pH and when you add in
23 chemicals we -- you also have safeties that are
24 related to this. Here, you end up having an
25 analagous system of multiple safeties. In this

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2 case, in order for the chemical pump to go on, it
3 can't be -- you can't energize the chemical pump
4 unless the well pump is on, because you don't want
5 to be pumping just chemical into the system. You
6 also, in order for the chemical pump -- to go, you
7 also have a pressure sensor at the well. So there
8 has to be pressure at the well head in order for the
9 chemical to go on. There's a flow meter. So there
10 are multiple safeties.

11 In the case of caustic, there is
12 also an analyzer and if the analyzer says the pH is
13 out of range, it will shut off the pump. So you
14 can't pump. So there are multiple levels of safety
15 that is related to all the elements of the
16 operation, and that pretty much summarizes the story
17 of how one deals with these kind of issues. Again,
18 going back to a broad general point of view, your
19 district here in Bethpage, as with many others, if
20 you want to call it a zero tolerance policy. They
21 pull this stuff off-line and deal with it. They
22 don't wait to find someone that has the money or
23 wait four years to argue with someone you got to pay
24 for something. They deal with it -- their first
25 level of responsibility is public health and safety.

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2 So they'll deal with a situation and then go after
3 someone to pay for it. And the dollars you're
4 talking about here, I guess the dollar value is for
5 Bethpage, I'll just put out a very round number, I'm
6 going to say has probably been about 9 million
7 dollars of district related expenses for building
8 these facilities. Which have been either directly
9 funded at one time, the Navy or Grumman, which is
10 kind of a time payment with all sorts of guarantees
11 in case they disappear somewhere along the line, but
12 that is pretty much the story and I'm available to
13 answer any questions you may have.

14 A MAN: The only thing you're
15 treating for is VOCs not for heavy metals.

16 MR. MOLLOY: Okay, it is not an
17 issue at all. We sample for heavy metals but I've
18 never seen heavy metals as an issue in a public
19 water supply well. The only metals that have ever
20 been an issue for treatment in a public supply well,
21 has been, on Long Island, has been iron. And we've
22 designed -- anywhere on the South Shore of the
23 Island. We've done it for Long Island Water Corp.,
24 New York Water Service, we've done it for South
25 Farmingdale. When you have -- but that's all

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2 naturally occurring iron that's in the aquifer. And
3 iron is not a heavy metal, but it is a metal
4 nevertheless and it is heavy when you put it all
5 together in one place, it's like coal, it gums up
6 your system.

7 MR. SCHARF: What about manganese?

8 MR. MOLLOY: Manganese is another
9 naturally occurring metal that feeds to be treated
10 in certain spots. It can be a problem when you're
11 running water through that through a PAC tower. We
12 have one in place in Bethpage, where we treat for
13 both iron removal and air stripping.

14 MR. GRELO: What kind of cleaning is
15 done to these towers once they are off-line.

16 MR. MOLLOY: Because of the nature of
17 the raw water, here, as I think you probably all
18 know, you know, the water here on Long Island is
19 super, super soft. There is very little in it. It
20 leaves little to no deposits on it. It really has
21 been a non-issue. I designed a plant in 1982. In
22 Hicksville, which was like one of the first ones
23 around, which was a stripper plant. I think we
24 changed the media after 20 years. Something like
25 that.

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2 MR. GRELLO: Why did you change it?

3 MR. MOLLOY: After 20 years, it had
4 like a little bit of kind of iron on it?

5 MR. GRELLO: What about bacteria
6 growth inside.

7 MR. MOLLOY: Bacteria growth is a
8 consideration. When you're moving that much air
9 around and you have that much moving? It is
10 certainly a consideration. And those plants are all
11 routinely sampled for bacteria, that is a standard.

12 MR. GRELLO: Monthly, weekly,
13 monthly.

14 MR. MOLLOY: Actually your water
15 distribution system is done probably generally
16 speaking two days a week there is somebody out there
17 in the water system going to -- we generally go two
18 places that don't deal with food and we stay away
19 from gas stations. You do a stationery store or dry
20 good store where actually the location is not what
21 is causing the problem that fairly -- when you pick
22 up locations to test water in a water system, you
23 like to go to someplace that is going to be open
24 during the week, so you can get access to it, a
25 place where people aren't going to be bothered or

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2 annoyed if you want to go back to resample it. So
3 generally there is a network of locations that you
4 would have around the community to do samples.
5 There is also routine sampling that is done at the
6 well for bacteria. And there's time series bacteria
7 samples, that you do on the well, raw water and the
8 treated water. Bethpage is a little different than
9 a lot of districts in that it has a chlorination
10 waiver? So it does not actively chlorinate? But
11 it does have an emergency chlorination facility in
12 the event that it needed to.

13 There are certain things that are
14 incorporated in the design of these plants to try to
15 minimize getting mother nature into the systems?
16 The air before it goes in, will go through two sets
17 of filters. The air is pre-filtered. I remember
18 trying to figure out how to deal with this 20 years
19 ago. You end up having a roughing filter then you
20 have a food grade filter equivalent to what you
21 would have in a food processing plant. So you
22 double filter the air before it goes into the
23 system. Most of these places we avoid by having
24 appropriate mowing strips and not having grass in
25 and around where the blower intakes are, because all

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2 of a sudden the landscapers come around. It sounds
3 silly, but these guys come around, running through
4 the area with their mowers, kicking up grass and
5 soil. And so we do things about how we control the
6 immediate area surrounding it, to prevent that kind
7 of thing. If you take a look at the top of the
8 towers, you'll notice that they have, they go
9 straight up and then at the top where the air comes
10 out, there's like a hood.

11 A WOMAN: *Cupola.

12 MR. MOLLOY: What we try to do to it,
13 is prevent wind driven rain from getting in there.
14 And things like birds like to hang out on top and if
15 you get rain and water on them where they are, you
16 don't want to have anything dripping back down. So
17 there's little details that you have to kind of
18 think of when you go through this.

19 A MAN: What are your chances of
20 digging a new well? If you do that, you poke a hole
21 in the ground, you're going to get contaminants.

22 MR. MOLLOY: It depends on where you
23 go. We have a well right now, and I'm maybe two or
24 three years out of the direct answer to your
25 question, but the community is fairly stable in

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2 size. I don't see any change in demand. The
3 district has a pumpage cap. I don't know of any
4 real reason why necessarily they might need
5 immediately a new well. But we do have a location
6 right by the park which seems to be away from -- but
7 the odds are, anywhere in the gut of the Island,
8 from -- actually you can go from Queens, because the
9 old Jamaica water supply wells, anywhere, and you
10 can follow a line from there and go all the way
11 east, any of the districts on either side of that
12 line, the spine, the major recharge area, most of
13 them have or will have treatment for this kind of
14 stuff.

15 A MAN: Say you get a broken pipe
16 near one of those tanks out there, because the
17 pipes, especially the main lines, are only four feet
18 deep? What is stopping anything from getting into
19 those lines and how would you clean it out and how
20 do you clean it out?

21 A MAN: You have the contaminants
22 right there. After it has been treated, it is going
23 up to those big tanks.

24 MR. MOLLOY: Well, you know, first of
25 all in any monitoring that we do, you're analyzing

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2 not just with the wells but the distribution system.
3 Whenever you have a main break there's procedures.
4 Main breaks happen all the time. Typical, as you
5 pointed out, typical mains are four and a half feet
6 deep. There are isolation procedures, repair
7 procedures, disinfection procedures and blow-off
8 procedures before you bring it on line. When a main
9 breaks, water is moving in the other direction. The
10 problem comes in when you're bringing it back, when
11 you shut it down and you're bringing it back on line
12 and there are protocols to do that, that they have.
13 Because before we ever talked about this other
14 stuff.

15 A MAN: What are the protocols.

16 MR. MOLLOY: I don't know. You know,
17 it is similar to to what I just outlined to you. I
18 would have to talk to the guys that are doing it to
19 be able to detail it. But there are protocols that
20 involve shut down, blow off, disinfection. Bacteria
21 is all around us. Right now, if you took a swab,
22 you'd find it here, you'd find it there. You'd find
23 it every where. When you analyze bacteria in water,
24 most of it is soil origin. Typically, time
25 immemorial, when you have main breaks, you have to

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2 deal with issues of preventing bacteria, and you use
3 the same kind of protocols to do that. You swab
4 with chlorine and other stuff, too. But you try to
5 minimize stuff getting in the lines.

6 A MAN: Do you have a diagram of all
7 the cleaning systems that you implemented. Do you
8 have an actual exact diagram when we have to show
9 the people where we can actually say, this is the
10 system that they have. This is the protocol and
11 everything.

12 MR. MOLLOY: That is not a problem.
13 I can give you that. I can give you a reduced set
14 of drawings for Plant 5, which will give you a good
15 idea of what it looks like. I'll give you a real
16 set of drawings. If you want a schematic, I can
17 give you a schematic, as well. I'll take care of
18 that for you. I'll get it back through the
19 committee somehow or through you somehow, Jim
20 Colter.

21 Any other questions?

22 MR. COLTER: Safe to say, John,
23 you're speaking on behalf of Bethpage. H2M also
24 does the engineering for south Farmingdale.

25 MR. MOLLOY: Yes, we are the

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2 engineers and have been for -- South Farmingdale,
3 actually was our first water account, and I think it
4 dates back close to 60 years.

5 South Farmingdale is a client of ours
6 and at tomorrow's meeting, we will not -- one of our
7 guys will not only be representing Bethpage, but we
8 represent also South Farmingdale and New York Water
9 Service, which was another one, there. At least we
10 represent them in this matter and we've done some
11 plant work for them.

12 MR. COLTER: For all the water
13 supplies that we are concerned with, the procedures
14 are basically the same, is that safe to say?

15 MR. MOLLOY: For treatment? Yes.

16 MR. SCHARF: You mentioned carbon.
17 There is a dichotomy, if you go about Long Island to
18 different districts, some districts prefer the
19 carbon approach, others prefer the air stripper
20 approach. Both systems can produce water that is
21 nondetect, potable and safe to drink. H2M is
22 designing a carbon system right now for East
23 Farmingdale.

24 MR. MOLLOY: We've done both. There
25 are certain application differences. There are

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2 certain time differences. I can get a carbon plant
3 on line quicker, you know East Farmingdale has some
4 issues. They need to get water very quick, I can
5 get it on line.

6 MR. SCHARF: Upfront, it is cheaper,
7 but in the long run, O & M can be more expensive.

8 MR. MOLLOY: There are other places
9 where you have volatile organics that might not lend
10 themselves as much to air stripping. You know, they
11 are volatile but they don't work as well. So we've
12 used both.

13 MR. SCHARF: Based on the design
14 criteria, each has its good and bad.

15 MR. MOLLOY: Right. It is more
16 expensive to build an air stripping plant, but it is
17 less expensive on an O & M.

18 In that one particular sense, it's
19 simpler because what will happen with a carbon
20 system is you'll have adsorption in that a certain
21 point you'll get breakthrough where stuff is coming
22 in one end and not going out the other end, not that
23 that can't be overcome and dealt with. But you need
24 to know what kind of loading you're putting on it.
25 Air stripping is much simpler that way. As long as

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2 you're running the air through it, it will do what
3 it is intended to do.

4 MR. SCHARF: I wanted to make the
5 statement.

6 MR. MOLLOY: I wasn't knocking carbon.

7 MR. SCHARF: You may live in an area
8 that has an impacted well and using carbon for a
9 design purpose is a great system.

10 MR. MOLLOY: Carbon is suitable.

11 MR. GRELO: There's more of a chance
12 bacteria and breakthrough with the charcoal systems.

13 MR. MOLLOY: Each system in terms of
14 bacteria, you got to watch for different reasons,
15 but, yeah.

16 MR. COLTER: Any more questions for
17 John?

18 MR. MANGANO: I have a request. The
19 questions and answers that took place tonight were
20 excellent I thought. This is a common, common
21 question for the last nine years. How do I know my
22 drinking water is safe. If the water district would
23 be willing to produce a brochure or pamphlet
24 outlining exactly what you said tonight, it would be
25 helpful to send that to people, so they get an

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2 understanding there's contamination in here, but in
3 your glass of water at home, there it isn't. You
4 got to go through those steps tonight.

5 MR. SCHARF: The county health
6 department put out this brochure.

7 CO-CHAIR McBRIDE: John, in all
8 honesty, I've had the same questions asked and
9 it's -- a lot of people don't know what's going on.
10 People ask Jim, do you drink the water at home.

11 You have bottle of water, it is just
12 because I have a bottle of water, I turn my tap on
13 and drink.

14 MR. GRELO: They also need to know
15 the difference between air sparge and the charcoal
16 media method, so there's no less chance of
17 contamination with the air sparge than with the
18 charcoal medium, and also the disclaimer that the
19 bottled water you drink goes through less testing
20 than the water going through your tap.

21 MR. SCHARF: Don't say likely to be
22 impacted with charcoal. There's two carbon tanks, a
23 primary and a secondary. They test the primary.
24 Once there is breakthrough, they'll change it.

25 MR. MOLLOY: Carbon is also a safe,

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2 wonderful unit for design purposes.

3 MR. MOLLOY: I will take that back.

4 MR. MANGANO: If I could help, we can
5 talk to the commissioner.

6 MR. MOLLOY: You twist one arm, I'll
7 twist the other.

8 A MAN: This is a system in place if
9 heavy metals gets to that depth, can you just start
10 it up.

11 A MAN: Let me mention one other
12 thing while you bring it up. T that somewhere along
13 the line, there was a map that went up there, that
14 you can't read. But if you looked at it, you saw a
15 lot of dots all over the place. There is I don't
16 know how many wells. I've lost count at this point.
17 But there is a routine program for groundwater
18 monitoring. Part of it is to understand the plume
19 bed, it's depth, its breadth and what is in it, we
20 see that data routinely. There is a full, I think
21 you mentioned that earlier. That gives us a good
22 idea what is coming our way. I don't at all expect
23 to see heavy metals as an issue.

24 You know, they can be treated, just
25 to answer your direct question. I couldn't treat

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2 them today? But I don't expect -- I don't expect
3 at all to see it. And if there were any wild reason
4 to see it, I would see it somewhere else first.

5 Just one other thing on the data
6 that Arcadis, developed, and they send it out to
7 their lab, the water district takes split samples of
8 those same groundwater. And the data is consistent
9 and it has been for years. But just so that the
10 district can say rightfully to their own customers,
11 that, listen, we are watching over that, as well.
12 Not that we expect anything. We see the data
13 ourselves.

14 A MAN: Nassau County DPW also has
15 test wells.

16 MR. MOLLOY: Nassau County DPW
17 has -- yeah, most of their wells are relatively
18 shallow. And it is more for understanding the water
19 table and for hydraulics and modeling. This area is
20 fairly well defined by a model. And at this point,
21 it has been worked on, massaged and you know, with
22 ten years' worth of data, by this point it's a very
23 well-tweaked model. So they do have it fairly well
24 represented. I'm not sure -- these wells that are
25 in this program they are at depth too, so you can

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2 really get a good idea of what is going on with the
3 aquifer system. It is very well-known at this
4 point.

5 CO-CHAIR McBRIDE: Thank you for your
6 time.

7 MR. COLTER: Thanks, John. We
8 appreciate it.

9 MR. GRELLO: Before we get to our
10 last agenda item, I wanted to expand on something
11 that John alluded to earlier in his presentation.

12 As well as Dave. We talked about
13 community workshop and why do we have to do things
14 in places where we are planning to do them. Believe
15 me, the Navy doesn't want to go out into the
16 community and disrupt them with this GM38 remedy.
17 As you heard from Steve, the DEC is insistent upon
18 it and Bethpage Water District has been insistent
19 upon it, for years. Yeah, it is an impact. It is
20 going to be an eyesore for a while till we finish
21 the construction, but it is something that is needed
22 and is being pushed by your local constituents, so
23 that is going to be a key component. We are not out
24 here because we want to disrupt the community. We
25 are out here because it is the right thing to do and

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2 we need to get it done and your representatives are
3 looking over our shoulders so...

4 MR. MANGANO: I would like to add
5 what you want to do is explain it to people so
6 people understand what's going on. Workshops are
7 important. When people understand things, they are
8 more accepting. No one wants to be inconvenienced,
9 to be inconvenienced and not understand it is
10 really --

11 MR. COLTER: Our posters will step you
12 through the process, a lot of what you heard tonight
13 will be in a poster. A lot of different people will
14 explain the different aspects. Hopefully, Bethpage
15 water will be there to back up the need for the
16 system. Hopefully the DEC will be here to back up
17 the need and we'll try to answer all the questions,
18 and give them a little more comfort, like you
19 suggested.

20 CO-CHAIR McBRIDE: Jim, at the last
21 RAB that I attended there was an actual section of
22 the Navy that comes out and does these brochures
23 with health people? Are you planning to use them.
24 They made a couple of good presentations out there.
25 They were describing their function as similar to

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2 what you're discussing.

3 MR. COLTER: As far as the workshop.

4 Oh, NEHC. Naval Environmental Health
5 Center? Probably not. We had somebody here way in
6 the beginning, explaining toxicology in layman's
7 terms, they try to explain risk assessment in
8 layman's terms. They are very good with risk
9 communication. We'll take a look at it.

10 CO-CHAIR McBRIDE: You may want to
11 consider it.

12 MR. COLTER: We'll have to see what
13 we are presenting and if it is a risk type of
14 presentation, maybe we'll use their expertise. That
15 is a good point.

16 All right. Quickly, the last thing,
17 again, not on the agenda, but it has been something
18 that has been ongoing, is the TAPP review for the
19 dry well report. And Gary Miller and Paul Lageraen
20 are here again from H2M, your independent
21 consultants.

22 Gary, give us updates on where you're
23 at.

24 MR. MILLER: As you're aware H2M was
25 retained by the RAB to conduct an independent review

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2 of work done by another consultant on behalf of
3 Northrop Grumman Corporation. Specifically it dealt
4 with two former storm water drywells associated with
5 the old Plant 3. When we were last here in
6 November, we presented our executive summary. Since
7 that time we have finalized our report. We had an
8 opportunity to meet recently with the RAB and go
9 over the report. They had some questions. We've
10 made some revisions and we have final copies of the
11 report.

12 Without boring you with a lot of the
13 details, we went through back in November, the two
14 drywells in question were part of a larger
15 investigation when Grumman -- Northrop Grumman was
16 shutting down the plant, they investigated all of
17 the various leaching pools drywells and subsurface
18 drain structures associated with the plant. And two
19 of these drainage structures were identified as
20 having been impacted with PCBs. As a result of that
21 vision, a remedial effort was undertaken and the
22 drywells, the two drywells, the soils beneath the
23 drywells and adjacent to the two wells were
24 excavated to a depth of 28 feet. As is normally
25 done, when the excavation was complete, end point

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2 samples were taken at the bottom of the excavations,
3 to determine whether or not all the contamination
4 had been removed. As it turns out there were soils
5 at the bottom of the excavations that contained PCBs
6 that were in excess of the DEC's recommended soil
7 clean-up objective of 10 parts per million.

8 As a result of those findings,
9 Northrop Grumman hired Ru, to conduct an
10 investigation to look at the subsurface soil
11 conditions and to examine potential impacts to
12 groundwater.

13 H2M was asked to look at those
14 reports, to determine whether a thorough job was
15 done, whether their conclusions were accurate, and
16 whether some of their recommendations were on
17 target.

18 The first thing we looked at was the
19 soil investigation program. Ru conducted 17 soil
20 borings adjacent to the two drywells and radiating
21 outward from the two drywells they went down to
22 depths of 68 feet.

23 A MAN: The deepest, yet.

24 MR. MILLER: About 54 feet in some
25 places, as the borings were advanced, soil samples

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2 were collected at two foot intervals and analyzed
3 for PCBs.

4 As a result of that investigation,
5 they did identify subsurface soils with PCB
6 concentrations in excess of 10 parts per million.
7 Soil cleanup was recommended. The majority of those
8 soils were at depths greater than 14 feet. The
9 impacted soils extended radially outwards as far as
10 30 feet from the center of the dry well.

11 In looking at all the data, our
12 opinion was that they did a very thorough and
13 comprehensive job in looking at soils. They were
14 successful in delineating the vertical extent of the
15 contamination, as well as the horizontal extent of
16 contamination.

17 The next thing Ru did, was they
18 installed four of the monitoring wells to evaluate
19 groundwater quality. At each dry well, a monitoring
20 well is installed immediately adjacent to the dry
21 well and then they installed a second monitoring
22 well at each dry well, 75 feet downgradient of each
23 dry well. Once the wells were installed and
24 developed, groundwater samples were collected and
25 analyzed. Ru analyzed the samples using -- two

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2 ways:

3 They analyze filtered and unfiltered
4 samples. The rationale for doing filtered and
5 unfiltered samples is often contaminants can bind
6 themselves to fine silts that will find their way
7 into the water sample and bias the results on the
8 high side. What Ru found was that they were
9 finding PCBs in all of the unfiltered samples and
10 the PCB concentrations ranged from 1.2 to 12 parts
11 per billion of the class GA water. The quality
12 standard for PCBs, is .09 parts per billion. So the
13 unfiltered samples indicated that there was an
14 impact. All but one of the filtered samples came up
15 non-detect.

16 From downgradient, it showed
17 1.2 -- 2.1 parts per billion. Ru went back and took
18 a second sample to confirm that. And they did
19 confirm they found another 1.5 parts per billion of
20 PCBs. They confirmed that there were relative minor
21 impacts to groundwater quality. In looking at their
22 groundwater study, in comparison to the soil study,
23 we felt that the groundwater study was not quite as
24 comprehensive. Although we didn't disagree with
25 Ru's findings and conclusions, it is felt more could

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2 have been done, and in fact we have recommended that
3 a little bit more be done. Specifically, we have
4 recommended that monitoring wells or temporary well
5 points be installed upgradient of the drywells. The
6 purpose for that would be to confirm that the
7 drywells are in fact the source of the PCBs that we
8 are seeing in the groundwater. And there aren't any
9 upgradient sources that we don't know about.

10 The second thing we looked at, as
11 John mentioned and as we've discussed before,
12 there's a wide network of monitoring wells here on
13 the site, that are looked at routinely, once a
14 quarter. When we looked at some of that data, we
15 discovered PCBs were not being analyzed in those
16 groundwater samples. So we've also recommended that
17 in selecting existing monitoring wells on the site,
18 that are located downgradient of these two drywells,
19 and that PCBs be added to the standard list of
20 chemicals that are looked at on a quarterly and
21 routine basis.

22 After Ru completed their site
23 investigation, of site characteristics, they
24 conducted what is known as a feasibility study,
25 which would examine the various remedial

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2 alternatives for dealing with the PCBs. They had
3 conducted an exposure assessment between the site
4 characterization and the feasibility study, and the
5 exposure assessment concluded that there really was
6 zero risk in terms of the PCBs, the low level PCBs
7 that were detected in groundwater, because there was
8 not a complete exposure pathway, because of the
9 system that Northrop Grumman has in place, here, to
10 capture and treat the contaminated plume, they felt
11 there really was no potential for PCBs reaching the
12 public water supply.

13 The exposure assessment similarly
14 found that with regards to soils, there was very
15 little in the way of risk. The soils with the
16 highest concentrations of PCBs are down below 14
17 feet. We did see some low concentrations, again,
18 that one to 10 parts per million range in shallow
19 soil samples, for the most part the higher
20 concentrations were down below 14 feet. The
21 feasibility study looked at number of remedial
22 operations. One option that they looked at that we
23 always look at, is a no action alternative. That is
24 the baseline, for comparison purposes. Throughout
25 their report, they talked about the no action

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2 alternative. Really that is a little bit of a
3 misnomer. It is the no further action alternative
4 in this case, because a remedial action was taken
5 when the PCBs were first taken and the soils beneath
6 the dry wells were excavated.

7 Ru Associates, in doing the
8 feasibility study and from our review of the
9 feasibility study, we feel they did a thorough and
10 comprehensive job. We explored the various
11 technologies they looked at. We examined whether
12 there were any new technologies that were out there
13 that were not examined. We didn't find any. The
14 technologies that they felt had some merit were the
15 no action alternative, *thermal desorption, in situ
16 *thermal desorption and excavation and disposal
17 off-site. Those alternatives were further evaluated
18 using the standard criteria dictated by EPA and the
19 DEC. And as a result of that, evaluation, the no
20 action or no further action alternative was the
21 selected remedy.

22 Again, the no action or no further
23 action alternative, was tied in to both engineering
24 and institutional controls. By "engineering
25 controls", what I mean, is Ru looked at the fact

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2 that there is right now two feet of clean soil that
3 covers the upper surface that there -- that the
4 asphalt around one of the dry wells will be repaired
5 by the cap. The other dry well. Where asphalt
6 doesn't exist, asphalt will be placed to provide a
7 cap. Those, are what we call engineering controls.
8 They also discussed institutional controls in the
9 form of a deed restriction. A deed restriction
10 would prohibit the deeper subsurface soils from
11 being disturbed by future development or
12 construction on the property.

13 Again, in looking at the feasibility
14 study, H2M came to similar conclusions that the no
15 further action alternative made sense. In
16 discussing these results with the restoration
17 advisory board, there were some concerns raised,
18 regarding environmental easements which include both
19 engineering and institutional controls.
20 Environmental easements are used as sites where it
21 is impractical to remove all of the contamination.
22 In many cases engineering or institutional controls
23 will be adequately protective of human health. And
24 that was the case here.

25 The Restoration Advisory Board's

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2 concerns with regard to environmental easements, is
3 that there can be some problems. There was
4 legislation passed by -- signed into law by the
5 governor that dealt with environmental easement, by
6 law, now, environmental easements, must be in place
7 with the local municipality, in this case it would
8 be the Town of Oyster Bay and Nassau County. And if
9 a developer or a property owner proposed to do
10 anything with that property that would affect the
11 land use or the development of that property, the
12 local municipality, or the agency that would review
13 that application, and have the jurisdiction to
14 approve that application, would have to forward that
15 application up to Albany to the New York State DEC.
16 The New York State DEC would review that application
17 to see whether it was consistent with that
18 environmental easement.

19 The problem that was discussed with
20 the restoration advisory board, was the fact that
21 most deed restrictions are put on file with the
22 county clerk or the town clerk. But when you go to
23 get a building permit or a change of land use, that
24 application goes to the planning department or the
25 building department. And often the various entities

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2 within the government, they don't talk to one
3 another. So the only concern we raised and we would
4 hope that Nassau County and the Town of Oyster Bay
5 develop and establish a mechanism whereby when an
6 environmental easement in the form of a deed
7 restriction is placed on a property, that that
8 information is disseminated to those departments
9 that have the jurisdiction to issue the restriction
10 or land permits.

11 To summarize, Ru did a good job in
12 characterizing the soils. They did a good job in
13 characterizing the groundwater. However, we felt
14 there should be more upgradient sampling done. The
15 drywells are the only source of PCBs in the water.
16 And let's add PCBs to the normal test parameters
17 that are looked at, and not monitoring wells. I
18 don't know how many monitoring wells you sample on
19 quarterly basis. I think we identified a half
20 dozen, six or seven.

21 MR. LAGERAAEN: Three wells at two
22 depths.

23 MR. MILLER: In those six wells, we've
24 recommended PCBs be added to the list of analytes.

25 With regards to the selection of the

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2 no further action alternatives with deed
3 restrictions, we felt that given the planned future
4 use of this property for commercial and industrial
5 use, it was consistent with that future plan for the
6 property, and we felt that that would be protective
7 to human health. So we've issued our ROD.

8 MR. LAGERAAEN: We do have some extra
9 copies here. Is there anyone on the committee that
10 hasn't gotten a copy, we have them here.

11 MR. GRELLO: The Navy is receiving a
12 copy, correct.

13 CO-CHAIR McBRIDE: Since we have the
14 final report tonight, we'd like to read through it
15 tonight. We'll get back to you with questions.

16 MR. MILLER: After you'd read the
17 report, digested the report, if you have questions,
18 get back to us, we'll answer questions. If we need
19 to amend or expand any sections of the report.

20 MR. GRELLO: I have comments for the
21 Navy already. Institutional controls do not work.

22 I have a report here from former
23 State Comptroller McCall. I'll read a couple of
24 paragraphs to you. Do institutional controls work?
25 Not really. An audit of the Superfund program

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2 performed by controller H. McCall showed that in
3 many cases institutional controls failed. In part
4 of the audit, the DEC provided a controller with 28
5 sites that required deed restrictions. The
6 controller's office found five additional sites
7 requiring deed restrictions, which the DEC did not
8 have filed. Also, when auditors checked county
9 clerks' offices to see if deed restrictions were in
10 place, auditors cannot find four of the six deed
11 restrictions. And one of the deed restrictions was
12 not filed at all. For deed restrictions to work,
13 they must be easily accessible by the public that
14 they are meant to protect. This report calls into
15 question the effectiveness of institutional controls
16 to protect people from dangerous toxic exposure.
17 This from Carl McCall, former state comptroller.

18 This report, is from the
19 Environmental Law Institute in Washington, D.C. I'm
20 going to read some areas I highlighted, okay.

21 For the protection of groundwater,
22 pavement covers over clean soil and structures
23 located above prevent human exposure. To prevent
24 contact with contaminants, different types of
25 barriers are needed depending upon which exposed

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2 pathways they are intended to block.

3 Zoning notices, warning easements
4 restrict the covenants, restriction of uses specific
5 resource, such soil and groundwater withholding
6 insurance, certain uses of land, these are all
7 different types of controls. Thus institutional
8 controls have a long history which include both
9 successes and failures. Institutional controls,
10 like most legal tools, operate by inducing humans to
11 modify their behavior. Managing human behavior is
12 an extremely difficult task. None of the
13 institutional controls currently in use or under
14 consideration for future use is fool-proof.

15 Institution controls have the
16 potential to be either over or under-protective.

17 But the adage out of sight out of
18 mind applies to ground fuel sites. The residual
19 risk likely will be buried by asphalt or buildings
20 and therefore could be forgotten. Then the
21 slightest carelessness, forgetting to check a
22 record, not checking far enough back in time, or
23 loss of records or institutional memory, could lead
24 to future zoning boards to approve changes, allowing
25 a use that could expose people to substance."

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2 I could go through this and read to
3 you ten times more than I read. All this stuff
4 highlighted in blue all backs that up.

5 The reason why I'm so concerned about
6 these dry wells and the use of institutional
7 controls is the very fact that that Ru report, had
8 soil , SB1, soil boring one, at dry well 20-08.
9 PCBs were detected above RSCOs, recommended soil
10 cleanup objectives, at 19 milligrams ^{per} kilogram, at
11 four to six feet below grade, and between eleven and
12 41 MG/KGs, at depth 14 to 20 feet.

13 We keep hearing 14 feet. Okay, we
14 have four to six and 11 feet. Then -- at the
15 drywells. Now we go to drywell 34-07. Same Ru
16 report. Soils exceeding RSCE were encountered at
17 depth, from four to 54 feet. Both drywells contain
18 PCBs more than double the state TAGM for soil at
19 depth of four feet. Anything could happen.

20 A MAN: Any time you build a
21 building, you need a drywell, because you got a
22 parking lot, you're going to dig, you're going to
23 break the barrier. I don't care where you come
24 from, what you do, you're going to break it. That
25 is the bottom line.

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2 MR. GRELLO: They put in a sign in
3 the parking lot, they dig the post down three or
4 four feet, they'll hit it.

5 A MAN: Your water, your pipes are
6 right in the ballpark.

7 MR. COLTER: For the most part, I'd
8 have to look at that. If they got a detection, one
9 detection, they're going to report that they have
10 detected PCBs at four feet. But that doesn't mean
11 there is a big slug of PCBs down there.

12 MR. GRELLO: It's in the Ru report
13 and it still exists.

14 MR. COLTER: I agree with the
15 institutional controls. We have come a long way.
16 Over the next decade knowing the shortfalls you've
17 just outlined and we have a group down in D. C. that
18 is tasked if we are going to use these institutional
19 controls, how are we going to guarantee.

20 MR. GRELLO: Who is going to
21 administer it?

22 MR. COLTER: There is a few different
23 programs that we are testing. We were testing one
24 in the state of Pennsylvania, setting up a trust
25 fund to pay the State of Pennsylvania to administer

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2 and check routinely these things. So it is a
3 problem and we are working at the.

4 A MAN: Especially with the sewer
5 system. Now we are dealing with a sewer system.
6 We're going down 20 feet with a sewer system.

7 MR. SCHARF: Before we even talk
8 about what we are or are not going to leave, there
9 is a ROD in place for OU1 for soil and PCBs. And if
10 there's -- we go back and review all of the data,
11 once we get into the design phase, which is coming
12 up shortly, in fact I'm not going to handle that
13 project. If the Navy is going to recommend an
14 explanation -- something very deep and we leave that
15 PCB concentration because we can't get to it, they
16 had to do shoring down to 28 feet and even then it
17 was expensive to get that deep if there's a problems
18 a four neat when they do the shallow soils that is a
19 very good point, good point, at four feet you can
20 get that. It has to go. It is above the indicate
21 soil cleanup criteria.

22 MR. MANGANO: To put it in
23 perspective, while you're on that depth subject for
24 the property that's found in the FOST, what would be
25 the shallowest depth of contaminant that is being

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2 allowed? I ask this question, because really the
3 property is going to be redeveloped. There is going
4 to be construction. We don't know what ultimately
5 it will be, but in the next several months, we may
6 have a better idea and my gut reaction is there is
7 going to be a lot of construction. What depths are
8 we at? Is the 28 feet to the lowest?

9 MR. COLTER: Well, if you look -- at
10 the Navy Environmental Baseline Survey, and we
11 talked about this at the meeting a couple of weeks
12 ago, we have that big map of ^{Plant}~~Plane~~ 3, there are
13 various steps. Grumman went in and dug out a hole
14 to 18 feet and took twenty confirmation samples.
15 One confirmation sample came up above TAGM, not a
16 big deal. One out of 23 go to the DEC. And one out
17 of the 20, 20 feet, 18 feet down, is not a risk.
18 Can we backfill? DEC says yes, backfill. We've
19 called those out in that plan. So there's various
20 steps. The plan began at a four-foot depth control.
21 There's 200 AOCs that they dug.

22 A MAN: When you take the test, how
23 long before it comes back to you.

24 MR. COLTER: Two day turnaround, a
25 week turnaround.

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2 A MAN: You dug a ^{hole} ~~hole~~ and it is
3 exposed so it is exposed to people.

4 MR. SCHARF: Just understand that DEC
5 oversaw the work that Ru did. They reviewed the
6 work plan with the health department and approved
7 the work plans they did. And it was confirmed by
8 H2M, they did an adequate job of characterizing the
9 lateral and vertical extent of the contamination.
10 They made their recommendation, and my response to
11 their recommendation was that we did not concur with
12 that recommendation. Rather we transferred the
13 responsibility of the PCBs in those two drywells
14 that were discovered by the close-out on under the
15 UAC to the Site 1 ROD. So the Navy is going to take
16 care of that on a site-wide basis uniformly, now.
17 So anything that they're going to have to leave
18 that's above the recommended soil clean-up
19 objective, they have to go through the explanation.

20 Therefore, it will all be addressed
21 at that time.

22 A MAN: They are going to start
23 generating a lot of dust and all that stuff okay,
24 they are going to go down, they are going to start
25 digging. Are you going to put the bill on the

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2 company that is going to come in.

3 MR. COLTER: Let me explain that. If
4 you're going to develop this area and you take soil
5 off of this station, it is just prudent. Any
6 disposal facility is going to require you to show
7 them what you're bringing onto their site.

8 CO-CHAIR McBRIDE: It is by law.

9 MR. COLTER: There is a possibility,
10 if we go down deep enough in some areas, we
11 encounter one of those confirmation samples but have
12 you to be exposed to that for well over like 250
13 days. The one-time incidental exposure is
14 absolutely no risk whatsoever. So -- we've said
15 that all, but the nine acres, is free of
16 contamination with the exception of a hit here, a
17 hit there and a depth here and a depth there.

18 A MAN: That is my point.

19 MR. COLTER: It is not wide spread.
20 Northrop Grumman did a pretty good assessment, and
21 we followed that up.. Can we give you a 100 percent
22 money back guarantee, no, that is not the way the
23 program is set up. We didn't grid the plant out on
24 five foot intervals. In the unlikely event that you
25 guys are developing and you hit a source of

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2 contamination that we missed, there's CERCLA
3 covenants that goes with the deed. It is federal
4 law that says in that instance, the Navy comes back
5 and addresses it.

6 That is in the deed. It is in the
7 federal law and we can't get around it. The first
8 thing we would do is make sure it is not something
9 that happened post transfer. Barring that, we'll
10 come back, budget it, and take care of it.

11 MR. SCHARF: Under the FOST, that has
12 been mentioned here, there are certain areas that
13 within Plant 3, they can only dig so deep. When
14 they were doing the corrective action I covered
15 earlier. They were inside the building. As they
16 were digging down, and they did confirmation
17 samples, they found areas down deeper that had
18 elevated inorganics and contaminants, but they deed
19 restricted that also. So the building itself in
20 certain areas has a bunch of deed restrictions that
21 are going to run with the deed. So anybody that's
22 going to tear down Plant 3 and redevelop that area
23 specifically has to do a very comprehensive testing
24 program before they do that, because there are
25 restrictions that are running with that deed.

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2 MR. GRELLO: The reason why I'm
3 concerned with the two drywells is guy is going to
4 be working -- I'm in the construction trade. He's
5 digging footings for curbs, he's running piping for
6 storm drains. He's going to bring that PCB mud that
7 is in that four feet, home on his shoes, into his
8 car, and his children are going to be breathing that
9 or eating that when they drop the Cheerios on the
10 floor and pick it up. If it is at four feet, it
11 should be removed.

12 MR. SCHARF: That is correct.

13 MR. GRELLO: We are not talking going
14 down 28 feet.

15 MR. COLTER: We'll take a look at it.

16 MR. SCHARF: We agree.

17 MR. SCHARF: The Department of the
18 Navy, in their design, will go through all the data
19 that is available and make sure it will be
20 addressed, cleanup standards will be addressed.

21 MR. COLTER: As far as -- and we have
22 to look -- Grumman dug down to 24 feet, supposedly
23 got everything, and backfilled everything with clean
24 fill. So we have to take a look at that.

25 A MAN: We wanted to make sure,

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2 horizontally, how far does it go out? That was just
3 outside the excavation.

4 A MAN: They were 10 foot intervals.

5 MR. COLTER: If they're addressed
6 outside of the excavated area, that is what we
7 address under our ROD.

8 MR. SCHARF: When we first developed
9 the work plan, we developed how to tackle the
10 problem. And --

11 MR. COLTER: There's a significant
12 difference at depth, because, yes, our ROD says
13 we'll clean up everything above ten, but we also
14 have a duty. The taxpayers' money is what we use to
15 clean this up. So if we are going to spend, to go
16 down 50 feet, if we spend six, 7 million dollars and
17 really there's no risk to anybody, Congress is going
18 to question that, that decision. So we have to be
19 real careful in how we spend the money and that we
20 also protect the environment and human health, too.

21 CO-CHAIR McBRIDE: Jim, separate
22 question. The report that was issued by H2M. Since
23 it was paid for by the Navy, is there a restriction
24 as to whether we can give copies to anyone who is
25 interested?

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2 MR. COLTER: That will go into the
3 information repository.

4 MR. MANGANO: If someone asks us to
5 get a copy, does it have to go through the Navy to
6 get released?

7 A PERSON: We have spare copies.

8 MR. SCHARF: This was something done
9 by the citizen's group and it is a releasable
10 document.

11 CO-CHAIR McBRIDE: As far as you're
12 concerned, if somebody else wants to read this
13 report, does it have to come through you first?

14 MR. COLTER: No, we'll put a copy in
15 the library and we'll have several copies and give
16 several copies to Jim.

17 MR. SCHARF: There's two things, I'd
18 like to commend H2M for doing a thorough job of
19 reviewing the reports that were generated on this
20 part of the project. And I'd like to commend the
21 Navy for funding this part of the project. I think
22 it was helpful and helps to substantiate what we are
23 going to do at this site, the remedial work that
24 needs to be done.

25 CO-CHAIR McBRIDE: We were very

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2 pleased on the work we did with H2M, was very

3 professional.

4 There are two recommendations that
5 H2M did make in the report. What's the procedure
6 now for getting a response back from the Navy as to
7 whether or not those recommendations will be
8 accepted.

9 MR. COLTER: We'll take a look at
10 them and see how they play in our overall scheme and
11 we'll make a decision.

12 MR. MANGANO: By the next RAB, in
13 other words.

14 MR. COLTER: Maybe not the next one,
15 but the one after that. We'll look at it, the one
16 recommendation in there is for Northrop Grumman.
17 They are the ones that do the quarterly monitoring
18 so we'll have to see how the DEC is going to play
19 into implementing that one. That may be a bit of a
20 problem to implement from the Navy side, because
21 Northrop Grumman is doing that work as per our
22 agreement.

23 Investigating a little bit more
24 groundwater, I don't see that as an issue, because
25 we are going to be doing some work. I didn't bring

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2 it up at this meeting but at the next AOC 22
3 meeting, former Fuel UST site, we have a vendor out
4 there that claims they have a process that can clean
5 that soil up in 12 months. So we've presented it to
6 the DEC to see if it is something that is feasible
7 to do. They look favorably upon it and that vendor
8 is putting together work plan, at the next RAB we'll
9 actually present what they're going to be doing to
10 clean up the soils. Part of that is groundwater
11 monitoring in that area. So.

12 CO-CHAIR McBRIDE: Okay.

13 MR. COLTER: To put a few more wells
14 in that area at that time, shouldn't be a problem.

15 MR. MANGANO: So I have the process.
16 We went through the expense of getting this report
17 to get some more recommendations. The process is
18 this report -- who comments on it, the DEC?

19 MR. COLTER: Whoever --

20 MR. MANGANO: Who do we officially
21 present this report to so it gets commented on,
22 like.

23 MR. COLTER: Should go to every
24 member of the RAB and regulators on the mailing list
25 and anyone is free to comment on it.

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2 MR. MANGANO: Who's the decision
3 makers?

4 MR. COLTER: Is there a budget left
5 to incorporate comment.

6 MR. SCHARF: That is a good point.

7 A PERSON: I don't know how many
8 copies, how many people are actually on the board.

9 CO-CHAIR McBRIDE: The board is here.

10 MR. MANGANO: My question went to
11 getting a response to this.

12 CO-CHAIR KAMINSKI: We are going to
13 respond to it.

14 MR. COLTER: I don't know.

15 MR. MANGANO: Do you coordinate also
16 with Northrop Grumman in D. C., in getting these
17 answers.

18 MR. COLTER: We will. That
19 recommendation, I'll have to talk to Steve about to
20 say, you know, how are we going to do this, or can
21 we do this?

22 MR. MANGANO: For the next agenda,
23 you'll give us an update on the process of actually
24 getting an answer?

25 MR. COLTER: (Nods)

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2 A MAN: So it is an official item.

3 MR. GRELLO: Jim, in the grand scheme
4 of things ,adding PCBs as another parameter in
5 testing is minimal cost. I don't foresee that as a
6 problem, adding that parameter. When we are talking
7 and adding upgradient monitoring wells, it is common
8 sense, we should have upgradient numbers coming in.
9 For all we know these chemicals could be coming from
10 Hooker and Grumman is paying for them. There could
11 be something across the street where the farmers
12 market was. We don't know.

13 MR. COLTER: IR Sites 2 and 3,
14 remember, are on the other side of Plant 3, on the
15 north side. We have plenty of data up there on PCBs
16 and groundwater, and -- or the lack thereof. There
17 is upgradient data for the site. I'm not sure where
18 we are talking.

19 A PERSON: Based on what we looked at,
20 the drywells are very likely the source of what they
21 saw in groundwater.

22 MR. GRELLO: They were mixed with
23 solvents. That is why they spread so far.

24 CO-CHAIR McBRIDE: Joe, can you
25 coordinate with H2M to have this mailed out

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2 (indicating) to the people on the mailing list, so
3 everybody has it.

4 A PERSON: If someone can provide us
5 with the mailing list.

6 MR. COLTER: I could do it.

7 I'll put out a distribution letter
8 from the Navy and send it to you and you can -- what
9 I'd like to do, though, everyone that has one.

10 CO-CHAIR McBRIDE: We have them. The
11 RAB has it.

12 MR. COLTER: The people that don't,
13 is the DOH.

14 Has everyone signed in.

15 Everyone who signed in will get a
16 copy of the distribution letter but not the report.

17 MR. MANGANO: So we have an updated
18 list, the names and addresses get them to Jim
19 McBride so we have.

20 MR. COLTER: Yep.

21 CO-CHAIR McBRIDE: Are we at the last
22 order of business.

23 MR. COLTER: That's it for me.

24 CO-CHAIR McBRIDE: Can I just, I've
25 said in the past, we started the RAB three years

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2 ago, if anybody else on the committee would be
3 interested in assuming the position of co-chair, I
4 think it is only fair that it is offered to
5 everybody on the committee.

6 CO-CHAIR KAMINSKI: You get a free
7 trip to Salt Lake City.

8 CO-CHAIR McBRIDE: Everyone's been
9 extremely helpful and again, for fairness, it has to
10 be opened up to everybody. I would like everybody
11 really to consider it. And if anyone is interested,
12 please.

13 MR. COLTER: How about at the next
14 meeting we bring nominations to people that want to
15 do it. Let us know if you still want to do it. If
16 not, I guess somebody has to pick it up.

17 CO-CHAIR McBRIDE: I think we should
18 in fairness open it up to everybody.

19 MR. GRELO: Don't you have to send
20 notification to the rest of the members.

21 CO-CHAIR McBRIDE: This is the
22 membership of the RAB.

23 A MAN: This is it.

24 MR. COLTER: Anybody else you know in
25 your neighborhood that is interested.

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2 MR. MANGANO: My own comment hope you
3 have -- you have been here as the president. It has
4 to be somebody that has attended regularly. To
5 bring in a chairman in, starting over, it doesn't
6 make sense. I would think, you could be a member.
7 Maybe you can bring somebody on as a member, but to
8 be the chair.

9 CO-CHAIR McBRIDE: I'm willing to
10 assist and to stay on, but I think it should be
11 opened to everybody.

12 CO-CHAIR KAMINSKI: Closing remarks,
13 then, from me?

14 I want to thank the presenters,
15 especially John -- everybody else who is on the
16 payroll. John came up as a volunteer. I appreciate
17 that. It goes way beyond what RABs usually do.

18 CO-CHAIR McBRIDE: Good night,
19 everybody.

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