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INSTALLATION RESTORATION PROGRAM
TECHNICAL REVIEW COMMITTEE MEETING

REPORTER'S TRANSCRIPT OF PROCEEDINGS

NAVAL AIR STATION, MOFFETT FIELD

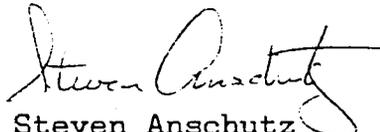
May 16, 1990

Reported by: MARK I. BRICKMAN, CSR
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31 May 1990

ERRATA SHEET
FOR
INSTALLATION RESTORATION PROGRAM
TECHNICAL REVIEW COMMITTEE MEETING
REPORTER'S TRANSCRIPT OF PROCEEDINGS
NAVAL AIR STATION MOFFETT FIELD
MAY 16, 1990

1. Due to the placement of name plates at the head table, several people are misidentified in this transcript. The speaker identified throughout as "CDR Hobgood" was actually Mr. Ted Smith of the Silicon Valley Toxics Coalition. The speaker identified throughout as "Mr. Smith" was actually Mr. Lenny Siegel of the Silicon Valley Toxics Coalition, with two exceptions: at the bottom of page 53, and again at the bottom of page 54, the speaker identified as "Mr. Smith" was Mr. Lewis Mitani of the Environmental Protection Agency.
2. Due to the background noise generated by the air conditioning system, the recorder sometimes missed or misunderstood particular words or phrases. These transcription errors do not significantly alter the meaning or intent of the proceedings, and no attempt has been made to correct them.



Steven Anschutz
Public Works Department
Environmental Division Director
By Direction of the
Commanding Officer

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A P P E A R A N C E S

The Presenters:

SARAH BARTLING
KEITH BRADLEY
TOM ADKISSON

The Panel:

RITA HELPER,
Mtn. View Chamber of Commerce

SANDRA OLLIGES,
NASA

MONICA HENDRICKS.
BAAQMD

PAT BURKE,
Navfacengcom

ERWIN KOEHLER,
Santa Clara DoHs

STEPHEN CHAO,
West Div. Navfacengcom

BOB SUCH,
Sunnyvale Chamber of Commerce

COMMANDER GLENN E. REYNOLDS,
NAS Moffett Field

STEVE ANSCHUTZ,
NAS Moffett Field

CAPTAIN T. QUIGLEY, JR.,
NAS Moffett Field

COMMANDER BILL HOBGOOD,
NAS Moffett Field

KEITH BRADLEY,
I.T. Corporation

LILA TANG,
RWQCB

MICHAEL GUISTI,
Bd. of Sup., Santa Clara County

///

1 Panel Cont'd

2 LYNN NAKASHIMA,
3 DoHs

4 TED SMITH,
5 Silicon Valley Toxics Coalition

6 Dr. JAMES McCLURE,
7 MEW Study Group

8 MARY VRABEL,
9 League of Women Voters

10 LEWIS MITANI,
11 EPA

12 ---o0o---

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BE IT REMEMBERED that, pursuant to the Notice of
The Meeting, and on May 16, 1990, at the hour of 1:20 p.m., at
NAS Moffett Field, Moffett Field, California, before me, MARK
I. BRICKMAN, CSR No. 5527, a Notary Public in and for the
County of San Mateo, State of California, there commenced a
meeting under the provisions set forth by the guidelines of the
Technical Review Committee.

---o0o---

1 CAPTAIN QUIGLEY: I first want to welcome you to
2 Moffett Field and the Technical Review Committee process; this,
3 of course, being our spring session.

4 We have a set agenda that we'll go ahead and walk
5 ourselves through. Here again, during the course of the -- of
6 the agenda, I encourage all formal members of the committee as
7 well as any ancillary attendees to certainly chime in as we
8 progress through if you have any area of concern, discussion,
9 point or item that you would like to illuminate on.

10 Hopefully we'll have a couple more folks arrive as the
11 case occurs.

12 We've certainly made a great deal of progress in the
13 last couple of months. It's our last session, and that is the
14 intent of the agenda, is to speak to all of that, and before we
15 proceed any further, I'm going to turn the floor over to
16 Commander Glenn Reynolds and let him review the TRC function
17 with all of us so that -- so that we have a common starting
18 ground and take it from there and our updates and exactly
19 what's occurring on the reclamation projection.

20 COMMANDER REYNOLDS: I'm Commander Glenn Reynolds, if
21 you don't remember or can't read this little, tiny printing on
22 my name plate here.

23 Last meeting, the February 12th meeting, we
24 reviewed -- okay. We are here, we're all part of the TRC, so
25 what? What is that? What does that mean? What are we going

1 to do?

2 We talked about that a little bit then. I just wanted
3 to hit some of the highlights of that again today, and also,
4 knowing that you've all read that several times in the interim
5 since we met last and that was a copy of the last minutes that
6 were sent out, I think that was February 26th, I won't spend a
7 lot of time doing that.

8 The basis and authority for this charter is the Circla
9 agreement in 1980 as amended by the charter of '86 and the
10 particular sections are addressed here.

11 We particularly as the TRC serve as an advisory body
12 to the Navy on the IR program at NAS, Moffett Field. We will
13 on occasion -- and we had one question at the last meeting and
14 got a little off of that subject about some of the programs
15 that we are doing here at Moffett Field and we'll address
16 those, but those aren't the primary reason for us to be here.

17 We're really concentrating on the IR program. TRC she
18 review and comment on proposed Navy response actions with
19 respect to the IR program at Moffett Field. TRC shall review
20 and comment on technical procedures and schedules to be
21 followed by the Navy during the IR program process at Moffett
22 Field, and we shall endeavor to identify any federally
23 promulgated state standards, criteria, orientations that are
24 legally applicable.

25 And there's some other things that I could read on.

1 The structure of the TRC, the chairman, the commanding officer,
2 Naval Air Station, Moffett Field or its designee shall consist
3 of representation from the parties identified on the attachment
4 1 that came along with this, and I think as you see, most of us
5 are here being Department of the Navy, NASA Ames Research
6 Center, Environmental Protection Agency Region 9, California
7 Department of Health Services, California Regional Water
8 Quality Control Board, the Bay Area Air Quality Management
9 District, Santa Clara County Health Department, Santa Clara
10 County Board of Supervisors, Mountain View Chamber of Commerce,
11 Sunnyvale Chamber of Commerce, League of Women Voters, Silicon
12 Valley Toxics Coalition and the Middlefield Ellis Wisman Study
13 Group.

14 While those are the official designees and several of
15 you have alternates identified, there may be an occasion where
16 due to the subject or the particular topics to be covered, you
17 would feel more comfortable having a technical expert accompany
18 you.

19 Feel free to do that, but remember, one of the reasons
20 of the TRC and in getting together in what we hope to be a
21 small, informal group is to foster exchange of ideas and give
22 everyone a chance to make their input, and as the group grows
23 larger, that's -- it's harder to do.

24 So we would encourage you to maintain a smaller
25 cadre, and if you do have folks, as many have done today, just

1 sit back and listen and participate as you need your folks to
2 do that.

3 To move on, the chairman shall be responsible for
4 recording the minutes of the meeting and for dissemination of
5 these minutes to committee members.

6 You may also have noticed a recorder is with us today.
7 That will be his function to provide a detailed account. Those
8 will be summarized in the minutes that are sent out to you.
9 Usually we try to get that out within ten to fourteen days to
10 review.

11 Chairman shall convene TRC meetings to discuss topics
12 pertaining to the IR program, technical data for remedial
13 investigation reports, work plans and other documents relating
14 to Navy response actions.

15 Primary function of the TRC is to obtain a coordinated
16 review of IR program actions at Moffett Field through
17 consultation with EPA state and local authorities, and we as
18 the Technical Review Committee will be providing technical
19 comments considering this action, and also ensuring that as a
20 representative on the committee as a whole, you represent your
21 particular agency's concerns as we go through the process and
22 as we go through the discussion.

23 And the meetings are scheduled to be held for the next
24 several years and on an average of quarterly which will be
25 promulgated in the minutes of each meeting that's sent back to

1 you.

2 And the last point, I guess, is that we all serve
3 without compensation, in case there was any doubt.

4 CAPTAIN QUIGLEY: It's not in this year's budget
5 requirement. I'll tell you. No doubt.

6 MR. ANSCHUTZ: Thank you, sir.

7 I'm Steve Anschutz. I'm the environmental coordinator
8 for Moffett Field.

9 The next item we have on the agenda is Moffett Field
10 Resource Recovery Program, and in the item of old business, if
11 you will, during the last Technical Review Committee meeting
12 that we had, there was a request made for us to discuss the
13 item of agenda at the next meeting, what we're doing with
14 regard to resource recovery here, installations and it will
15 come up in discussions during that last time.

16 Included in your packets are provided a copy of
17 Moffett Field's recycling materials program instruction which
18 details requirements pertaining to that program, installation-
19 wide program.

20 We have established during the 1989 time frame the
21 qualifying recycling program here at the installation. What
22 does that mean?

23 Well, we collect all types of recyclable materials
24 here on the installation. Primarily right now we're dealing
25 with scrap metals and used tires.

1 We turned this into the re-utilization and marketing
2 office known as the RMO. They, in turn, market those materials
3 for us.

4 We then receive one hundred percent of the revenue
5 return on that here at the station which we can apply towards
6 environmental projects, occupational health and safety aspects,
7 energy conservation and also benefit the morale welfare program
8 here at the installation. We get a direct return on that by
9 the sale of materials.

10 More recently, we advertised for and awarded a
11 contract to obtain recyclable materials from the housing areas.
12 It was referred to as domestic recyclables, things such as
13 newsprint, aluminum cans, clear, colored and -- clear, green
14 and brown glass, plastic beverage containers.

15 We will here within the next few weeks see recycling
16 collection points established at ninety points throughout the
17 installation and all other key sites such as the commissary and
18 the Naval exchange facilities.

19 We're also establishing a collection site within the
20 NASA-Ames Research location there for people to deliver
21 recyclable materials that they don't want to collect at a their
22 own domiciles. So as soon as those will be established, we
23 will be receiving recyclable materials of that type.

24 This was a contractor that bid on this, and since
25 these are not government waste items, we're able to award

1 contracts on it.

2 It's bid on a so much per pound, based upon
3 anticipated general rates for these various recyclables.

4 We, in turn, will be able to deposit those moneys,
5 also, into a recyclable program account and put them to good
6 use in the installation.

7 CAPTAIN QUIGLEY: I think in a simple sentence -- not
8 so simple. But in a simple sentence, the -- the objective is
9 to -- is two-fold. One is clean-up, what has occurred, and two
10 is the use of institution of environmental awareness, and what
11 we are doing here, of course, is reviewing how we are
12 proceeding with the clean-up phase as well as just recognizing
13 that we are also in the parallel effort working on the
14 institutionalization aspect of environmental awareness here at
15 the field in terms of both industrial recyclables as well as
16 regular. We hope to have both.

17 The outside program has been on-line for most of a
18 year. We hope to have domestic on by the end of June.

19 MR. SMITH: Do you have any plans to do end line
20 recycling on that basis?

21 MR. ANSCHUTZ: Yes. We have a plan right now in the
22 works which would be for recycling used solvents at all of our
23 maintenance facilities.

24 CAPTAIN QUIGLEY: One thing we don't have is the
25 time.

1 MR. ANSCHUTZ: I can talk a little on that.

2 It is to utilize those particular GSA vendors that are
3 already in the system rather than the activities to procure
4 various types of solvents in their maintenance activities, and
5 based upon our study analysis that we've done here with you, we
6 feel that it would be essentially a wash cost to them to cure
7 these recycling services, that the company then supplies the
8 machinery or what the case may be for roughly the same cost.

9 The big savings would be in waste disposal cost.

10 MR. SMITH: This sounds like a good program. I don't
11 know if you followed it here. It's been in hot water
12 nationally because it's unloaded hazardous waste to Army
13 surplus wholesalers.

14 As long as -- I'm always nervous when the recyclables
15 are a mess because they've been selling things that shouldn't
16 be recycled to wholesalers of military surplus.

17 It's obviously much better to sell them back directly
18 into use on base.

19 MR. ANSCHUTZ: The only thing that we are authorized
20 by law in military rules is to act to sell recyclables and be
21 able to receive a direct return on the -- there's three types
22 of category: Waste, scrap and other items.

23 The other items are not eligible on this program.
24 Those are your items such as vehicles or typewriters or
25 furniture, things of that nature, clothing items are military

1 surplus.

2 Waste and scrap, you can sell and you can receive
3 revenue from. Any further --

4 COMMANDER HOBGOOD: Do you know at this point how
5 much waste solvent is being generated here?

6 MR. ANSCHUTZ: I have that. If you want to discuss
7 it with me afterwards --

8 COMMANDER HOBGOOD: There's the program that's in
9 place that is able to generate this kind of numbers.

10 MR. ANSCHUTZ: Based on the studies that have been
11 done here at the installation, we're presented with a plan to
12 recycle solvents.

13 We also have some figures on how we're going to
14 dispose of them, also, over the years.

15 COMMANDER HOBGOOD: Okay.

16 MR. ANSCHUTZ: Any further discussions or comments?
17 If not, we'll get into the IR program portion of the meeting.

18 The IR program, what we're going to discuss here
19 today, we'll go into our Phase II investigation study
20 processes.

21 Since we last met in February, we completed our
22 hydropunch testing. We will have a presentation on that as far
23 as preliminary results from that, where we go from there.

24 Currently, we are installing monitoring wells, which
25 is based upon the results of that study. We're in the

1 investigatory process right now.

2 Also, on today's agenda, we will be discussing the
3 closure of known or suspected -- say, suspected wells. We will
4 be endeavoring to locate several wells which were purported to
5 be here in certain locations, and based upon exhausting field
6 research on our part, we think we've narrowed it down as to
7 where they may or may not be and we'll try to locate them and
8 close them out in a proper fashion.

9 That will also be addressed today, what's being
10 planned for that.

11 Preliminary work is on that right at this time, and I
12 believe the actual work will get under way here in June.

13 As far as removal of abandoned underground storage
14 tanks and sumps, that work was initiated here this past week
15 and we will also have a presentation on the work that's ongoing
16 now and we'll be there going through the rest of it this
17 summer.

18 So, what we will do here is have three separate
19 presentations. The first one on the CPT will be by Miss Sarah
20 Bartling from I.T. Corporation; the second one by Mr. Keith
21 Bradley, from the same environmental consulting firm; and last
22 but not least, Mr. Tom Adkisson from PRC will address the
23 abandoned underground storage tanks, sumps and removal.

24 I ask that you hold your questions until each of these
25 individuals finishes their presentations in order to facilitate

1 the progress here today.

2 Okay. Sarah, are you ready?

3 MS. BARTLING: As Steve has already mentioned, I'm
4 going to review the cone penetrometer testing and hydropunch
5 water sampling that was started in late December of '89 as part
6 of the Phase II investigation.

7 Can everyone hear me back there okay?

8 And the outline of this discussion -- first I'm going
9 to review real quickly the CPT hydropunch objectives and the
10 approach and then I'll also review the cone penetrometer test
11 for CPT test method, and the hydropunch sampling, how that's
12 performed, and then I'd like to compare the test results.

13 We did some comparison testing of the hydropunch and
14 cone penetrometer to the well data that was collected in our
15 Phase I investigation, and then I'm going to pick two sites as
16 examples of how -- how the CPT hydropunch testing went, and
17 then review the progress of the program and go back and compare
18 the results of the CPT hydropunch program to the objectives
19 that we set.

20 The objectives of the CPT hydropunch program were --
21 basically there were two main ones. First, we wanted to
22 further design the contaminant plume distribution at various
23 sites or identify contaminant plumes, the existence, if any,
24 and this is achieved simply by the high number of sample points
25 that we can get using this method.

1 It's a lower cost and much quicker method than your
2 standard monitoring well, so it allows us to get a lot of data
3 points quickly.

4 And our second objective was to optimally locate the
5 monitoring wells of the Phase II plan and that is achieved by
6 identifying the locations and the depths of sand or aquifer
7 zones, by CPT and also by estimating the concentrations of
8 contaminants in the groundwater and their distribution.

9 These two bits of information allow us to optimally
10 locate those monitoring wells. Their approach, then, is to
11 place several of the CPT/hydropunch where we anticipated a well
12 might be needed based on the Phase I data, and we would analyze
13 the samples, the hydropunch samples for the common or -- the
14 common compounds of concern that those might be expected at a
15 particular site, and those compounds were organics.

16 Basically the VOC analysis picks up the fluorinated
17 solids that we know are of concern at the sites and total
18 petroleum hydrocarbons, which would identify leakage from fuel
19 tanks.

20 We analyzed these samples on a fast turnaround time by
21 standard EPA methods, so we were able to get the results back
22 within forty-eight hours, and this allows us to keep the
23 program really rolling so we're not -- we're not waiting a long
24 time to get all the data back and then sitting down and
25 thinking about it.

1 It's a think-as-you-go, get the data back and work
2 with it.

3 So when we get the data back from the lab and we have
4 the CPT log data, we evaluate those two in combination to
5 decide -- again, going back to our objectives, the presence of
6 aquifer material so we know where a good place to screen the
7 well is and where we might place that well relative to what we
8 want to monitor.

9 In other words, do we want to look for the edge of a
10 plume; do we want to be right in the middle of it or do we want
11 to be upgradient of it, and then the data then allow us to put
12 our wells in the best place so we don't end up with all of the
13 wells in a hot spot or all of them outside of the plume, but we
14 can spread them appropriately.

15 Now, the cone penetrometer test method, it's important
16 to keep in mind that these methods, they are screening tools
17 and all the relations are confirmed when we put in the
18 groundwater monitoring wells.

19 But real quickly, then, the cone penetrometer test
20 evaluates the subsurface soil and sediment types. It's a
21 truck-mounted operation which adds to its efficiency, and the
22 operation basically involves driving rods down into the
23 subsurface at a constant penetration rate.

24 The physical parameters that are measured are measured
25 from sensors at the bottom -- at the end rod and we measure the

1 resistance to penetration at the tip and we call that tip
2 resistance, and we measure the friction along the side, and
3 that's measuring figures.

4 We can also get a floor pressure which is the pressure
5 of waters in the cores as that probe is driven into it, and
6 those physical measurements, then, allow us to evaluate the
7 types of soils, and their -- the evaluation is essentially done
8 in a comparison to empirically determined values, so that we
9 can look at charts and say, "Yeah, this is a clay" or "This is
10 a sand," and also there are some -- some soil and sediment
11 properties that are applied in this method.

12 And these are basically programmed into the contractor
13 who's doing the cone penetrometer testing, whose equipment
14 includes these charts and empirical values.

15 In the program at Moffett Field, they're tremie
16 grouted to prevent the communication of the water bearing zones
17 that we sent through in doing the testing.

18 The hydropunch sampling method is a one-time sample of
19 groundwater. Again, these are screening methods. And this is
20 also a truck-mounted method and it, in fact, is mounted to the
21 same truck that does the cone penetrometer testing.

22 The difference is the -- we no longer have the CPT end
23 rod which measures the friction and penetration resistance, but
24 we go down with a set of rods that has the sample -- sampling
25 apparatus on it.

1 As the -- as this rod is driven in, the sample port is
2 closed and then you pull back the rod a bit. This catches and
3 it opens the screen to allow the water to flow in under its own
4 head and the sample is maintained in the sample chamber and a
5 one-way truck valve is retracted from the hole and it's
6 decanted at the surface of the proper sample containers and
7 sent to the lab for the standard analysis that I mentioned
8 earlier.

9 And again, as with the CPT holes, the hydropunch is
10 tremie grouted to prevent any communication between the water
11 bearing zones.

12 So that is a real quick review of CPT/hydropunch
13 method.

14 At the start of our program, we wanted to get an idea
15 of the quality of the data that we were getting from the
16 CPT/hydropunch method, so we wanted to do some comparison
17 testing to start out, how well does this work, and in order to
18 do that, to document the site specific reliability of these
19 methods, we went to our Phase I data and ran tests of CPT and
20 hydropunch adjacent to these locations where we already had
21 Phase I data.

22 So for the cone penetrometer test method, it's a
23 comparison of lithology is what we're comparing. We would run
24 a CPT adjacent to one of the locations where we had a
25 geophysical boring proposed in Phase I, and this gave us

1 electric log data and continuous core data to compare our CPT
2 log data to.

3 So we're making a comparison of this screening tool to
4 standard field data gathering techniques that we used in the
5 Phase I.

6 On the hydropunch, the comparison testing means a
7 comparison of groundwater sample data. In order to do this, we
8 sampled adjacent to A aquifer wells, we drove the sampler to
9 the depth of the screened interval of the wells that were
10 installed at Phase I.

11 So we were getting a sample from the same interval
12 that we got a well sample from, and then we compare those
13 results to the well sample data to see how -- how good a match
14 we were getting.

15 For the CPT -- this is a sample log from the CPT.
16 This curve is the tip resistance -- let's see. Here with an
17 increase in tip resistance this way, and it indicates an
18 increase in tip resistance here suggesting a sand and in a
19 slight increase in tip resistance here suggesting another sand,
20 and those matched fairly well with our well 85A boring log that
21 we had from the Phase I.

22 We had a sand in this -- basically in this zone here,
23 fairly relative with the CPT information and another one down
24 in here and a little one in here which is a fair match with
25 this information here.

1 Is that visible to everyone?

2 This local friction and the tip resistance ratio is to
3 give us a friction ratio percent, and that log also indicates
4 sand in these zones, so we felt that we had pretty good
5 correlation in this test hole.

6 We didn't -- we did three of them and we got similar
7 results in the others, but we won't go over all of them in
8 these short minutes.

9 Now, for the hydropunch data, the comparison is to
10 groundwater sampling information that we got in the Phase I,
11 and I would guess from looking at it from here, that we're
12 you're going to have to go to your handouts to see that.

13 CPT hydropunch 9-44 was sampled adjacent to monitoring
14 well 9-14A, and the results from 9-14A were -- the results
15 printed -- presented in your table are an average over seven
16 rounds of sampling for the Phase I monitoring period.

17 We seem to have some pretty good indication from the
18 hydropunch what is in the groundwater based on this comparison.
19 1-1 DCE, which the hydropunch did not detect that.

20 However, the well did not pick it up in all of the
21 rounds, so -- so something is happening here that is not real
22 clearcut.

23 However, on the 1-2 DCE where we had 650 parts per
24 billion picked up in the hydropunch, the well data over the six
25 rounds indicated 484.

1 So we have a proper order of magnitude there, and as a
2 screening tool, the hydropunch is saying, "Yeah, we have this
3 chemical and it's about this level." That's what we were
4 hoping to find and it did well there. These two areas, 1-1 DCE
5 and 1-1-1 TCE, the hydropunch picked up some that the well did
6 not pick up.

7 There may be a number of reasons for that. We may
8 have had interference from tomorrow of the contaminant levels
9 in the well that would change the detection levels here that
10 may not have occurred in the hydropunch.

11 In TCE, however, one of our biggest chemicals of
12 concern out at Moffett, we had 22,000 parts per billion in the
13 hydropunch and we had 18,000 in the well, so that's a very
14 close correlation.

15 So even though we have -- have one of two chemicals
16 that the hydropunch picked it up and the well didn't in the
17 reverse, I think the most important thing is from the screening
18 standpoint, we picked up the -- the key indicators at the
19 proper order of magnitude, so -- and we did see the order of
20 magnitude difference, a very big difference and it wasn't
21 missed.

22 So as a screening tool, it works very well, and
23 these -- these data, again, are going to be confirmed by
24 monitoring wells in the continuation of Phase II investigation.

25 Results of testing at site 3. Site 3, we wanted to

1 investigate groundwater in an area where head high soil-gas
2 concentrations and we had planned twelve CPT/hydropunch to test
3 for potentially putting in eight monitoring wells.

4 We ended up completing six of the CPTs and five of the
5 hydropunch samples. One of the CPT.

6 CAPTAIN QUIGLEY: That was as of when? This week or
7 how long ago?

8 MS. BARTLING: Oh, at -- site 3 was completed quite
9 sometime ago. The CPT program is complete. The hydropunch
10 is --

11 MR. BRADLEY: Site 3 is probably finished in
12 February.

13 MS. BARTLING: February for site 3.

14 One of the CPT locations had no sand, so there was no
15 zone to produce water, and that's why we had five hydropunch
16 samples. We found no groundwater contamination through the
17 hydropunch sampling, and as a result, rather than putting in
18 the eight wells that were planned in the event of the worst
19 case, we will put in from one to three wells that have been
20 planned for the scenario that's -- that we've discovered no
21 detection of contaminants in the groundwater.

22 And the layout, quickly, north this way, groundwater
23 flows across the page, basically north. These circles are the
24 high soil-gas areas. These are topography, bunkers. They're
25 not contamination.

1 These were the areas where we had high soil-gas
2 contamination, and the CPTs were placed one right in each of
3 the high soil-gas areas and several outside and we got no
4 contamination in those.

5 So one of the advantages of the CPT worked for us here
6 in that that forty-eight hour turnaround time on the samples
7 allowed us to say, "Let's stop. Let's not put in all twelve."

8 We aren't getting anything out here, and perhaps
9 somewhere else on the base, we'll find out that we need more,
10 and, in fact, that's the case and we've used these CPT in other
11 places.

12 At site 9 -- I've just picked out one of the small
13 areas of site 9.

14 The area 9B, which is the old NEX Gas Station, we
15 wanted to investigate groundwater contamination that was picked
16 up in one of the Phase I wells and another soil-gas hot spot,
17 if you will.

18 We had planned five of the cone penetrometer tests/
19 hydropunch tests to locate three wells that were planned there
20 and we have ended up installing one upgradient well, one near
21 the tank locations and we were able to place one in the far
22 field downgradient towards the edge of the plume because we had
23 the hydropunch data.

24 Here is a a map of that. Again, groundwater is across
25 the page to the north. The soil-gas area is right in here

1 where we had higher soil-gas, and the tanks are in this area
2 with possibly some piping through here that's giving us the
3 high soil-gas concentrations.

4 We put a CPT here, and the indications were that this
5 is a -- sort of a background level of total volatile organic
6 compounds, approximately nine parts per billion.

7 Here as we get close to the tank area, we had
8 approximately 2,600 in monitoring wells, 2,600 parts per
9 billion. CPT came out real close to that, 3,800.

10 So we are getting higher concentrations near the
11 tanks, and as we moved away, we had 197, we had twelve on this
12 side and thirty-one on this down -- side -- or down at the end,
13 and the indications are that this is within a local plume.

14 This is possibly laterally off to the side of it and
15 this is approaching the background concentration that we saw up
16 here.

17 So the CPT/hydropunch data combined allow us to place
18 a well here in the upgrading direction to monitor what might be
19 a local background, a well here to monitor the high
20 concentrations, and a well way down here so that we can monitor
21 the edge of that local plume rather than trying to guess ahead
22 of time where in this area we might find the end of that local
23 plume.

24 So we think as a screening tool, it's worked very
25 well.

1 The progress in the investigation, as I just mentioned
2 it, the CPT/hydropunch is done. We completed 126 CPTs, and 118
3 hydropunch samples were collected and analyzed.

4 Some of the cone penetrometer tests were strictly
5 planned for lithologic information and we had not originally
6 planned to actually take a sample.

7 The data that were collected, if we gathered them
8 before April 1st, will come out in this next quarterly report
9 or the one that actually just came out yesterday, and the
10 remainder of the data will be published in the following
11 quarterly report.

12 So in conclusion, then, our objectives were to further
13 define contaminant plume distribution and optimally locate the
14 monitoring wells.

15 The results at site 3, we had good results in
16 determining that we do not have groundwater problem there, but
17 again, it will be confirmed with monitoring wells.

18 We were able to locate one to three key wells in that
19 area and that leaves us with up to seven wells that we can
20 place in other areas of the base should it become necessary.

21 So the -- the program has allowed us to be flexible
22 and move things around without having delays to the drilling
23 program overall.

24 At site 9, we were able to determine the extent of a
25 local plume and locate wells in the far field instead of having

1 them all end up right in the middle of the local plume.

2 So we have some inside and outside or at the edge of
3 the plume, which is the optimal configuration, and in the end,
4 we were able to eliminate some locations, because there was no
5 aquifer material at all, and when we got the rig out there,
6 it's too late.

7 You just end up with a hole full of cement, so we
8 avoided that waste, and then also we were able to eliminate
9 some screen intervals which would not yield any water to the
10 hydropunch sampling equipment.

11 So it might appear that there was sand there, but we
12 couldn't get any water out of it, and we were able to eliminate
13 those and screen in zones where we can get good recovery.

14 And that is a quick review of the CPT/hydropunch and I
15 can take questions now.

16 Sir.

17 MR. SMITH: Two questions. I found the comparison
18 between hydropunch and the well were interesting and I was
19 wondering whether the time difference would account for some of
20 the discrepancies.

21 MS. BARTLING: The time difference between --

22 MR. SMITH: Well, you have three contaminants that
23 showed up in the hydropunch that were not detected at all in
24 the well samples.

25 I'm just wondering whether the hydropunch would have

1 been done later --

2 MS. BARTLING: Whether those contaminants could have
3 moved in since we did the well sampling. That is one scenario.

4 MR. SMITH: And the other question is: Which labs
5 are doing the testing? Is it your own lab?

6 MS. BARTLING: Yes. It's the I.T. lab in San Jose,
7 which has done the hydropunch samples, again, by EPA methods.

8 COMMANDER REYNOLDS: What kind of certification or
9 accommodation do they --

10 MS. BARTLING: The San Jose lab has state
11 certification for hazardous materials testing.

12 COMMANDER HOBGOOD: What are some discriminations?
13 It's not consistent. You have one non-detect in the hydropunch
14 and three non-detects in the well where in the opposite side,
15 you've got a detect.

16 MS. BARTLING: In the -- in the well samples, we have
17 some very high concentrations that might mask the -- the
18 appearance of those, and --

19 COMMANDER HOBGOOD: So those might be false
20 negatives?

21 MS. BARTLING: It might not be that they're not
22 showing up.

23 COMMANDER HOBGOOD: How would you then explain the
24 other one, the 1-1 DCE heavy concentration?

25 MS. BARTLING: Well, it's the same method and it

1 should come out, but sometimes they don't.

2 I mean, in the well sample, we had three, three times
3 and in the hydropunch, we only have one, so we don't know if we
4 took a hydropunch sample there the next day, the lab might pick
5 it up.

6 MS. VRABEL: Is the volume of water in the hydropunch
7 the same as the volume of water for the well?

8 MS. BARTLING: No, it isn't. The hydropunch, you
9 collect 500 mls. In terms of a volatile organic analysis, it's
10 a moot point, because when you take a volatile sample analysis,
11 however, on the total petroleum hydrocarbons, you generally
12 need more.

13 So on that sample, it might be raised a little.

14 MS. VRABEL: That's what I was wondering, if that
15 might help some of the discrepancies.

16 MS. BARTLING: I don't think we had a total petroleum
17 hydrocarbons shown on that particular sample.

18 MS. VRABEL: I'm just wondering if the detection
19 level might be different for one or the other.

20 MS. BARTLING: It can be.

21 If there are a lot of other contaminants in that
22 sample and you raise your detection limit, you don't have
23 enough of sample to go through the innerations to get through
24 the detection level.

25 MR. SMITH: How far was the hydropunch from the well?

1 What's the distance?

2 MS. BARTLING: We were trying to get it, I believe,
3 within five feet.

4 If we get too close, we might get interference in the
5 zone from where you drilled the well, just the ring itself.

6 Sir.

7 AUDIENCE PARTICIPANT: You mentioned the background
8 level.

9 MS. BARTLING: Of this little site 9 example that I
10 showed? From that data, it looks like it's 9. At this
11 particular point, it's about 9, so I would say in the tens of
12 parts per million.

13 AUDIENCE PARTICIPANT: Where is that from?

14 MS. BARTLING: Well, we have some Moffett -- this is
15 one part of site 9. Upgradient of that, there are other parts
16 of site 9, and upgradient of that, across the highway, there is
17 another contamination site which is probably contributing to
18 that, as well.

19 DR. McCLURE: Sarah?

20 MS. BARTLING: Yes.

21 DR. McCLURE: Which particular analysis were one on
22 the hydropunch analysis?

23 MS. BARTLING: 61 and 62, and THC, high boiling
24 point.

25 DR. McCLURE: And when was the sample taken, do you

1 recall? Sometime presumably around February, but --

2 MS. BARTLING: Maybe there's a date on there.

3 DR. McCLURE: I didn't see one on the map.

4 MS. BARTLING: In the quarterly report, the sample
5 analyses all have dates on them and they're tabulated, so it
6 should be fairly easy to determine.

7 COMMANDER HOBGOOD: Is that just out, you say?

8 MS. BARTLING: It came out yesterday?

9 COMMANDER HOBGOOD: And would that be made available?

10 MR. CHAO: It will be in the administrative record
11 this afternoon and you'll be getting your copy in the mail.

12 MR. BRADLEY: It's the routine quarterly report.

13 MS. BARTLING: Okay. Thank you.

14 MR. ANSCHUTZ: Okay. Keith is going to talk to us
15 about the closure of the area.

16 MR. BRADLEY: Within the next two weeks, we'll be
17 getting -- we'll be beginning activities to close the abandoned
18 wells at Moffett.

19 What's -- by "abandoned wells," I'm talking about
20 wells that are no longer in use. Mostly we're talking about
21 old irrigation wells and some water supply wells.

22 Plans for the closure activities are to close five
23 known abandoned wells. By that, I mean abandoned wells that we
24 know exist, we know where the locations are, and nine abandoned
25 wells that we determine suspected wells. By that, we don't

1 know for sure that they exist or we don't know for sure exactly
2 where the locations are.

3 This map I'm -- I'm showing you several things here.
4 The title of this is approximate location of active wells,
5 known wells and suspected wells.

6 I've colored in in blue here the locations of the five
7 known wells, the wells that we know exist. We're also showing
8 active wells.

9 Those are not -- will not be included under the well
10 closure program. I've also shown some wells here with X's on
11 them. Those are already been closed out.

12 These solid circles -- all together, we have
13 thirty-two wells here. The solid circles are locations of
14 wells that went through a first cut.

15 They were first identified as potential locations of
16 suspected wells, and what that means is that another contractor
17 to the Navy two years ago went through the exercise of -- of
18 looking at old topo maps, going through old USGS publications,
19 looking at old well construction logs, talking to old timers
20 who used to work here, whatever means they could -- could use
21 to come by information as to where old wells might exist, and
22 these are the locations they came up with.

23 These are low -- suspected areas of -- of old wells.
24 Now notice here, we actually have two well identifications and
25 four spots. That's because they got conflicting stories as to

1 where those wells might be located.

2 What they -- what they did, then, for these suspected
3 wells is they conducted some geophysical techniques at these
4 suspected well locations. They used ground penetrating radar,
5 magnetometer work and electro -- conductivity meter to -- they
6 took a hundred foot diameter circle to try to locate these
7 wells exactly.

8 As a result of that effort, we ended up with nine
9 locations of suspected wells that -- that are felt to be --
10 present reasonable possibilities of existence. These are
11 locations where suspected wells may be present.

12 The other locations were ruled out because there was
13 no evidence shown from the -- from the geophysical
14 investigations that they were present at all. They could not
15 be located. They were ruled to not exist.

16 Let me tell you -- I told you initially that we had
17 five known wells. I need to update you on that a bit.

18 We have a bit of a complication with two of those
19 known wells. This known well here, 23A01, that well is right
20 on the fence line. In fact, the stake is just right there on
21 the fence.

22 Right now, it appears that that well may not be on
23 Moffett property. I guess it would what, be Caltrans property,
24 Steve?

25 MR. CHAO: Possibly.

1 MR. BRADLEY: And so that well's being surveyed to
2 see who that well is actually on, and the Navy won't be closing
3 that well out. That will be removed from the list.

4 And the other complication is 12NO1 up here, this is
5 in the fuel farm area, site 4 -- no. Site 5, actually.

6 That well has been located there, and at this point,
7 we are not sure that we have it accurately located.

8 We may have -- we're more or less throwing that into
9 the suspected well category because we still have to locate the
10 thing, so that location may actually move around up here a bit,
11 but we -- but it is thought right now that it does exist.

12 So we're left with five known wells. That's assuming
13 that these two still fit in that-category, and nine suspected
14 wells that will be closed down.

15 The process of closing out these wells is a lengthy
16 process and it's a fairly expensive process and I'd like to
17 talk -- tell you or explain to you why the Navy is going to
18 close these wells out at all.

19 The -- this is just a real simple depiction, but it
20 explains a scenario here for contaminated groundwater such as
21 we have in the shallow aquifer at Moffett that would enter an
22 abandoned well and then proceed through ruptures in the casing.

23 Over the years, we obviously have screen here that's
24 not closed off. And in other areas, where it's not screen,
25 it's ruptured in so many areas, we feel like.

1 This would be a scenario of how contaminated
2 groundwater would enter a previously uncontaminated aquifer.

3 One thing that this picture does not indicate is that
4 since the wells were installed for irrigation and water supply,
5 they're most likely not sealed off here at the aquifers.

6 This is probably more or less a continuous gravel pack
7 along the outside, so even if it was not ruptured, it's
8 possible contamination could occur on the outsides of the well.

9 Our schedule, like I say, within the next two weeks,
10 we'll begin site preparation. By that, I mean that differs
11 from site to site.

12 We have one, it looks like it's been filled with
13 concrete and that's simply turned over the top of the well.

14 On the others on the suspected well, that would be
15 finding the well. That would mean digging down perhaps as deep
16 as ten feet until we find the top of the well head, and in some
17 areas, it might be constructing a little stabilization around
18 that area and then to make it available for your drilling
19 equipment.

20 The next step will be to remove blockages from the
21 wells.

22 We don't know much about most of these wells. A
23 couple of them we know go down about 1,200 feet. The rest of
24 them could be as shallow as sixty feet.

25 We really don't know much about many of them, but we

1 do know that a couple of them -- we know of two wells that go
2 down to about 1,200 feet. One of them's blocked at
3 thirty-three feet. The other one's blocked at ninety-five
4 feet.

5 It's rather typical to have these wells to have
6 collapsed casing, to be silted in and to be blocked several
7 times -- several places along the way.

8 So we'll be removing those blockages and sampling and
9 we'll be removing the blockages, and as we go, we'll be
10 sampling the water between the blockages or at significant
11 operator zones, whichever results in the most samples; doing
12 geophysical logging, which would be running gamolog down the
13 well to try to pick up aquifer zones, for one thing, and for
14 another thing, we want to make sure we're staying in the hole,
15 because it's easy at that depth to drill outside the well.

16 We'll be doing video logging so that we can see where
17 the screens are in the wells and we can also look for cracks
18 and breaks in the well case.

19 That will be followed up by well sealing, and that's
20 essentially where the casing's solid, and that means
21 perforating the casing and filling the hole up. And that will
22 be followed by site restoration.

23 Our schedule. Again, on the five known wells, we'll
24 begin work here within the next couple of weeks. Field work
25 will take us on those five known wells until October 1.

1 The report -- a final report will be out by January
2 11th. That will be -- on the suspected wells, field work will
3 begin October 1.

4 The idea is not to have a break in our field work here
5 between the known wells and the suspected wells. Report
6 preparation then will be out February 1 of '92.

7 Any questions?

8 DR. McCLURE: I didn't mean to cut somebody off.

9 How are you planning on selecting the intervals for
10 perforation and conducting the subsequent grouting?

11 MR. BRADLEY: It will be sealed from top to bottom,
12 so every place where we don't have screen, every place we have
13 solid casing, we'll go ahead and perforate it. That's
14 presuming that we have gravel packed on the outside.

15 If we really had reason to believe we had a tight seal
16 outside, then maybe we'll have a reason. But we expect them to
17 be perforating.

18 DR. McCLURE: How are you planning on perforating?

19 MR. BRADLEY: Right now, there's a -- a drill bit
20 that has -- it's somewhat of a shredder rather than the
21 explosive type perforation.

22 That's what we have in mind right now.

23 DR. McCLURE: As opposed to a Mill's life? Are you
24 going to be using a rotary tool?

25 MR. BRADLEY: Yes. Right now, that's sort of open.

1 We'll use whatever technique is most comfortable.

2 MR. SMITH: Are you going after these one at a time
3 sequentially?

4 I'm just trying to figure out your schedule.

5 MR. BRADLEY: Not necessarily. We'll start off with
6 one.

7 We'll probably be -- depending on what we run into, we
8 may use up to about three different kinds of rigs here.

9 Let's say we have a -- let's say we use a ten ton pump
10 rig, a rig that can pull a large pump of something up to about
11 ten tons' worth of force.

12 We work on one rig, which moves one pump and gets down
13 to the next level. Maybe we'll move him on to the second hole
14 and bring in a larger pump rig behind him.

15 Say they work and we find we have collapsed casing and
16 need to go to mud rotary, so then we're -- we'll probably
17 just -- we'll see how it works as we go along.

18 The idea will be to try to keep as many rigs working
19 as we can and try to keep as many wells working as possible.

20 MR. SMITH: My other question is: What do we know
21 about these active wells; I guess, just outside the base? Are
22 they neutral?

23 MR. BRADLEY: I don't know much about those active
24 wells.

25 MR. SMITH: Are they pumping?

1 MR. BRADLEY: One of them is located on the base, and
2 I think that's probably an irrigation well on the south side
3 there near the end of the runway.

4 That's probably an agricultural well.

5 CAPTAIN QUIGLEY: It's been used out there for
6 planting barley. We used to have that, too.

7 MR. SMITH: I'm just wondering whether the rate of
8 pumping is likely to affect the spread of contaminants.

9 CAPTAIN QUIGLEY: He may have an educated opinion.

10 MR. BRADLEY: I don't know about these wells up here.
11 I don't --

12 CAPTAIN QUIGLEY: Those used to be irrigation wells,
13 one inside and two outside.

14 MR. SMITH: I can't imagine anyone drinking from them
15 anymore.

16 CAPTAIN QUIGLEY: They're only used by the Navarro
17 family for farming, and since we've been in the drought,
18 nobody's used those wells.

19 MR. SMITH: How about the rest of them?

20 CAPTAIN QUIGLEY: It's a good question. If you have
21 it, we'll find the answer, too.

22 MR. ANSCHUTZ: Did you note the question?

23 MR. BRADLEY: No.

24 MR. ANSCHUTZ: The question, whether or not we knew
25 anything about the rate of pumping and what affect it might

1 have upon the aquifer?

2 MR. BRADLEY: The rate of pumping from these wells up
3 here?

4 MR. SMITH: Any of the active pumps.

5 MR. BRADLEY: The extensive rate of pumping, the
6 pumping was so extensive, we had severe subsidence in this
7 area.

8 I don't think -- that's stabilized. I don't think
9 that we witnessed that type of pumping or type of pumping that
10 would draw contaminants back. I don't think we've absorbed
11 that.

12 MS. BARTLING: We have looked at the data that we
13 have out there on the groundwater contours. The groundwater
14 mapping that we've done out on the base in the last four
15 quarters have not shown any indication of a change in
16 groundwater flow direction.

17 More data will give us a better indication. Phase II
18 data will give us a better indication of actual flow patterns.

19 But a regional trend does not seem to be diverted,
20 showing any diversions from the pumps.

21 MR. BRADLEY: That, of course, would be the impact,
22 the extensive pumping that there were.

23 COMMANDER HOBGOOD: I'm still concerned about the
24 time schedule.

25 It looks like the closure of the suspect wells is

1 going to to take a lot longer than the known wells.

2 Why can't that be done quicker?

3 MR. BRADLEY: Well, there are nine of them. The rate
4 of accomplishment, the rate of field work -- what have we got
5 here? We've got eleven months here for nine of them.

6 COMMANDER HOBGOOD: And then you have four months --

7 MR. BRADLEY: For five of them.

8 The rate of field work is about the same. It's --
9 without knowing what we're going to run into, it's really hard
10 to do anything but assume if not the worst, then at least a
11 complicated scenario.

12 The field work here, if we run into shallow wells,
13 have a few blockages without extensive complications, it could
14 easy be cut very significantly.

15 MR. CHAO: You might want to explain the process
16 involved in locating suspected wells.

17 COMMANDER REYNOLDS: That may be part of the
18 difference right there.

19 MR. BRADLEY: We know, we have the hundred feet or
20 actually twenty foot now target area, and the first thing we'll
21 do is go out with a backhoe or front end loader and start
22 excavating till we find the well head itself, and that's --
23 that's really the week here.

24 Within actually a day, you've either found it or you
25 haven't found it.

1 The real -- the real lengthy process here will be
2 closing the things out, depending on what we run into.

3 We also have one complication in that one of those
4 wells, the one at the end of the runway down there is in the
5 glidepath, and so we are really going to have a mess trying to
6 coordinate that with flight operations because having a drill
7 rig out there presents a serious safety hazard.

8 CAPTAIN QUIGLEY: It's just one runway; isn't that?

9 COMMANDER HOBGOOD: It looks like there's actually
10 three of them out there.

11 MR. BRADLEY: It's the one out there by the end of
12 the fence.

13 COMMANDER HOBGOOD: 914A and 14C look like they're on
14 the runway.

15 CAPTAIN QUIGLEY: Actually, 14A and SW9. Those are
16 the only ones on the runway. SW1, we have an impact. 14C is
17 on the taxiway.

18 COMMANDER HOBGOOD: It looks like three of them are
19 real close to hangars, also. Is that going to be a problem?

20 CAPTAIN QUIGLEY: I think to answer as best we can
21 right now, we have been liberal in the time estimate because,
22 one, we have to locate them definitively; and then two, we
23 don't know how complex the process it's going to be to clean
24 them out.

25 We have a better feel for it on the known tanks. Now,

1 when I was initially briefed on this, I naturally assumed that
2 if one could locate them easily, then obviously we lessen the
3 amount of time, but there's no way to anticipate the whole
4 process.

5 MR. BRADLEY: As we go, we can keep you updated and
6 we may be able to knock them out a little sooner.

7 MR. ANSCHUTZ: Based on the information related to
8 us, we feel that the suspect wells may have the pump head or
9 the stem removed few to several feet below the surface of the
10 ground not in order to remove any obstruction obstacles for
11 farming practice prior to Moffett Field being established here.

12 So that is one of the reasons where they'll digging an
13 excavation project, 250 feet by ten feet deep.

14 Now if we excavate that pit and find nothing, we'll
15 once again use ground penetrating radar and try to see if
16 there's anything in there.

17 And if inspection's there, we know we've made a good
18 faith effort to locate that well and then we'll close and
19 reclaim that site, strike it from our list.

20 But if we find it, it could get into a lengthy process
21 of trying to remove the structure and determine the integrity
22 of the well facing and ultimately grouting and filling it from
23 the bottom up.

24 MR. BRADLEY: And the report could contain --

25 CAPTAIN QUIGLEY: We'll start with the known wells

1 because we know where they are.

2 I'd like to give a commercial here. I reported to the
3 Naval Academy in 1963, and during that first week, one of the
4 senior midshipmen, who was training fleets that year,
5 rhetorically asked my particular unit what it was that an
6 individual in the Navy could determine -- could use to
7 determine whether or not he had a sense of what was going on in
8 the organization and what was -- how he could measure his
9 success as a Naval officer, and of course because it was
10 rhetorical, we all didn't know the answer.

11 And so finally, he said -- after we all gave up, he
12 said, "The answer is simple. All you have to know is who's
13 ahead. The diggers or the fillers."

14 Well, I can tell you that the diggers are going to be
15 ahead at Moffett Field as far as working on these wells.

16 DR. McCLURE: Keith, at the locations where you have
17 still designated wells as suspected, do you have a geophysical
18 anomaly.

19 MR. BRADLEY: Yes.

20 DR. McCLURE: So there is something at each of those
21 locations?

22 MR. BRADLEY: Exactly.

23 DR. McCLURE: And that's the basis for the narrowing
24 of this area?

25 MR. BRADLEY: Exactly.

1 MR. ANSCHUTZ: Any other questions?

2 Thank you very much, Keith.

3 Tom? You're up next to talk about underground storage
4 tanks and sumps.

5 MR. ADKISSON: I didn't bring any overhead, so I'm
6 going to ask that you take your handout out of the packet that
7 was provided to you for the tank remove activities. And we'll
8 work from that.

9 What I'd like to talk about is the objectives of the
10 tank and sump removal activities, our schedule for those
11 activities and briefly describe the locations and the usage
12 that -- at least what we know about those tanks and sumps.

13 And then go through the field activities themselves in
14 terms of how we are going to be doing the removals and
15 confirmation samples.

16 There's two main objectives to our tank and sump
17 removals. The first one is to remove existing contaminant
18 sources that may still be present at those locations, and that
19 would include the tanks and piping themselves as well as highly
20 contaminated soil that may be around the outsides of the tanks
21 and the piping.

22 The second objective is to obtain information to
23 determine the significance of the contamination that was caused
24 by these tanks or sumps and the pipe runs associated with them.

25 As far as the schedule, we have it in two phases. I

1 don't want to confuse these two phases of the IR work that's
2 being done. These are just phases for the tank removals
3 themselves.

4 Phase I addresses five tanks and a sump which have
5 been identified and, in fact, were out in the field at this
6 time removing the tanks.

7 Four of them were removed last Friday and samples were
8 taken. The remaining tank and sump are going to be removed
9 this Friday.

10 Phase II tanks are in a more of a preliminary stage.
11 We have a good idea where most of them are. We have a few
12 other where additional work's being done to confirm their
13 location.

14 Also, there will be preparation of an action
15 memorandum to justify or to describe the removal action itself,
16 and that will be prepared and submitted for public comment.

17 At the completion of that time, there will be a field
18 plan prepared and we'll go out and remove those tanks from
19 Phase II. So Phase II, there will be some additional work to
20 verify the location of a few of these tanks.

21 An action memorandum will be put together and then
22 we'll do a work plan out in the field. We anticipate being out
23 in the field in the late summer, early fall with Phase II
24 tanks.

25 Okay. What I've got attached here is we'll go to

1 that, is I have them separated as far as the locations of these
2 tanks by phases.

3 The first attachment shows the site map and the
4 locations of those tanks followed by four specific maps showing
5 each tank.

6 And then if you go past those four -- excuse me.
7 Three specific maps, you'll get to the site map showing the
8 locations of the Phase II tanks.

9 I will start with Phase I. We have a sump 66 and tank
10 67 and tank 68 that are all in one area. Tank 67 and sump 66
11 are scheduled for removal this Friday.

12 Tank 68, which its existence is still a little bit
13 unclear, originally was believed to be right next to tank 67,
14 but when we uncovered 67, it wasn't there. We believe it's in
15 another location.

16 That one has been filled with concrete according to
17 information provided by the base, and we'll be addressing that
18 when we go out and do some well drilling.

19 Moving down the line, we have tank 14 which was
20 removed last Friday. The other three tanks associated with
21 Phase I are on the eastern side of the base. Two of them from
22 tank 2 and tank 43 are on the east side of hangar number 3, and
23 then finally tank 53 is up in the north end of the golf course.

24 MS. VRABEL: They're gone?

25 MR. ADKISSON: Yes. Tank 53, 43, number 2 and number

1 14 were removed last Friday. Tank 67 and sump 66 will be
2 pulled on this Friday, two days from today.

3 COMMANDER HOBGOOD: Is it 67 you said was filled with
4 concrete?

5 MR. ADKISSON: No. 68, which is the other one.

6 COMMANDER HOBGOOD: It says 67. That's 20,000
7 gallons.

8 MR. CHAO: That's Friday.

9 MR. ADKISSON: Yeah.

10 And I've attached just for your own benefit specific
11 location maps showing where these tanks are in relationship to
12 the buildings.

13 Now, we'll move over to the base map showing the Phase
14 II tanks. These are clustered in more of a centralized area.

15 We have tanks 47, 48, 49 and 50, and I've indicated
16 suspect because those are the four tanks that we believe
17 they're in this area, but we haven't confirmed their process.

18 COMMANDER REYNOLDS: Is it under the parking lot?

19 MR. ADKISSON: Yes. There's been some geophysical
20 work done there and the results have been inconclusive.

21 Basically, there's a lot of background noise in this
22 area.

23 CAPTAIN QUIGLEY: You're going to start that in late
24 summer?

25 MR. ADKISSON: Mid to late summer.

1 We're going to try to find these tanks. We've pretty
2 much exhausted geophysical techniques to try not to disturb the
3 area and now we're going to go with some backhoes.

4 Tanks 56 through 59 are -- have been located, and
5 they're -- actually, Sarah had talked about those a little bit
6 in terms of her CPT and hydropunch work that they were doing.

7 Then we have a sump which is across the street from
8 the suspected tanks and that's sump 61, and then there's
9 another sump lower down where there was some truck washing
10 activities, which is sump 60, and those are the ones scheduled
11 for field work to start in late summer and removed in early
12 fall.

13 Now -- and again, I've attached some specific location
14 maps for your use to give you an idea of where we believe these
15 tanks are.

16 The first location map shows a rough estimate of where
17 we think tanks 47 through 50 are, but there aren't any specific
18 tanks located because that hasn't been confirmed yet. It just
19 shows a rough area of where we believe they are.

20 Now, if you look to the last page of the handout, it
21 shows you some information on tanks and sumps for both Phase I
22 and Phase II.

23 As you can see, tank 68 -- excuse me. 68 is
24 identified here as -- and we believe it's concrete filled. We
25 have a good idea on what can contents of Phase I tanks and

1 sumps were.

2 There's still some unknowns associated with the size
3 of, for example, 68, and then when we get to Phase II, we're
4 really not sure about the size of these sumps and tanks. We
5 really will find that out when we get out there.

6 All the tanks are inactive at this time. They're no
7 longer in use, and the same with the sumps.

8 Okay. Now, to talk a little bit about what the
9 activities involved out in the field. We've been out in the
10 field for the Phase I tanks for approximately a week and
11 initially we uncovered the tanks and have located the
12 associated piping, exposed the piping and the tanks.

13 Then we coordinate having a -- either a crane come
14 out, or depending on the size of the tank, we'll just use a
15 backhoe to pull all the tanks at one time and load them onto a
16 flatbed truck and they are taken to a permitted facility that
17 is permitted to handle the scrapping of these tanks.

18 Immediately upon removal of the tanks, we are taking
19 samples of below each tanks and every twenty feet of the pipe
20 runs that we've exposed. Those are all per Santa Clara County
21 guidance and we've had Santa Clara County inspectors out for
22 the initial tank pulls that we have done.

23 After we get the tanks out of the ground, we are going
24 to be excavating visibly contaminated soil from each location
25 and we'll be stockpiling that next to the tanks and covering it

1 with plastic to prevent off-gassing.

2 When we're done with the excavation of each tank,
3 which will be based on visual observations, we will be taking
4 more samples at the ends of the excavation to confirm what
5 levels, if any, may remain in the soils, and all these samples
6 will be taken to -- to certified labs that are certified to do
7 work for California, and we'll be getting those results back.

8 Now, in the tanks we've removed so far, we've found
9 visible evidence of contamination, though they will all be
10 candidate locations for installation of monitoring wells, which
11 we'll be doing this summer.

12 The objective of these monitoring wells will be to
13 determine the local water quality that was impacted by these
14 tanks.

15 So we'll be placing them as close to the tank
16 excavations as possible, based on physical limitations, and
17 their actual at the design will be based on what we know about
18 the geology of those areas, in terms of where we're going to
19 screen for those types of issues.

20 After we've excavated the materials, that will all be
21 manifested and hauled off to an appropriate disposal facility.
22 We'll be backfilling the tank locations with clean filling
23 material and finishing the sites.

24 MS. VRABEL: What about the contents of these tanks,
25 do you remove them?

1 MR. ADKISSON: The tanks were primarily empty. There
2 was a little bit of groundwater in them. The water table is
3 fairly low.

4 MS. VRABEL: So that's what was in them?

5 MR. ADKISSON: And that material will be pumped in
6 the drums.

7 COMMANDER HOBGOOD: If you want highly contaminated
8 soil, where some of the tanks are, what plans would you have
9 for them?

10 Just let it evaporate or would you be doing something
11 else?

12 MR. ADKISSON: No. We're going to be hauling that
13 off the site for either disposal or treatments, with whatever
14 the contaminants are.

15 We aren't proposing to do any soil aeration and
16 reintroduction of this material. Primarily what we're
17 looking at are hydrocarbons and in most cases diesel-type fuels
18 and oils are not too amenable to that type of operation.

19 MR. SMITH: Are there any other inactive tanks or
20 sumps on the base?

21 MR. ADKISSON: I couldn't answer that for you.

22 There's been other contractors involved with doing
23 tank investigations and these have been the ones that have been
24 identified as suspected leakers and been carried over to the --
25 the IR program for removal.

1 MR. SMITH: Do you know of any other inactive tanks?

2 MR. ANSCHUTZ: We don't know of any other inactive
3 tanks.

4 We do have some active tanks. We should be letting
5 the contractor before the end of the month to have all these
6 tanks tested for improper storage.

7 MR. SMITH: Are there active tanks?

8 MR. ANSCHUTZ: Some are and some aren't. But we will
9 be monitoring them.

10 MR. SMITH: I'm sorry. What about the monitoring?

11 MR. ANSCHUTZ: Some of them have monitors on them,
12 the tank monitors.

13 Do you have any more information on that?

14 COMMANDER HOBGOOD: Is the base at this point
15 attempting to comply with the local hazardous materials
16 association for monitoring?

17 MR. ANSCHUTZ: Yes.

18 COMMANDER HOBGOOD: Are you at this point in
19 compliance?

20 MR. ANSCHUTZ: We will be if we get our tanks tested.

21 MR. ADKISSON: Are there any other questions?

22 CAPTAIN QUIGLEY: Thank you very much.

23 MR. ANSCHUTZ: Thank you, Tom.

24 That concludes our new business part of the meeting
25 here.

1 Are there any other comments or questions of a general
2 nature that need to be discussed here?

3 CAPTAIN QUIGLEY: Distinct in this proceeds is we're
4 going to have our annual open house in the August time frame.

5 We don't have a date specific set on this, but just
6 for your information similar to what we did the last 4th of
7 July.

8 MR. ANSCHUTZ: Yes.

9 MR. SMITH: At the last meeting, we reported that we
10 were negotiating or discussing with the new site some sort of
11 agreement -- I read in the business journal that those -- you
12 were having difficulty in those negotiations.

13 I was just wondering of the status in the relationship
14 between the two sites.

15 CAPTAIN QUIGLEY: Bob and I just ate lunch together
16 and he was very amenable. At this point, we're still in
17 contracted negotiations, but it's ongoing.

18 COMMANDER HOBGOOD: Do you project a resolution date?

19 CAPTAIN QUIGLEY: Between the new sites and the
20 government? I wouldn't want to waker.

21 MR. ANSCHUTZ: Mr. Burke can perhaps --

22 MR. BURKE: We've had a lot of correspondence and
23 discussions back and forth.

24 More recently things seemed to have slowed down a
25 little bit. We sent the last letter to the companies a couple

1 of weeks ago. We still haven't heard back.

2 We are still interested in entering into an agreement
3 with them if they are still interested. We just have to see
4 how it comes out.

5 MR. SMITH: I guess that's a particular concern to me
6 as a Mountain View resident is while the plume from Moffett
7 itself doesn't threaten the Mountain View water supply, there's
8 some studies suggesting that a new plume might under certain
9 conditions threaten it, and we'd like to see things move in
10 such a way that they move as quickly as possible with their
11 pumping.

12 MR. BURKE: Independent of our discussions with the
13 MEW group, we have been talking to EPA and with the state
14 regulators, as well, and one of the things we're attempting to
15 do is get a plan to coordinate it so that EPA -- and so that
16 Moffett and MEW companies will be able to undertake the
17 earliest possible mediation of the plume with all the
18 objectives that we have.

19 MR. SMITH: What's the timing on that likely to be?
20 What's your estimate on when serious pumping would begin?

21 MR. BURKE: I'm sorry.

22 COMMANDER HOBGOOD: In other words, does EPA have any
23 time?

24 MR. MITANI: We've negotiated a schedule with the
25 Navy and they've made a commitment on paper, but we're not

1 prepared to make that public at this time.

2 COMMANDER HOBGOOD: When will that be public?

3 MR. MITANI: When the FFA is finally executed.

4 There's quite a bit of coordination going on, because
5 when we coordinate with the Navy, it does impact another
6 negotiating group with the MEW, PRP, and so there's quite a bit
7 of delicate balancing going on.

8 The Navy has not, and we put the paper at the earliest
9 years possible time that we can discuss source control, and I
10 think we've agreed to that.

11 We're still fine-tuning some of the parameters, but it
12 is currently not public information.

13 MR. CHAO: I think where your concerns are maybe for
14 the actual input, actual start of mediation, but the
15 discussions that we've been having problems with -- not
16 problems, but discussions with the MEW companies are I think
17 basically cost allocation-type, and that is the question there,
18 not when or if the remediation will be done.

19 That procedure will be proceeding as soon as possible.
20 EPA and all the regulator companies have to make sure -- that
21 is not the issue.

22 The issue is cost allocation between the MEW companies
23 and the Navy, and similarly, like how NASA would be to the
24 Navy, also, because the common plume and common area that we
25 are interested in.

1 MR. SMITH: There's no -- there's nothing in the
2 current investigations finding the plumes that would perceive
3 the extent of a plume which would delay the pumping mediation
4 that affects the cost allocation?

5 MR. BURKE: The cost allocation issues are one thorny
6 area that we're having some problems with in our discussions
7 with the MEW group, as you can imagine, but we're -- well,
8 really, we're proceeding with the EPA and regulators to
9 negotiate with them a schedule for work that is going to be
10 performed here, and that schedule is -- is a function of a lot
11 of things, including the investigations surrounding it.

12 So we're proceeding as quickly as we can to accomplish
13 the investigation necessary to be able to start the full scale
14 mediation.

15 That in one sense is totally separate from the
16 negotiations that we're involved with the MEW companies.

17 COMMANDER HOBGOOD: Is there any work that could be
18 going on that isn't going on because of the hassle of that?

19 MR. BURKE: No.

20 MR. CHAO: No.

21 COMMANDER HOBGOOD: The schedule at this point is not
22 being delayed?

23 MR. SMITH: The schedule of work has already been
24 implemented by the Navy and were seriously discussed with the
25 Navy to expedite the schedule, so we can identify the sources

1 and do source control as early as possible.

2 COMMANDER HOBGOOD: I guess one final thing.

3 The last I saw, there were nineteen other private
4 sites over there on the MEW side.

5 Are those sites now being represented by the MEW
6 companies or by anybody else?

7 MR. MITANI: Say again. There's a fan going on here.

8 COMMANDER HOBGOOD: Last I saw, there were I think
9 nineteen different private PRPs on the other side of the
10 freeway.

11 MR. MITANI: The MEW side?

12 COMMANDER HOBGOOD: Yeah. And EPA was trying to
13 figure out which of those were going to be serious participants
14 and which were not.

15 What is the status of that set of discussions? Is
16 that part of all this or is that separate?

17 MR. MITANI: That would be a separate. There is a
18 separate negotiating team and separate sets of attorneys
19 involved dealing with the civilian side of the house.

20 COMMANDER HOBGOOD: That's not going to slow this
21 down at all?

22 MR. SMITH: Not at all. The Navy's already
23 implemented this schedule.

24 There are some legal things that are independent of
25 the schedule, independent of the things being scheduled by the

1 project manager.

2 MR. ANSCHUTZ: Any additional questions or comments?

3 What about topics for the next meeting? Is there
4 anything that you'd like to see included on the agenda in
5 particular?

6 We'll work up the proposed agenda and we'll publish
7 that prior to the time of the next meeting which will be
8 tentatively scheduled for about the middle of this coming
9 August.

10 COMMANDER HOBGOOD: I would like to ask that the
11 follow-up of this discussion be on that agenda.

12 MR. ANSCHUTZ: Which particular?

13 COMMANDER HOBGOOD: On-the --

14 CAPTAIN QUIGLEY: The timetable.

15 COMMANDER HOBGOOD: MEW discussions, negotiations.

16 MR. ANSCHUTZ: Okay. Anything else?

17 Okay. If not, we'll be publishing the summarized
18 minutes of this particular meeting and getting that out to you
19 in a couple of weeks announcing the next day, time and place of
20 the next TRC meeting.

21 Do you have any closing comments?

22 CAPTAIN QUIGLEY: No, I don't.

23 (Whereupon, the meeting adjourned at 2:48 p.m.)

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