
NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION
WARMINSTER

PUBLIC HEARING
REVIEW OF PROPOSED PLAN FOR OPERABLE UNIT 1
(OU-1)

Hearing held at the William Tennent High
School, Warminster, Pennsylvania, on Monday, May 10,
1993, commencing at 7:10 p.m., taken by Jennifer S.
Walker, Court Reporter and Notary Public.

PRESENT:

CAPT. WILLIAM L. MCCRACKEN
Commanding Officer
Naval Air Warfare Center Aircraft Division Warminster

LONNIE MONACO
Remedial Project Manager
Northern Division, Naval Facilities Engineering Command

NEIL TEAMERSON
Project Manager
Halliburton NUS

DARIUS OSTRAUSKAS
Remedial Project Manager
Environmental Protection Agency

MARY ELLEN JADICK
Public Affairs Officer
Naval Air Warfare Center Aircraft Division Warminster

1

1

2

MS. JADICK: Good evening ladies and gentlemen. My

3

name is M.J. Jadick and I am the public affairs officer

4

for the Naval Air Warfare Center Aircraft Division

5

Warminster. On behalf of the Center, the Northern

6

Division of the Naval Facilities Engineering Command and

7

Environmental Protection Agency, I would like to thank

8

you for taking the time to join us.

9

The purpose of this evening's hearing is to

10

share with members of our surrounding communities a

11

proposed plan containing three suggested interim

12

remedial alternatives for all contaminated shallow

13

groundwater attributable to the Center, technically

14

referred to as the "overburden and shallow bedrock

15

aquifers." For this purpose, the groundwater is

16

identified as Operable Unit One. We are here for your

17

comments, questions and inputs concerning the preferred

18

alternative for Operating Unit 1, which is the one that

19

the Navy -- correction -- that the Navy, with the support

20

of the EPA, is recommending for selection.

21

The objective of the remedy in this case is

22

to minimize the migration of all contaminated shallow

23

groundwater attributable to the Center while further

24

investigations are performed to fully identify the nature

25

and the extent of possible contamination both on and off

1 public comment section. Since they were the first to
2 ask, we didn't see any problem with accommodating their
3 requests; therefore, Bucks County will go first followed
4 by Congressman Greenwood's office, then Warminster
5 Township.

6 Last, but certainly not least, we ask that
7 the questions and comments this evening be focused on the
8 environmental proposed plan of action and not on the
9 Center's relocation to southern Maryland in 1996. At
10 this time, ladies and gentlemen, I'd like to introduce to
11 you again, Captain William McCracken.

12 CAPTAIN McCracken: Good evening, ladies and
13 gentlemen. When I took command of this base in 1991, I
14 stated clearly to all my employees, to all military
15 personnel under my command that my highest priority
16 issues were safety, equal opportunity and the
17 environment. Tonight we will be briefing you on the
18 status of my biggest environmental issue, the eight waste
19 site areas placed on the National Priorities List.

20 The use of pits to burn waste began here more
21 than 50 years ago when the first owner, Brewster
22 Aeronautic Company, built a waste burn pit. This
23 practice, common for the time, continued after they
24 dismissed ownership in 1944. In those early days, no one
25 realized that an accepted procedure would lead to such a

2 1 problem legacy half a century later.

2 First efforts to investigate sections of our
3 eight waste areas began in 1980. These studies,
4 conducted by geologists and groundwater hydrologists, did
5 find contamination on our base, but they found none
6 beyond our fence line. Still the work continued and
7 later, the EPA eventually took a closer look at our
8 installation. Using a mathematical procedure known as
9 the Hazard Ranking System or HRS, the agency, in 1985,
10 patented a numerical score that would give some idea of
11 our situation. We received a high score. Mostly because
12 we knew little about what was buried here and because
13 this region with its high-population density relies
14 heavily on wells for drinking water, with such a high HRS
15 score, it was inevitable that our base would
16 eventually go on the National Priorities List and that
17 placement occurred about four years later in 1989.

13 But listing on the National Priorities List
19 isn't necessarily a bad thing. Nationwide, there are
20 thousands of sites that have to be cleaned up. These
21 cleanups will be slow, extensive undertakings and because
22 of limited resources, NPL sites such as ours are the
23 first to receive money for treatment. Remediation
24 follows a deliberate course, one that requires time,
25 effort and a lot of money. The slow pace of work stems

1 in part from the nature of groundwater itself. In most
2 areas, this water moves slowly, often no more than a few
3 inches a year and before scientists can learn about these
4 movements, they must drill many wells, take measurements
5 and periodically draw samples for laboratory analysis.

6 The work also goes slowly because at first,
7 there is no precise knowledge of where the sites were or
8 what they contained. Decades ago, when on-site waste
9 disposal began here, no one drew maps or kept records.
10 When pits filled up, they were simply covered, graded and
11 seeded. Today, a look at the ground surface gives no
12 hints to what lies below. In fact, we have pictures in
13 the back of what these sites look like today.

14 So consultants using magnetic-detection
15 equipment search for drums and other buried metals. And
16 with other sophisticated instruments, they look for tiny
17 maps of gases that might seep in the soil and offer
18 more clues about pit locations. Also numerous
19 photographs were reviewed together with interviews of the
20 employees who had been in the area for the last 50 years.
21 Gradually, they managed to fit all the pieces together
22 gaining a clear picture of what will have to be done.

23 All the work I just described has taken more
24 than four years and it isn't finished yet. It will
25 continue for months, perhaps years, but now the EPA and

2

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

the Navy believe that they have enough information to begin a portion of remedial work. The evidence gathered so far suggests that groundwater at shallow depths could be moving beyond the fence line. Tonight representatives of our consultant, Halliburton NUS Corporation, will present possible solutions for dealing with this problem. It will discuss three alternatives. Including one of no action, except for long-term groundwater sampling and testing. Consideration of this no-action alternative is required by law. Let me emphasize that this choice is not the preferred one.

Mr. Neil Teamerson, project manager for Halliburton NUS, will tell us what course of action is favored over the other two. Although this meeting deals with environmental restoration, I do understand that many of you have many questions on how this effort is linked to the Navy's announcement of transfer to Patuxent River, Maryland. As all of you probably know, we expect by the end of 1996 to complete the transfer, after which the base will have about 300 workers, most of them from another Navy command. And although this transfer is likely to be made before the waste site cleanup is done, the work will go on until the regulatory agencies are satisfied. Northern Division, Navy Facilities Command, represented here this evening by Mr.

1 Lonnie Monaco, has the lead role in investigation of
2 these sites. The law does not permit the government to
3 dispose of contaminated property.

4 In concluding my remarks, I would like to
5 stress again that the remediation process is long and
6 painstaking. The work we will discuss tonight is but a
7 small first step. It is by no means the only work we
8 will do. We have a large stake in the community. Our
9 employees and the military personnel from the base live
10 here. We share the environment with everybody else who
11 lives here. We breathe the same air, we drink the same
12 water, many of our people intend to stay here. We will
13 not let them down and we will not let down any community.
14 As long as I'm the commanding officer at this base, the
15 environmental issues will remain my highest priority.
16 Thank you.

17 MS. JADICK: At this time, I'll turn the floor over
18 to Mr. Monaco from Northern Division.

19 MR. MONACO: Good evening, ladies and gentlemen and
20 welcome to tonight's presentation. My name is Lonnie
21 Monaco and I'm the project manager for the Warminster
22 facility. I wanted a chance to speak to you this evening
23 so that I may explain my role in this process.

24 I work at the Northern Division, one of
25 several engineering field divisions throughout the

3 1 country whose headquarters is just outside of Washington,
2 D.C. Northern Division conducts most of the large
3 studies, design analyses and construction projects for
4 the federal facilities within our ten-state jurisdiction.
5 I'm responsible for identifying and remediating the
6 contamination as a result of past practices by the Navy.

7 I can assure you that Northern Division will
8 continue its investigation until the full extent of the
9 contamination has been addressed while we proceed with
10 our recommendations to clean up those areas that have
11 contamination. Our commitment to the cleanup process
12 does not depend on how long the Warminster facility
13 remains in this area. The environmental process we have
14 undertaken continues regardless of how long the facility
15 remains or what effects its downsizing has. We're the
16 lead agency responsible to address the environmental
17 issues in order to propose and implement remedial
18 actions.

19 We have with us tonight Mr. Neil Teamerson
20 who is the project manager for the firm who has been
21 hired by Northern Division to conduct the environmental
22 investigation. He will take you through the steps
23 leading to the proposed plan of action. So without
24 further delay, I will turn the microphone over to Mr.
25 Teamerson.

1 MR. TEAMERSON: My name is Neil Teamerson. I'm the
2 project manager for Halliburton NUS Corporation. Since
3 November of 1991, we've assisted the Northern Division in
4 Superfund activity, installation and restoration and
5 program activities at Naval Air -- NAWC.

6 What I'd like to cover for the next 20
7 minutes is the following topics that brings us to the
8 proposed plans. These topics are as follows -- to bring
9 us up to date, we will go over NAWC's Superfund process.
10 The Superfund program is generally divided into two
11 phases, site assessment phase and the remedial phase.

12 For the Center, the facility was first
13 discovered back in 1979. That proceeded into a
14 computerized database known as CERCLIS, which is
15 basically a system for tracking hazardous substance
16 facilities as they progress through the Superfund
17 process.

18 In 1985, EPA conducted a preliminary assessment
19 which is basically a very efficient investigation very
20 quickly to determine if there is a problem or whether the
21 site warrants additional investigation to see if there
22 are problems that may be resulting from hazardous
23 substances. EPA also completed a site inspection. The
24 site inspection is the next phase of the site assessment
25 process. It's used to collect a few samples from the

3

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

facility or from targets in the facility and support information for evaluating the site using the Hazard Ranking System.

The Hazard Ranking System package was prepared in 1985. And in June of 1986, NAWC was proposed for the National Priorities List. This list represents those sites that pose a serious threat to the human health and the environment. The HRS is not a system to evaluate how bad or how worse one site is compared to another. It's a go, no-go decision and in this case, the facility scored above the cutoff criteria that EPA uses to list sites for public information on the NPL. The NPL listing for NAWC was finalized in October of 1989.

UNIDENTIFIED SPEAKER: Louder, please.

MR. TEAMERSON: Okay. Thank you. Those sites that are listed on the NPL are eligible for funding under the EPA criteria or the responsible party. In this case, since Warminster is a federal facility, the Navy has initiated continuing investigations at NAWC. From 1989 through 1993, the present, the Navy conducted a remedial investigation/feasibility study for the Center. I'll talk a little bit about what the remedial investigation does in terms of collecting information in which to evaluate a site, characterize the types of waste in the

3 1 facility and characterize or assess the risks that those
2 wastes may pose to human health or the environment.

3 Where the proposed plan fits into this
4 process is right here, between the RI/FS and the Record
5 of Decision. The proposed plan -- copies are available
6 in the back -- is basic information as to risks, threats
7 and the types of contamination at the Center, what types
8 of remedial alternatives can be evaluated in order to
9 select a preferred remedy or a preferred alternative for
10 addressing the contamination and reducing unacceptable
4 11 risks to public health and the environment.

12 Once the proposed plan is released and the
13 public comment, which we're a part of right now, is
14 completed, the Navy will prepare, with EPA's support, a
15 Record of Decision. Record of Decision is a decision
16 document that outlines why one alternative or one remedy
17 was picked for action at NAWC. So right now is the
18 public comment period. The Navy will consider all the
19 comments that are generated during the period. The Navy
20 will consider, as well, the comments from the public.

21 MR. MAYER: My name is Lawrence Mayer. I represent
22 about 12 percent of the population of Warminster
23 Township. Couple questions. All of this addresses
24 remedial tests and shallow testing; what about deep
25 wells?

4 1 MR. MONACO: I wonder if I could ask you, please
2 hold all comments, questions until the presentation is
3 done.

4 MR. MAYER: He asked for public comment, didn't
5 you, sir?

6 MR. TEAMERSON: I think what Lonnie is indicating
7 is that I think there is a number of questions and
8 perhaps some of the questions which come from the
9 audience, I might address before I'm completed. And if I
10 could get through my presentation --

11 UNIDENTIFIED SPEAKER: Excuse me. But I have a
12 problem with you telling me that we have to make a
13 decision with public comment this evening on information
14 you just handed us and asked us to review. With
15 listening to you and trying to review this information at
16 the same time does not allow us the proper time to make
17 proper public comment, sir. I do have a problem with
18 that.

19 UNIDENTIFIED SPEAKER: I'm not the fastest reader
20 in the world. The public comment period runs almost
21 through May 28 and there is time between now and May 28th
22 to review the materials which I was going to address.

23 MR. MAYER: All right. Let's skip that question.
24 Let's skip that question. Who concerns the movement of
25 hazardous waste?

1 UNIDENTIFIED SPEAKER: Will you let him proceed
2 with the presentation so we can learn and then we can get
3 your comments?

4 MR. TEAMERSON: Once the Record of Decision is
5 available, or is promulgated, sites enter the remedial
6 design/remedial action phases of the Superfund process.
7 Remedial design is basically the task in developing
8 blueprints and drawings and all those nuts and bolts that
9 go together and how the remedy or the alternative will be
10 implemented. The actual implementation of the remedy is
11 done during the remedial action, that's the construction
12 phase, that's the phase where the actual action is
13 physically implemented.

14 Following that, there is generally, for some
15 remedies, what we refer to as "operation and maintenance"
16 where the system has to be maintained, cleaned,
17 fine-tuned, instruments checked throughout the course of
18 that alternative to make sure it works well.

19 I'm going to keep the facility history fairly
20 short for two reasons; number one, I think many of you
21 have questions and probably you want to ask those
22 questions. Number two, the history of the facility is in
23 one of the handouts in the back. One of the things I
24 wanted to mention is that additional information on
25 all the reports and the process that generated the

4

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

information for the Center and the interim remedy that was proposed in the proposed plan is available in two administrative record files. One is at the Doylestown branch Bucks County Library. The second one's available at the public affairs office at the Center. They have their hours and phone numbers listed in the proposed plan. If someone's interested in reading the history of the facility, what's happened, looking at the various reports, just generally familiarizing yourself with the Center, the history of the investigations, contact those two offices, the library and the public affairs office.

As Captain McCracken referred to, there's eight waste areas that are part of the NPL listing for the Center. The general orientation of NAWC, a better schematic of this, as far as locations of the waste disposal sites, are shown here. This may be a little fuzzy at the top. There is a handout of this for those of you that have trouble reading what's behind me.

Basically in this figure, the eight sites fall out into two general areas with two exceptions. This first area, Area A, contains Sites 1, 2 and 3. They're on the northwest property boundary of the Center fairly close together within 100 feet of one another and they're just north of the Warminster Waste Water Treatment Plant. In the southeast corner of the facility

1 is what we refer to as Area B for purposes of the RI and
2 test reports for the Center.

3 Area B also contains three sites, Sites 5, 6
4 and 7. One of the sites is partly under the enlisted
5 men's housing for the Naval base. The two remaining
6 sites are Site 3, which is a fire-training area that was
7 used to put inflammable materials on the ground, ignite
8 them and then practice firefighting training by putting
9 the fire out and set a small end of a runway off the main
10 runway. The last site is Site 4. It's the largest site
11 in the facility. It's on the north central part of NAWC
12 property.

13 There's a fairly long history involving
14 these sites. I know this slide may be small, but
15 basically from 1944, when the facility was commissioned,
16 until 1983 when the firefighting training area ceased
17 being used, NAWC has had a series of wastewater sludges,
18 small amounts of paints and solvents from various
19 research and development testing laboratories at the
20 facility that have gone into these eight potential waste
21 areas at the Center. The longest period of operation was
22 Site 5, which is 15 years, and Site 1 which is also 15
23 years. The types of substances that went in -- such
24 as hazardous materials -- that went into those areas, the
25 size of them, whether they were burn pits, landfills or

5 1 other disposal areas are shown on this slide. The
2 history of the facility and each one of these waste areas
3 is in the RI report for the Center.

4 As I indicated previously, the Navy has been
5 conducting a remedial investigation and feasibility study
6 at the Center since 1989. Halliburton NUS picked up
7 Phase 2, the real investigation process. During Phase 1,
8 the former Navy Northern Division contractor did what we
9 refer to as soil-gas and geophysical studies to try to
10 find out what was in these waste-disposal areas. These
11 are techniques to try to determine if there is any
12 hazardous substances, volatile organic substances,
13 soil-gas technique. And the geophysical study basically
14 tries to locate buried ferrous or buried metal objects
15 below the surface to find out if there was drums in some
16 of these waste areas.

17 These studies are used to try to define the
18 general location and depth and size of the eight waste
19 areas at the Center. Test pit excavations and
20 confirmation soil borings are also done. These are done
21 to show enameles in the subsurface. Fracture-trace
22 analysis mapped the fractures that may run through or
23 off-base. Fracture traces refer to cracks in the rock,
24 basically, in the bedrock underlying the facility and
25 they're important for where most hazardous substances may

1 or may not go because the fractures open up doors or
2 a conduit to where a hazardous substance, once they get
3 into the fractures, they can move much more quickly than
4 an area that does not have the fractures.

5 During Phase 1, a local well inventory was
6 completed to try to identify the wells in the vicinity of
7 the facility. I'll talk about that a little bit later
8 because it also covers Phase 2 RI and some of the more
9 recent work the Navy is doing at the Center. In addition
10 to those tests, a number of monitoring wells were
11 installed at the facility and environmental sampling was
12 performed on both surface water, sediments and the
13 groundwater as well as air.

14 During Phase 2, from 1991 till just recently,
15 additional monitoring wells were installed to try to find
16 out where the shallow groundwater had migrated to and
17 contaminated shallow groundwater had migrated to.
18 Additional sampling was performed to include soil
19 sampling on some of the various waste areas at the
20 facility. A number of aquifer characterization tests
21 were performed. These tests were performed basically to
22 find out how the off-site wells in the vicinity of the
23 Center, when they pump water, what happens to the general
24 water levels in the vicinity of the facility; are they
25 affected, are they not affected?

5 1 The aquifer tests were also performed to try
2 to get a feel for the type of hydraulic characteristics
3 that the water-bearing unit under the Center had so that
4 when it came time to remediate the site or proposed
5 possible alternatives, information would be developed to
6 help support redesign of that. Also, Phase 2 is
7 investigating off-site -- possible off-site groundwater
8 contamination, several commercial wells, municipal well,
9 residential wells samples. That sampling is continuing
10 today.

11 The significant conclusions of the remedial
12 investigation, including both the results from Phase 1
13 and Phase 2, are shown on this slide. The primary
14 shallow groundwater contaminants are volatile organic
15 compounds and they're listed there underneath.
16 They include what we refer to as trichloroethene or TCE,
17 which is a solvent used in degreasing a possible
18 maintenance operation. PCE, which is another solvent
19 sometimes used for the same purpose and the various
20 metals; arsenic, manganese, lead, cadmium and barium.
21 One of those particular contaminants is lead which is
22 associated with paints that were used for operations at
23 the Center.

24 Patterns of shallow groundwater contamination
25 were found within both Areas A and B. I'll show you what

5 1 that looks like in just a minute. We know that inferred
2 shallow groundwater flow is north for Area A and south
3 for Area B. We knew that going in and we're going to
4 talk a little bit more about that, but that helped us
5 determine which way contaminants were migrating as well
6 as providing information as to where we might locate the
7 wells if we needed to capture the contaminated plume that
8 may be emanating from eight NAWC sites.

9 The available information, the water-level
10 results that we collected between the aquifer tests,
11 the samples that we took from the groundwater wells
12 on-site, the samples that we took from off-site wells
13 suggest that the contaminated shallow groundwater beneath
14 Area A is migrating off the facility property. At the
15 time of the RI report, the available information did not
16 indicate the contaminants were migrating off NAWC
17 property in the vicinity of sites 5, 6 and 7 or Area B.

18 The briefing package has, I think, four
19 slides that show groundwater -- what we refer to as
20 "groundwater concentration maps." What these maps are,
21 when we collect samples from the wells, have them
22 analyzed, we look at a single contaminant, one that shows
23 up most frequently, or the highest concentration, and we
24 basically plot its distribution by well in the vicinity
25 of the hazardous-waste disposal area.

6 1 So in the vicinity of Site A, the highest
2 concentration is right on the facility property boundary,
3 which runs this direction (indicating), basically within
4 the vicinity of Site 1. That was the highest
5 concentration of TCE found in that general area. As you
6 can see, the concentrations generally decrease until back
7 here in this general area where we didn't find any more
8 than five micrograms per liter or parts per billion.
9 There appears to be a hot spot right here (indicating) on
10 the edge of the facility in the vicinity of Site 1 for
11 TCE.

12 For PCE, it was a slightly different plume.
13 It wasn't directly in the vicinity of Site 1. Actually,
14 based on Phase 1 and Phase 2 analytical results, its
15 slightly upgrading where we thought Sites 1, 2 and 3
16 were. That posed some questions for us. One of the
17 things we know is that the waste in Sites 1, 2 and 3 were
18 regraded, moved around and that possibly the contaminated
19 soils or the contaminated materials in the vicinity of
20 Sites 1, 2 and 3 may have been moved slightly around
21 outside of those areas as part of reseeded, recovering
22 and moving the waste from alongside that part of the
23 property.

24 In the vicinity of Area B -- which again, is
25 Sites 5, 6 and 7 -- 6 is the farthest -- northernmost

6 1 site and Site 7 and Site 5 is underneath base housing.
2 The TCE plume's shown kind of going at a right angle
3 heading towards the facility property boundary, but not
4 leaving the facility property boundary. This may be a
5 result of distribution of monitoring wells that we have
6 out there. We don't know that. At the present time,
7 there's approximately 17 monitoring wells in the vicinity
8 of Area B. Area A has 21 monitoring wells.

9 Based on the distribution of the monitoring
10 wells and these analytical results, the information did
11 not indicate that this plume was migrating past the
12 facility boundary, but I will point out again that
13 sometimes it's function of where you have your wells,
14 where you take the samples and whether or not you sort of
15 hit or miss some of the fractures that may be -- may
16 possibly be carrying contaminants from the facility --
17 from the waste areas of the facility.

18 Other highlights of the RI, another
19 contaminant that we looked at in the vicinity of Sites 5,
20 6 and 7 was 1,1-TCE and 1,2-dichloroethane. It had the
21 same general shape, but a little bit smaller shape than
22 what I showed for the trichloroethene. Other highlights
23 of the RI, number one, the extent of groundwater
24 contamination attributable to NAWC Warminster is not
25 precisely known at this time. Additional groundwater

6 1 investigation is necessary not only within the facility
2 property, but off the facility property. The reason for
3 that is that we have not fully defined the shallow
4 groundwater plume. We don't fully know all the
5 contaminants involved. Even after 27 monitoring wells in
6 the vicinity of Site A, 21 monitoring wells in the
7 vicinity of Site B, this information is not available to
8 find out the full extent of the types of contamination
9 emanating from Areas A and B.

10 To assess the potential health risks, a risk
11 assessment was performed based on all the analytical data
12 and the targets and the likely exposure scenarios that
13 may affect public health. Usually in doing a risk
14 assessment, we look at three types of receptors or three
15 types of people; we look at adult residents, we look at
16 child residents and we look at adult employees. The
17 reason these people are divided into those three
18 categories is they have different times they spend at
19 home, times they spend at the workplace, different bodily
20 rates, different digestion to soak the contaminant.
21 Based on the risk assessment, we looked at three
22 scenarios; one was ingesting the shallow groundwater,
23 using it for potable drinking water. The second was
24 dermal exposure to the shallow groundwater either
25 through showering and washing and bathing, and an

6 1 inhalation of shallow groundwater contamination during
2 showering because volatile organic compounds can be
3 released while you're taking a shower as volatile
7 4 organics can be emitted during a hot shower.

5 Each of those various exposure scenarios
6 were evaluated for one or more of the types of people
7 that I described. Adult, child residents and adult
8 employees. Based on this risk assessment, the shallow
9 groundwater underlying both Areas A and B posed
10 unacceptable risks to public health, although at the time
11 of the remedial investigation, there were no known
12 exposures because of the contaminated water. What that
13 means is that the risk assessment assumes all
14 hypothetical receptors. There weren't any wells that
15 were sampled at the time that were contaminating --
16 shallow groundwater or deeper groundwater that were
17 contaminated where those wells were being treated prior
18 to being used for drinking water, bathing or handwashing.
19 So when we looked at the risk assessment, it was always
20 based on assuming a well was placed in the middle of this
21 contaminated plume, someone was using it for drinking
22 water, the risk from that well and that well water only
23 would pose the unacceptable risks.

24 This may be hard to see because it's a fairly
25 busy diagram. I mentioned that during Phase 2 we sampled

7 1 off-site wells. Four of the off-site wells were located
2 in the vicinity north of Area A including a municipal
3 well, two commercial wells and residential wells.
4 The residential wells did not show any contaminants. The
5 municipal well did show a number of contaminants. Some
6 of those contaminants are the same type of contaminants
7 that were used at the Center and that were found in
8 shallow groundwater, but what is not known is whether or
9 not the contaminants found in the municipal well or the
10 production wells are contaminants that came from the
11 facility. That's not known at this time.

12 One of the reasons that's not known is
13 because there aren't additional wells between the
14 facility property boundary and, for instance, in the case
15 of the municipal well, we don't know how far or how short
16 possible contaminants of the shallow groundwater
17 attributable to the Center may be migrating on base.
18 That piece of information is not known at this time.
19 Although based on what the analytical data suggests,
20 since we've seen shallow groundwater contamination right
21 on the edge of Area A which is right on the northern edge
22 of the facility, it is possible that the production wells
23 immediately north may well be the result of at least
24 partial attribution of the contaminants in the Center to
25 those off-site locations.

7 1 We also sampled two residential wells
2 southeast of the facility. Residential-home well
3 sampling is continuing today. We just finished round
4 one. I'll talk a little bit about where the local wells
5 are in the next slide. Two of the off-site residential
6 wells southeast of Area B were shown to have contaminants
7 that were the same types of contaminants found at Area B
8 shallow groundwater.

9 As part of continuing remedial investigation
10 work, some of the off-site wells were shown to have
11 possible contamination attributable to the Center. Work
12 is currently in progress to identify all the potential
13 wells in the vicinity of the facility that may be
14 contaminated. The highest densities of these is
15 approximately 39 wells southeast of the facility,
16 southeast of Area B. Approximately 11 wells north of the
17 facility. And the numbers are approximate for a couple
18 of reasons. Some of these areas now have municipal
19 water, but some people are not hooked up. They may have
20 a residential well that they use for water, they may be
21 using municipal water for drinking water and may be using
22 their own well water for irrigation or watering the lawn.
23 We found in the last couple weeks where wells were once
24 located, they are no longer being used. The number shown
25 here, 39 southeast of the facility, 11 located along

7 1 Jacksonville Road, 5 located off Kirk and Newtown Road as
2 well as wells located in this general area (indicating),
3 I think they refer to this as "The Speedway" and
4 additional wells down in these areas, all of those are
5 possible wells to be sampled in the near future to
6 determine if those wells may be affected and the types of
7 contaminants that may be due or attributable to releases
8 or waste areas at the facility.

9 This process is ongoing. Two weeks ago we
10 sampled nine wells, two of the nine wells I showed in the
11 figure before this. These general areas, Area 2 and Area
12 A, these are approximately 3,000 feet from contaminated
13 wells on the facility property. Right now, we're lookin
14 at a 3,000-foot radius. If wells are shown to be
15 contaminated within that 3,000-foot radius, if we need
16 to push out farther than 3,000 feet and the contamination
17 found in those wells than the extent of the home well
18 sampling and the distance, the farther we go away from
19 the facility, that will be made based on the results of
20 the previous sampling and the ongoing samplings. It's an
21 incremental approach. We've looked at nine. The Navy is
22 looking at approximately 30 more in the near future and
23 if necessary, additional wells will be sampled beyond
24 that.

8 25 The other recent study that was completed is

1 what's referred to as a feasibility study. In the case
2 of Warminster, a focus feasibility study was prepared
3 because it concentrated solely on the most significant
4 hypothetical risks at the facility; in this case, it was
5 the shallow groundwater. Because of that, the focus
6 feasibility study looked at possible remedies for
7 minimizing or mitigating or otherwise reducing those
8 unacceptable risks posed by the shallow groundwater.

9 As M.J. pointed out in the beginning, the
10 remedy in this case is not just for Area A, not just for
11 the facility property boundary. The remedy in this case
12 applies to all contaminated shallow groundwater. We can
13 define shallow contaminated groundwater by the overburden
14 and the shallow bedrock aquifer, but what we're really
15 talking about, approximately the first hundred feet below
16 the ground surface. It includes all the groundwater that
17 may be contaminated in the shallow groundwater
18 attributable to releases from the Center. That could be
19 off base, could be a quarter-mile off base. At this
20 point, until the full extent of that shallow groundwater
21 contaminated becomes defined, the remedy -- right now, we
22 know there's contamination in Areas A and B; however, the
23 Navy will conduct additional investigations to find out
24 if that contamination is off their property, off the Navy
25 property. If that shallow groundwater contamination

8 1 which is shown to be attributable to the Navy's operation
2 at NAWC is found to be contaminated, then the area that's
3 going to be remediated or the area that's going to fall
4 under the interim remedy, will be rolled into that design
5 system for treating that contaminated groundwater.

6 One of the things I'd like to emphasis is the
7 objective of the remedy. At this point, since there's
8 substantial uncertainty as to the full extent of shallow
9 groundwater contamination, the remedy can only address
10 the portions that we don't know the extent of or the
11 portions that we'll know about after the additional
12 investigations are performed and in the meantime, or for
13 the interim, the objective is to minimize the migration
14 of contamination of shallow groundwater from NAWC till
15 that additional information becomes available and the
16 full extent or better extent of the shallow groundwater
17 contamination can be defined.

18 Under the remedy that I'll talk about next,
19 it has the flexibility to incorporate the additional
20 shallow groundwater contamination that is found after
21 subsequent or additional investigations and roll in that
22 volume of contaminated -- shallow contaminated
23 groundwater attributable to NAWC as part of that
24 remedy.

25 Three alternatives were evaluated. As M.J.

8 1 mentioned previously, you always have to evaluate the
2 no-action alternative required by the Superfund law
3 commonly referred to as "CIRCLA." The two action
4 alternatives or action remedies basically involve the
5 same type of treatment. I'll get into what the actual
6 design and conceptual design of that is, but the **only**
7 difference between Alternative 2 and Alternative 3 is
8 what you do with the water after it is treated.

9 Under Alternative 2, after the water's
10 treated, it's discharged to a surface water map, a
11 tributary; the same tributary that NAWC is currently
12 discharging to. Under Alternative 3, the water's
13 discharged to a POTW, or what we refer to as
14 "publicly-owned treatment works" or one of the municipal
15 Wastewater treatment plants. The only difference
16 between Alternatives 2 and 3 is what you do after you've
17 treated the water, it either goes to a stream or it goes
18 to a municipal wastewater treatment plant.

19 The treatment, the process, the engineering
20 involved in treating that water, what you have to do with
21 it to make it clean before you discharge it, are the same
22 alternatives for 2 and 3. At this time, the proposed
23 plan the Navy and EPA are selecting is Alternative 3 as
24 the preferred remedy. One thing I'll point out is the
25 reason there's a public comment period, questions are

9 1 solicited, written comments are forwarded is so the Navy
2 and EPA can review the preferred remedy, the preferred
3 alternative and decide whether or not, based on the
4 community, state acceptance, whether or not they need to
5 change the remedy. Maybe the remedy isn't Alternative 3.
6 Maybe it's a different alternative altogether and that
7 process is part of the EPA and the Navy's public
8 participation process where we have meetings just like
9 this so that the Navy and EPA can solicit input based on
10 public comment and what the community feels is a better
11 solution or a different solution.

12 One thing I'll mention is that the preferred
13 remedy is selected by EPA and the Navy. Halliburton NUS
14 does the analysis study. The consultant in that
15 approval, he or she does not provide the remedy. They
16 only provide the analysis for the remedy.

17 Under Alternative 3, it basically involves
18 extracting groundwater, treating it on-site, either
19 pretreatment or treatment, and discharging -- I'm sorry,
20 this is Alternative 3. This is the preferred interim
21 remedy. Under this alternative, groundwater extraction,
22 on-site pretreatment and discharge to a wastewater
23 treatment plant, or publicly-owned treatment works, was
24 proposed in the proposed plan as the Navy and EPA's
25 preferred remedy.

9 1 The conceptual design for this basically
2 involves installing a number of extraction wells within
3 Areas A and B. 16 wells in Area A and 9 wells in Area B.
4 The extraction well network will be modified, located and
5 designed to maximize its effectiveness based on whether
6 or not additional shallow groundwater -- contaminated
7 shallow groundwater concern is identified during initial
8 investigation. The extracted groundwater will be pumped
9 from Areas A and B, most likely located closer to Area A
10 than B, using a booster pump in Area B to transmit water
11 to Area A to a treatment system located at the Center.

12 There could be one or more treatment systems.
13 Depending on the number of gallons or the volume of
14 contaminated shallow groundwater could be one treatment
15 unit or two treatment units or more. At this time, based
16 on the extraction well network and the size of the plume
17 as we know it, basically, only one treatment system would
18 be part of the conceptual design at this time. The water
19 pretreatment would involve air stripping. Those of you
20 not familiar with air stripping, basically water is
21 pumped to the top of an air tower, water is allowed
22 to trickle down packing material inside where a thin
23 film, the water contaminants are volatilized off the
24 packing material or the thin film material.

25 Carbon absorption, which is basically a

9

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

process that consists of activating granulated carbon that's used to absorb the molecules of the volatile organic compounds, to remove the organic compounds with precipitation and filtration, which is a process commonly used in water treatment to remove the heaviest metals or the heavier organic materials.

Under Alternative 3, the pretreated water will be discharged to the NAWC wastewater treatment plant. Now, the twist on this alternative is that the Wastewater treatment plant at the Center may be scheduled to cease operation before or after base realignment and closure. The NAWC Warminster, the Naval Center, has made some arrangements with the local municipality or started a process of possibly hooking up to the municipality in the next few years. I think that is accurate.

The extracted groundwater will be pumped from Areas A and B, treated at the Center and then the treated water, which is at that point removed of all the hazardous substances, will either be discharged to the Wastewater treatment plant at the Center or publicly-owned treatment works. And the only publicly-owned treatment works in the vicinity of the Center at the present time is the Warminster Municipal Authority. If necessary, treatability studies will be

1 performed to make sure that the waste water, after
2 treatment, meets its discharge requirements and that the
3 Wastewater treatment plant or the publicly-owned
4 treatment works met its discharge requirement as well.

5 Treatability study is a pilot run to make
6 sure that your treatment system, air stripping, carbon
7 absorption, filtration, precipitation, whether or not
8 it's functioning as it should and removing contaminants
9 based on the level that it should be designed to be
10 removing. Basically, it's a test run to make sure the
11 system works and how to design the system.

12 While the interim remedy is being implemented
13 or designed or operated, additional investigations will
14 be conducted along with it and those investigations would
15 be used to find additional shallow groundwater
16 contamination, as well as other investigation, to -- as
17 appropriate, to decide whether to modify that additional
18 treatment system. Basically, to play this out, as the
19 interim -- as the design of the preferred, at that time,
20 Record of Decision indicates, as that design is ongoing,
21 the additional investigations may find that shallow
22 groundwater contamination attributable to the Center is a
23 third of a mile off the facility property boundary line
24 or a third of a mile southeast of the facility property
25 boundary. If that contamination is shown to pose

9 1 unacceptable risks, the bodies of that contaminated
2 shallow groundwater will be designed into the interaction
3 to minimize further migration of that or to at least
4 contain that migration as part of the remedy that will be
5 ongoing that will be proposed or promulgated under Record
6 of Decision.

7 So the design of the interim remedy will be
8 flexible enough to accommodate any additional shallow
9 groundwater contamination concerns. And I think the
10 whole point of the interim remedy is to minimize the
11 migration now, conduct an additional investigation to
12 find out what the full extent of the shallow groundwater
13 contamination is, both on and off the facility. It's not
14 just off-site areas. There could be additional shallow
15 groundwater contamination within the facility boundary to
16 design that treatment system -- that groundwater
17 extraction treatment system to handle that volume of
18 contaminated shallow groundwater.

19 In order to cost the alternatives, we have to
20 look at, generally, the number of wells, the types of
21 pipes, some of the physical parameters that the
22 alternative or the remedy may involve. So for a
23 conceptual extraction well layout in the vicinity of Area
24 A, there's 16 wells basically located along the
25 facility's northwestern and northern property boundary.

1 I'll point out this is for conceptual purposes only.
2 Maybe it's not this many wells. Maybe some of the wells
3 are located off the facility property. Perhaps some of
4 the wells are located farther to the east or farther to
5 the west, but in order to design a cost estimate and in
6 order to compare the alternatives against one another,
7 you have to start from something, you have to assume this
8 is what it may look like, so now we can compare this to
9 another type of alternative. But for conceptual design
10 purposes, this is generally the layout of the extraction
11 wells in the vicinity of Area A.

12 In the vicinity of Area B, once again, for
13 cost purposes, the wells are basically located to capture
14 the flow of the plume that I showed you about 15 minutes
15 ago. That showed that bent right-angle turn. The
16 general purpose of that, some of the wells may have to be
17 swung over during remedial design, but for costing and
18 for comparing the alternative, this number of extraction
19 wells, that type of spacing, the depth of them, number of
20 wells, all that went into cost estimate in order to at
21 least put an estimated cost on what the alternative would
22 be.

23 The process flow diagram, as I mentioned, is
24 approximately 25 extraction wells that would be located
25 at the present time in the vicinity of Sites 1, 2 and 3,

10 1 5, 6 and 7, Areas A and B, respectively. Most likely, a
2 booster pump would have to push the extraction -- the
3 groundwater being extracted to the vicinity of Area A
4 where the treatment unit would be located. As indicated,
5 at this time it's not a significant volume. The
6 extraction well system from Area A to B will handle
7 approximately 36 gallons per minute. It's not
8 necessarily aggressively cleaning up the contaminated
9 groundwater, but is trying to minimize the migration of
10 that contaminated groundwater.

11 For Area B, the estimated process flows or
12 the volume of contaminated groundwater coming through is
13 20 gallons per minute. This flows through the process,
14 it includes the air stripper, the carbon absorption prior
15 to discharge. That concludes my presentation. I am sure
16 many of you have questions. I'm going to turn over the
17 question-and-answer period to Lonnie Monaco.

18 MR. MONACO: Mr. Ostrauskas will speak before we go
19 go on to our discussion from our PA representative, after
20 which time, we will proceed as M.J. outlined. There are
21 three people who have asked for some time. We will give
22 them time to speak. After which, we have several letters
23 that have come in from various townships that M.J. will
24 read and then we will open up the questions and answers.
25 Darius?

10 1 MR. OSTRASKAS: Yeah, I'd like to just speak very
2 briefly on EPA's role in this case --

3 UNIDENTIFIED SPEAKER: Louder.

4 MR. OSTRASKAS: I'd like to just speak very
5 briefly on EPA's role in this case. As mentioned
6 earlier, the Navy is the leading federal agency for
7 Superfund investigation and cleanup activities at the
8 sites. And EPA's primary role here is to select, with
9 the Navy, Superfund cleanup actions that are necessary to
10 protect the health of the community and the environment.
11 EPA also provides support to the EPA on their Superfund
12 investigations. After reviewing the available
13 information, as summarized by Neil Teamerson of
14 Halliburton NUS, the EPA agrees with the Navy that
15 pumping and treating contaminated groundwater to a
16 depth of about a hundred feet is the right first step in
17 cleaning up the site, and we emphasize "first step."

18 This proposed cleanup action would begin the
19 cleanup process by minimizing the migration of
20 contaminated groundwater toward public and private
21 groundwater supplies. As outlined in the proposed plan,
22 the treatment water could be discharged either to an
23 existing sewage treatment plant or to a stream. The EPA
24 also agrees with the Navy that some specific additional
25 investigations are needed before proposing any additional

10 1 cleanup actions.

2 Speaking for the EPA, I can say that we've
3 made a commitment to devote the resources we need to
4 support the Navy in these investigations and that
5 additional cleanup actions will be proposed by the Navy
6 and the EPA as soon as adequate information exists to
7 support the selection of the cleanup action. For now,
8 the EPA agrees with the Navy that the cleanup of this
9 site should begin with the pumping and treating of
10 contaminated shallow groundwater which, again, is
11 groundwater that extends to a depth of approximately one
12 hundred feet below ground surface. We encourage you to
13 comment on the proposed plan in writing during the public
14 comment period. The EPA will carefully consider your
15 comments before selecting a remedy with the Navy. Thank
16 you.

17 MR. MONACO: That concludes the presentation
18 portion of our meeting tonight. What I'd like to do
19 now, as M.J. mentioned, there were three groups that
20 asked for some time and I'd like to bring them up one at
21 a time; Bucks County representatives, Congressman
22 Greenwood and the Warminster Township folks. So if we
23 could have the Bucks County representative come down.

11 24 MR. TAYLOR: Good evening ladies and
25 gentlemen. My name is Bob Taylor. I've been

11

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

appointed by the Bucks County Commissioners to chair the NAWC Economic Adjustment Committee responsible for identifying accepted and recommended economic development strategies that will best utilize the resources of NAWC and its people to the best benefit of the surrounding communities.

Our committee was appointed by the Commissioners in September of 1992 and we've been in the process of developing economic development strategies since then. In March of 1993, we formulated an environmental subcommittee and the responsibility of that environmental committee was to monitor all of the environmental reports and studies surrounding this facility, to review the issues regarding the environmental conditions and remediation at the facility and to ensure the conditions are adequately and expeditiously remedied.

Captain McCracken, I thank you for the opportunity to speak tonight. There have been a lot of acronyms thrown around here, RODs, TCEs, RIs and all types of different alphabet-soup types of equations and I'd like to throw my own out. I believe the entire issue here involves FAITH, funding, alternatives, input from the community, timing and a healthy site for economic development purposes.

11

1 Let's talk about funding first. Mr.
2 Monaco, in your presentation here this evening, you've
3 mentioned that the cost of completing an alternative
4 through is approximately \$13.1 million; is that correct?
5 How about Alternative 2 -- you're saying the same cost.
6 Has Congress earmarked, at this point, any money for the
7 remedial cleanup of the NAWC facility?

8 MR. MONACO: We have scheduled for execution a plan
9 over the course of several years. Not only has this
10 first application been used, but several applications
11 have been coming down the line. That is -- we suspect it
12 will be a gift fund. That is always a matter of Congress
13 and within the last couple years, we have been receiving
14 full funding. This project is in a situation where we
15 have both what we call "BaC funding," which is Base
16 Closure funding and DER funding which is the normal
17 source of funds that we use in our cleanup process.

18 MR. TAYLOR: And how much (inaudible) for this
19 project?

20 MR. MONACO: For this project, we have funded --
21 well, we're only talking about -- we have funding for
22 this fiscal year. This fiscal year will include the
23 start of the design. So it's all the investigation that
24 has taken place to date plus the design.

25 MR. TAYLOR: Do you have a number?

11

1 MR. MONACO: Well, I have my contractor sitting
2 here and we haven't negotiated that fee yet. Let's say
3 that -- let's talk in terms of the whole year. The whole
4 year we funded several hundred thousand dollars.

5 MR. TAYLOR: So you have several hundred thousand
6 dollars to complete a \$13 million alternative?

7 MR. MONACO: We have -- well, no, because we only
8 fund the current year.

9 MR. TAYLOR: So you don't have a commitment from
10 Congress or the Administration, or anyone, to fund the
11 alternative you're talking about?

12 MR. MONACO: No. We cannot get funding until we
13 get -- we can project what we need.

14 MR. TAYLOR: Do you have any estimates as to the
15 cost and amount of funding that will be needed to
16 investigate and address remediation of the deep aquifer?

17 MR. MONACO: No, we haven't gotten that far in the
18 investigation.

19 MR. TAYLOR: Do you have any money available to you
20 appropriated by Congress for the rest of remediation of
21 soils on the site?

22 MR. MONACO: We haven't gotten that far in the
23 investigation.

24 MR. TAYLOR: The second issue is alternatives and I
25 guess I feel a little bit like the little boy whose

11

1 mother told him to wait for about four hours if he
2 behaves himself and if he is good, he's going to get a
3 treat for dessert and he can have one of three items
4 which she's going to be giving him. Dessert comes around
5 in four hours and he's all ready for the treat and his
6 mother brings out a plate of lima beans, spinach and
7 cooked turnips. The alternatives may be good for me, but
8 I'm not sure I like the smell or the taste.

9 I appreciate that Alternative 1 is required
10 by law. I'm sure the folks at NUS will come up with a
11 better alternative than to do nothing. Alternative 3
12 requires pumping to a POTW and your best guess is that
13 that POTW would be Warminster Municipal Authority POTW?

14 MR. MONACO: (Nodding.)

15 MR. TAYLOR: Are there any other alternatives for
16 POTWs?

17 MR. MONACO: The ones we have looked at are the
18 ones that were presented tonight.

19 MR. TAYLOR: Have you begun negotiation with
20 Warminster Municipal Authority to use their POTW for this
21 remediation?

12

22 MR. MONACO: No, we have not.

23 MR. TAYLOR: Do you know whether the Warminster
24 POTW is even engineered to treat this type of
25 contaminated water?

12

1 MR. MONACO: They would not be receiving
2 contaminated water. We would treat it and they would
3 receive clean water.

4 MR. TAYLOR: It will meet all EPA and DER standards
5 at the time that it reaches the Warminster POTW?

6 MR. MONACO: That's -- we are presenting
7 alternatives that can either be discharged directly to
8 the stream or to the treatment system. In either case,
9 they would be at standards that are acceptable for that
10 type of discharge. They would not require any type of
11 additional treatment.

12 MR. TAYLOR: Do you know, or does anyone from the
13 EPA know, what those standards are?

14 MR. OSTRAUSKAS: Well, in terms of the -- I believe
15 the -- first of all, the standards in this particular
16 case would be set by the Pennsylvania Department of
17 Environmental Resources and I believe the standard for
18 TCE is about three micrograms per liter. I'm not sure of
19 the precise number. Whatever the case may be, you would
20 have to meet the standards set by the State of
21 Pennsylvania.

22 MR. TAYLOR: Is the State of Pennsylvania, other
23 than as a member of the Technical Review Committee, is
24 the State of Pennsylvania participating in this study?

25 MR. OSTRAUSKAS: They're not part of the proposed

12
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

plan. They've been on the technical review committee and part of the entire process. They -- their position is not stated in the proposed plan.

MR. TAYLOR: So their standards are required to be met, but they don't have any input or any real responsibility in terms of the alternative that's eventually chosen?

MR. OSTRAUSKAS: No, they have certainly an input from this point forward and they've had an opportunity from this point prior to.

MR. TAYLOR: Does the technology that we're talking about to treat this water, does this technology destroy the contaminants that are in the water?

MR. TEAMERSON: No, it removes them.

MR. TAYLOR: What does the plan, once the contaminants are removed from the water, what do you do with those contaminants that are removed?

MR. TEAMERSON: Some of the contaminants are released into the atmosphere.

MR. TAYLOR: Will they be under the regulations of the --

UNIDENTIFIED SPEAKER: That statement is wrong. You are required to install a GAC filter. You cannot release them into the air. So your treatment system is going to include a stripper and a GAC filter.

12

1

MR. TAYLOR: Mr. EPA, is he allowed to just drop them off in the air?

2

3

MR. OSTRASKAS: The State of Pennsylvania, again, has regulations that address air emissions from an air stripper. My understanding is that the state requires vapor-phase carbon absorption on all air strippers and in this case, it would be no exception, as far as I understand, unless the State of Pennsylvania found that one was unnecessary.

4

5

6

7

8

9

10

MR. TAYLOR: Other than the air as a possible source -- or as a possible place for the contaminants, where else would we take the contaminants?

11

12

13

MR. TEAMERSON: There are sludges that are generated from the treatment plant as well as the generation of the carbon that's produced from the carbon-absorption process.

14

15

16

17

MR. TAYLOR: What would happen to the sludges and the carbon?

18

19

MR. TEAMERSON: The carbon can be regenerated. That typically is included -- whoever provides the carbon also gets involved in regenerating the carbon as well as the sludges. The final disposition of the sludges is covered in the feasibility study as well as all the other pertinent regulations whether they're air, drinking water.

20

21

22

23

24

25

12

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

MR. TAYLOR: Is it safe to assume that those sludges and those vapors, primarily those sludges would be transported off the site to some other resting place or would they be -- let me ask you this: Would they be left on-site, the sludges?

MR. TEAMERSON: No.

MR. TAYLOR: They would be transported through Warminster Township and the neighboring townships and communities to a site outside of your area for disposal?

MR. TEAMERSON: Part of the design and the remedial action looks at what happens to the sludges. There's filter (inaudible) sludges that gets called into the process. The current -- the sludges are either treated at the site, being nonhazardous, or treated off the site being nonhazardous.

MR. TAYLOR: So you would have to ship sludges off-site to dispose of them? That's part of Alternative 3. What I'm trying to get at, what does Alternative 3 say about the disposal of contaminants if you're not destroying them on-site at NAWC. You said some go into the air; what will we do with the rest?

MR. TEAMERSON: I'm not sure I understand your question. If you're looking at whether or not the contaminants are going to be reduced, the answer to that question is yes. If you're looking at whether or not the

12 1 contaminants are going to be diluted and find a way into
2 the atmosphere and sludge and a stream, that's not
3 correct.

4 MR. TAYLOR: What I'm trying to get at, will
5 everything be reduced and/or destroyed on-site?

6 MR. TEAMERSON: That's correct.

7 MR. TAYLOR: I got the impression from my earlier
8 questions that that wasn't a part of Alternative 3.

9 UNIDENTIFIED SPEAKER: Excuse me. How are you
10 going to regenerate or destroy the contaminants on-site?

11 MR. TAYLOR: Well, are you treating all of the
12 contaminants on-site or storing the contaminants on-site?
13 You said Alternative 3 will destroy all of the
14 contaminants that you pull out of the shallow aquifer
15 on-site; is that correct?

16 MR. TEAMERSON: Yes.

17 UNIDENTIFIED SPEAKER: Then why, sir, does it say,
18 "sludge to off-site disposal"? Right here on your
19 diagram, it says, "sludge to off-site disposal." Can you
20 explain why -- you just said, "yes," it will be destroyed
21 on-site and now it's showing in your diagram off-site.

22 MR. TEAMERSON: That sludge doesn't necessarily
23 have to be contaminated sludge.

24 MR. TAYLOR: My next question for the gentleman for
25 the EPA is: One of the courses of the treatment in the

13 1 alternative presented is that the treatment facility
2 presently at NAWC will somehow be part of the process for
3 cleaning those contaminants out of the water; is that
4 correct?

5 MR. OSTRAUSKAS: That's partly the alternative,
6 that's right.

7 MR. TAYLOR: Can you tell me: Is the treatment
8 plant at NAWC presently in compliance with all DER and
9 EPA standards for wastewater treatment?

10 MR. OSTRAUSKAS: Well, certainly at the time that
11 the discharge went to the facility, they happened to be
12 in compliance.

13 MR. TAYLOR: Is it now in compliance with EPA and
14 DER standards for the treatment of waste water at the
15 facility?

16 MR. OSTRAUSKAS: At this moment, I'm not aware of
17 the exact status at the facility. But as I said, at the
18 time that the treated -- pretreated water is generated,
19 the facility would have to be in compliance.

20 MR. TAYLOR: And how much have you allocated to
21 engineer, to construct that treatment facility to the
22 point where it will be able to perform that function?

23 MR. OSTRAUSKAS: At this time, the process does not
24 include cost to actually change the design and otherwise
25 change the nature of that plan. However, I would note

13 1 that the alternative does assume -- basically, both
2 alternatives assume the same level of treatment. The
3 water -- the volume of water going into any existing
4 treatment facility, whether it be NAWC plant or a
5 municipal treatment plant, in each case, that water will
6 be at the same quality as the water going directly into a
7 stream. Given the technology being used in this case,
8 it's basically the best that can be achieved through the
9 combination of technologies that has been proposed.

10 MR. TAYLOR: But you don't know whether that plant
11 is in a position to make any improvement at all. So I
12 guess my question would be: Why isn't it part of the
13 equation?

14 MR. OSTRAUSKAS: It doesn't have to be part of the
15 equation. It's simply been proposed at this point an
16 alternative in this case simply to discharge the water
17 directly into a stream. You have two alternatives and
18 that's really the point of this meeting. If Bucks County
19 believes that a better alternative is to discharge it
20 into a stream directly, then that's an alternative that
21 can be selected.

22 MR. TAYLOR: So we have one alternative that
23 suggests sending the water to the Warminster Municipal
24 Authority who is, as of this date, yet to be contacted
25 about receiving that water and we have another

13

1 alternative that suggests having the water sent to the
2 Center's treatment facility of which you're not even sure
3 there's compliance and you don't know what it will cost
4 to get that facility up to the required DER, EPA
5 standards so that it can accept the water. I've got my
6 choice between the lima beans or the spinach?

7 MR. OSTRAUSKAS: Again, it's not included in the
8 current cost estimate maybe so as not to include that in
9 their process.

10 MR. TAYLOR: The third portion of my acronym is
11 community. I want to make two comments. One, I'd like
12 to take exception to the memo by M.J. Jadick regarding
13 the public notice wherein it states that this study
14 input provided by the state and local regulators
15 and township officials from surrounding communities,
16 Alternative 3 had been selected by the Navy and the EPA
17 as the interim remedial response.

18 The NAWC Economic Adjustment Committee never
19 heard from (inaudible). We have not provided you with
20 any response that suggests that we support Alternative 3
21 in this matter and I'd like to make that clear for the
22 record.

23 Secondly, I'd like it to be noted in the
24 record that the Economic Adjustment Committee applied to
25 the Department of Defense for an environmental consultant

13 1 to be funded by the Department of Defense to assist our
2 subcommittee. And I want to compliment our subcommittee
3 because I believe it's made up of ten or twelve community
4 residents, leaders and volunteers who don't have this as
5 a full-time job. They're doing this on their own
6 volition. We've asked the Department of Defense to
7 support us by providing an environmental consultant to
8 help us and assist us with the very important and
9 technical aspects of your proposals. The Department
10 of Defense, in a letter in January of this year,
11 respectfully declined to provide us with that kind of
12 support. So obviously, the Department didn't feel that
13 we were worthy of having that type of assistance to
14 monitor your proposals.

15 The fourth part of my acronym is timing.
16 Your study began when, 1989? '87? '87, pardon me.

17 MR. MONACO: Neil had talked about in his
18 presentation, the initial finding, the initial kickoff
19 point began in 1979. Those early studies really didn't
20 show anything in the way of contamination pointing
21 towards the Navy facility. It was only in the 1989
22 reports when that started to become apparent. From then,
14 23 until now, those studies have been ongoing. So if you're
24 asking about --

25 MR. TAYLOR: Okay. Well, my next question will be:

14 1 How long would full remediation of the NAWC site take;
2 when can we expect a clean property?

3 MR. MONACO: That hasn't been determined yet.

4 MR. TAYLOR: You don't have a time?

5 MR. MONACO: No, we expect the extra work that Neil
6 spoke about as the design and the construction of the
7 first operable unit was ongoing. We expect to have a
8 work plan for that within a couple of months. The work
9 for the other media that still remains that we sort of
10 know about but don't have a true handle on, we expect by
11 the end of this fiscal year we can have a work plan,
12 outline, what needs to be done as far as additional
13 samplings, well monitorings, et cetera.

14 MR. TAYLOR: Well, what if I offered a hypothetical
15 to you? What if I suggested to you that I have a Fortune
16 500 company that told me that in 1997, after the Navy has
17 left the facility, they want to purchase 700 acres of
18 that area to build their international headquarters,
19 would you recommend that I begin negotiations to allow
20 them to buy that facility in January of 1997?

21 MR. MONACO: Depends on what they're going to build
22 on that. Depending on the contamination that we have,
23 the groundwater is the longest remedial. If it was
24 simply a matter of removing soil, I would say that the
25 removal actually would probably be done in several

14 1 months.

2 MR. TAYLOR: I would finally say that on behalf of
3 the committee, if our job is to market that particular
4 piece of property and to develop economic development
5 strategies for the community, I'm not sure I know whether
6 to plan for economic development strategies, look at the
7 year 1998 and what's important to the business and the
8 community in the area or shall I plan for the year 2020
9 because the economic development strategies required in
10 1998 are going to be entirely different than they are in
11 the year 2020. So when can I go back to a corporation
12 and begin the process of transferring that property to a
13 private commercial enterprise?

14 MR. MONACO: Like I said, that's an involved study
15 that we just don't have all those dates and answers right
16 now.

17 MR. TAYLOR: We would ask for more aggressive
18 investigation on-site and off-site. We would ask for a
19 comprehensive cleanup plan within the next year and we
20 would ask that you move a lot further in your efforts, a
21 lot quicker in your efforts. I guess if we have a
22 choice, like the little boy, we'll hold our noses and eat
23 Alternative 2. Our committee will recommend Alternative
24 2 as the best of the three you've provided us, but we're
25 certainly not happy about it and if you look at our

14

1 acronym of FAITH this evening, I think this proposal will
2 last a while. Thank you.

3 MR. MONACO: Next, we have a representative from
4 Congressman Greenwood's office.

5 MS. BORGER: Good evening. I'm Judy Borger. I'm
6 Congressman Greenwood's administrative assistant out of
7 the D.C. office. Congressman Greenwood regrets that
8 through a scheduling conflict, he couldn't be here this
9 evening, but obviously because of the critical nature of
10 what this is all about this evening, we definitely wanted
11 to be sure we were here to hear what the Navy and EPA had
12 to say and to especially give comments of our own.

13 I want to begin actually by commending Bob
14 Taylor from the County. I read through the documents
15 that they prepared in response to the feasibility study
16 the EPA prepared that actually Bob asked all my questions
17 except one. And very critical to this whole process is
18 the funding. I know that the funding has not been --
19 the proper funding hasn't been appropriated through
20 BaC funding. Funding clearly is going to be a
21 problem and something that I think we need to get the
22 Navy and the EPA pinned down on throughout the whole
23 process.

24 The other obviously critical element here is
25 the standards all this is to be cleaned up by. I was

14 1 very pleased tonight to have EPA discuss that the
2 standards for cleaning up are, in fact, EPA standards.
3 Nothing in the documents I have been presented so far
4 talk about the standards to which cleanup is going to
5 actually occur to. And the whole other timing aspect of
6 this, not only in terms of protecting all of those who
7 live around the surrounding area, getting it contained
8 and cleaned up, but also timing in terms of being able to
9 reuse that facility so we can keep the jobs here and
10 economy going as well.

11 I'd like to take a different tack, as Bob
12 most clearly covered much of everything else that I was
13 going to cover. Actually, I hadn't intended to raise the
14 issue, but a gentleman raised it very early on in the
15 process. I am somewhat familiar with the Superfund
16 process and the steps that are taken in order to actually
17 bring a cleanup about. And I'm a little bit confused and
18 also concerned about the approach that the Navy has
19 chosen to take in this proposed cleanup.

15 20 My question actually goes specifically to the
21 issue of why the Navy has chosen simply to approach this
22 upper groundwater contamination. Admittedly, in the
23 remedial investigation, there already was evidence to
24 indicate that groundwater contamination was in the deep
25 bedrock of the aquifer that was migrating off the site.

15

1 It would seem to me that the wisdom of coming up with an
2 alternative to address the cleanup of the groundwater
3 ought to take into consideration data that you first
4 gathered both in the deep bedrock as well as the soils.
5 I'm not an engineer, but it would certainly seem to me
6 that taking a look at the alternatives for cleanup may be
7 somewhat different if they have the data available that
8 would indicate what contamination, if any -- and they've
9 already indicated that they seem to think that there's
10 contamination deep in the bedrock -- then I would like a
11 consultant to address that issue for us, if they could.

12 MR. TEAMERSON: I guess if I understand your
13 question, why the deep bedrock aquifer has not been
14 investigated?

15 MS. BORGER: Exactly.

16 MR. TEAMERSON: I think there is three reasons that
17 that investigation has not been conducted. I think the
18 first reason is that it took many years in the
19 investigation or several years of investigation to first
20 check the sources of hazardous waste sites at the
21 facility itself. We can look back from 1980 through
22 probably 1985, 1986 time frame, the Navy was conducting
23 environmental investigations almost every single year on
24 the facility property. I think the initial investigation
25 was to find out if there was a problem. I think the

1 initial investigations are to find out what types of
2 contaminants and the size and location of the waste areas
3 consisted and I think that the Navy, in their initial
4 efforts, consciously was finding more about the types of
5 contaminants and the size of the waste areas that they
6 had at the facility.

7 I think the second reason is that generally,
8 when we conduct hazardous-waste-site investigations,
9 there's really one approach that works well and there's a
10 approach that doesn't work as well. One of the
11 approaches that doesn't work as well is to spend a lot of
12 money and a lot of time and effort doing certain types of
13 investigation that do not provide information that's
14 useful, that do not provide information that's valuable.

15 What I mean by that is, is that the Center in
16 the Northern Division, pursuant to the investigation
17 where deep wells were sunk to a depth of 200, 300, 400
18 feet within a quarter-mile of the facility property or
19 within the facility property boundary and outside the
20 facility property boundary and I think if you would ask
21 environmental officials, ask EPA or the technical types
22 of people that do these investigations where should we
23 put deep wells and the answer would have been: Really
24 don't know. We don't have the data for deep wells.

25 One of the things that complicates an

15 1 investigation into deep bedrock aquifers is the number of
2 off-site pumping wells in the vicinity of the facility.
3 Whether it's municipal wells or the wells here at the
4 facility itself, which they have half a dozen production
5 wells used for their own water supply, I think it's
6 difficult to get a feeling where the contaminants deep in
7 the bedrock aquifer may be migrating both in response to
8 the regional pumping centers, both looked at in light of
9 the fractures that we know exist and also looking at the
10 fact that the Stockton formation within and around the
11 facility and the neighboring facility and other sites in
12 the City of Warminster, the investigations have been very
13 slow proceeding of deep bedrock aquifers because of all
14 the uncertainty of where to sink the wells, where to
15 investigate. So that's number one. Number one is you
16 have to start somewhere and I think it's difficult to
17 find a starting place.

18 I think Number 2 is that there may well be
19 other potential sources of contamination in the vicinity
20 of the Center that aren't accounted for. There a number
21 of industrial facilities --

22 MS. BORGER: Off-site?

23 MR. TEAMERSON: -- that are a number of off-site
24 industrial facilities that are located east and west and
25 to the north and to the south of the facility. And it's

15 1 difficult to -- even if we went out and installed
2 off-site deep wells and found a quarter of a mile west of
3 here that there was PCE problem, it would be difficult to
4 say contamination quarter-mile of west of here was
5 any more attributable to the NADC Warminster that it
6 would have been attributable to an industrial center.

7 One of the things that EPA, in light of where
8 we are in the Superfund process at NAWC Warminster,
9 not speaking for EPA, but they do have a plan to look at
10 other potential sources of contamination in the vicinity
11 of the facility. That's one of the key things, when you
12 start assessing blame and cleanup and who's responsible,
13 what belongs to the Navy base and what belongs to another
14 industrial park or another manufacturer. And it's easy
15 to say that the Navy's the only game in town whether it's
16 deep groundwater or shallow groundwater, but the bottom
17 line is, contributing to that contamination is just as
18 much a part of the equation as finding it. So those are
19 two reasons.

20 UNIDENTIFIED SPEAKER: You're absolutely right.
21 You're not the only person -- the Navy is not the only
22 place that can contaminate the water. As of two years
23 ago, when it was published in the Philadelphia Inquirer,
24 you were the main source of contamination and Fischer and
25 Porter was the second main source. There was about five

16 1 or six of them in the area, possible contaminants and
2 definite contaminants and guess who was the biggest and
3 the most? The Navy, okay?

4 And you're wrong. Within one mile and a half
5 of your site, you have two 300-foot wells, okay, and
6 according to your own maps in here, you can see your
7 direction of the migration. What we want to know is if
8 you're going to take five years to study this thing. By
9 the time you're done studying, all your migration already
10 has hit these wells, okay? Let's not play now because
11 General Rivet or Fischer and Porter or somebody else has
12 contaminated the wells, we all know who the big
13 contaminant is around here and it's been there for 50
14 years. It's already been studied.

15 I mean, I've been drinking TCE for ten years.
16 You're talking to the people that live this every day,
17 that have been around here 10, 20, 30, 40 years. So
18 don't try to bullshit these people here because they all
19 know who -- every industry around here who got degreasers
20 and everything. They know who's the contaminants around
21 here. They didn't move into Warminster Township
22 yesterday.

23 What this lady wants to know is what are you
24 going to do about it? You called this meeting here. You
25 passed out all this fancy paperwork. Now, let's do

16

1 something about it or did you call this meeting wasting
2 people's time?

3 MS. BORGER: I think we all recognize that the
4 issue of liability, you take a look at the history and
5 the issue of liability is the key issue that held up so
6 many cleanups. I think specifically the question I'd
7 like you to answer is what is the timing that the Navy
8 anticipates for the development of a plan for the bedrock
9 contamination or to determine the levels or the extent of
10 the contamination and also the soil contamination. We've
11 not talked at all tonight about the effect of the deep
12 bedrock or the soil contamination.

13 Is the Navy intending to run -- to develop
14 feasibility studies and Records of Decision for the
15 cleanup of each of those separate -- the deep bedrock and
16 the soil contamination? Are you waiting till you
17 complete this phase with the surface groundwater until
18 you move forward? It's a very critical question. I'll
19 stop and I'd like an answer to that because I know
20 there's other people here who also have questions or
21 concerns. Congressman Greenwood does intend to submit
22 more detailed comments about the Navy's proposal to date.
23 We do thank you for the opportunity to speak.

24 UNIDENTIFIED SPEAKER: Will your boss help fund
25 this cleanup?

16 1 MS. BORGER: We certainly will need to take a look
2 at, number one, what's definitely needed and we'll make
3 every effort that we can to make sure that it's there
4 when it needs to be there. I think, as Bob indicated
5 earlier, we need answers on what needs to be available
6 and when it needs to be available. We need answers to
7 that in order to put a plan together. Certainly we
8 intend to follow this very, very closely.

9 If somebody could address the issue of what's
10 the plan for timing to address the deep groundwater
11 contamination, assuming that it's there, and also the
12 cleanup of the eight sites, whatever the plan will be for
13 the cleaning.

14 MR. MONACO: The next step, as we see it, for the
15 other media that are contaminated and for us to determine
16 what's the extent of our involvement, source for
17 contaminants, at this meeting, we're looking to put a
18 work plan together in about the next six months, by about
19 the end of our fiscal year, maybe September. That will
20 be going on as well as a work plan to address, as Neil
21 spoke about, the full extent of contamination in the
22 shallow groundwater. So those are things that we still
23 have coming and we will be addressing those in the near
24 future.

25 I'd like to address this other issue on the

16 1 funding. Everybody is picking up on the \$13 million.
2 What we are spending from that \$13 million is the
3 three-and-a-half million -- that's an estimate right
4 now -- to construct the pump and treatment system and
5 another \$628,000 annually for the operation and
6 maintenance of that facility. So the way we fund that is
7 if that design starts and is depleted and the impact just
8 put out on the street and construction project begins
9 within about twelve months, then about a year from now is
10 when we would be looking at, so to speak, turning the
11 dirt over and starting construction. That is our fiscal
12 year '94 and that is when we need this \$3.5 million to
13 award the construction portion of that project.

14 Every year afterwards, we would be funding
15 \$628,000 to be maintained at that facility. Now, if the
16 additional studies that go on show that the contamination
17 has gone out further and we want to increase the capacity
18 of that pump-and-treat system or if warranted, have to
19 build another pump-and-treat facility to treat the
20 shallow groundwater, well, then that will be additional
21 funding. As of yet, obviously, we don't have a handle on
22 what that will be.

23 Assuming that these numbers are accurate,
24 like Neil said these are just conceptual designs, if you
25 get the true design and the construction package turn out

17

1 to be these numbers, then that funding of
2 three-and-a-half million is something that will be
3 appropriated in fiscal year '94 with the additional
4 \$629,000 every year thereafter or we're estimating 30
5 years of remediation.

6 What I'd like to do is bring up a
7 representative from Warminster Township now to speak for
8 his five minutes.

9 MR. MCGOUGH: I'd like to thank the Navy for
10 inviting the township to this hearing. And I'd certainly
11 feel comfortable tonight in this meeting. It appears
12 that --

13 UNIDENTIFIED SPEAKER: State your name.

14 MR. MCGOUGH: It appears that these proceedings are
15 very much like the technical meetings that we attend. I
16 haven't heard anything new and I've never heard anything
17 before about it being a positive plan.

18 UNIDENTIFIED SPEAKER: Sir, would you state your
19 name, who you are. Some people don't know you.

20 MR. MCGOUGH: Fine. I'm Gene McGough. I'm
21 Warminster Township manager. I also represent the
22 Warminster Township Economic Development Commission.

23 I'm present at this hearing to express
24 Warminster Township's opinion of the Operable Unit 1
25 remedy selection for cleanup of the shallow groundwater

17

1 contamination in and around NAWC facility. I also
2 express our confusion and concerns regarding the
3 information presented to Warminster Township by the Navy
4 and the manner in which the remedial investigation was
5 conducted. Specifically, I refer to your public notice
6 for this hearing. In it you state that the treatment
7 system for Alternate 3 would consist of precipitation and
8 filtration before discharging to the existing treatment
9 plant.

10 In the focus feasibility study for OU-1, it
11 is stated that the treatment system for Alternate 3 may
12 consist of air stripping and carbon absorption. My
13 question, for the record, which is correct? What are we
14 really proposing to do? And I didn't hear anything to
15 this question before. How can Warminster Township give
16 meaningful input if we do not know the action you're
17 planning to undertake under these comparative
18 alternatives?

19 As in your public notice, you stated that by
20 using input provided by the state and local regulators
21 and township officials from surrounding communities,
22 Alternative 3 had been selected by the Navy and the EPA
23 as the interim remedial response. When did you receive
24 input from township officials? What form did it take?
25 Was it written comments, verbal discussion or maybe just

17 1 nod of the head? What was included in the comments of
2 the township officials that led you and the EPA to select
3 Alternative 3? Now, I would like your answer.

4 MR. MONACO: There were several mistakes on that
5 initial -- in the public announcement and there should
6 have been a correction. One of them spoke to that issue
7 of alternative already being selected. No alternative
8 has been selected. The purpose of the proposed plan and
9 the public meeting is to solicit comments. We come
10 forward with our recommendation, but that is not the one
11 we're going with. So that really spoke out of turn.

12 I think there was an issue of a wrong date
13 being in there for the end of the comment period also.
14 So that was corrected, too.

15 MR. MCGOUGH: But this is the document we received.
16 This is the official document that came out of the United
17 States Navy and the EPA. It leaves questions, it leaves
18 many questions and Warminster Township, I might add, has
19 a lot of questions when it comes time for this Navy
20 facility -- and they go way back, as many of the
21 residents who are here tonight, we, of Warminster
22 Township, are under the impression that the purpose of
23 this public hearing and comment period was for the Navy
24 to solicit our opinions on your proposed cleanup action
25 alternatives.

17 1 We certainly could not have given much
2 meaningful input before this evening because the final
3 version in the feasibility study regarding the latest
4 proposal alternatives you are now considering is dated
5 April 1993 and was not made available to us until April
6 1993. Any comments you may have received prior to that
7 date is moot. Since the cooperation -- correction, I'm
8 sorry. Since the comparison of Alternative 2 and 3
9 changed dramatically from previous versions of the
10 feasibility study as demonstrated by the cost comparison
11 alone of the alternatives which went from an Alternative
12 2 being twice the present worth cost of Alternative 3 in
13 the February 1993 draft of the feasibility study to the
14 present worth cost for the two alternatives being equal
15 in the April version of the study.

16 Are there any more modifications being
17 contemplated or is this finally the document which the
18 Navy is going to stamp?

19 MR. MONACO: The document of April of 1993 is the
20 final. As I mentioned, the one that you're referring to
21 was a draft and there were several changes that were made
22 and discussed at the TRC meetings, the Technical Review
23 Committee meeting. The comment period runs for
24 approximately 30 days. It began April, I believe, April
25 23th or 29th and it runs until May 28th. The purpose of

18

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

this meeting is to solicit comments, both in writing or oral, to have an open discussion, which we're having now, which are by no means forced to comment by tonight. There will be no decision-making tonight. You have until the end of the comment period to get your comments in and we request that you write them down, that way there's no problem in transcribing them. They will appear in the response summary of the Record of Decision and the decision will be made on the input that we receive.

MR. MCGOUGH: Regarding the two feasibility alternatives as evaluated in your study. Warminster Township wants to go on record as having strong preference for Alternative 2 as such that it is, which includes treatment of the contaminated shallow groundwater with discharge of the effluent to a stream which we consider only the first set in a very long journey that the Navy must travel before the EPA can possibly determine that the environmental cleanup of NAWC Installation and the off-site contamination caused by the operations at the facility is complete.

In fact, we consider Alternative 3, pretreatment of the contaminated shallow groundwater discharged to a publicly-owned treatment plant, unacceptable because of the long-term uncertainty of availability of wastewater treatment plant on-base or

18

1 off-base to accept the effluent discharge from the
2 treatment plant.

3 Alternative 2 will provide a reliable,
4 long-term, effective method of cleaning the contaminated
5 shallow groundwater in the Warminster community caused
6 by NAWC that is independent of and obviates the need to
7 rely on a POTW to accept the treatment system effluent
8 unlike Alternative 3.

9 Now that I have discussed our confusion and
10 made clear our preference of Alternative 2, let me now
11 express our concerns related to the Navy's intention
12 regarding the proper environmental cleanup of the entire
13 base. Warminster Township wants it to be clearly
14 understood that we consider the evaluation of the degree
15 and the extent of the shallow groundwater to be
16 incomplete. In fact, we want to know why only two small
17 areas referenced to as "A" and "B" in your studies on
18 this 800-plus-acre site have been investigated before you
19 decide to implement this process Alternate 2.

20 Warminster Township looks for answers to our
21 last group of questions. On what basis did you select
22 these two areas to investigate? Why not other areas? We
23 expect that the Navy will investigate conditions on the
24 entire base in accordance with the EPA standards that are
25 set for any other nongovernmental entity and guarantee

18

1 that before any portion of the base is cleared as having
2 no contamination present, enough laboratory analytical
3 data is collected to prove the area is uncontaminated.

4 When will you finally determine the degree
5 and extent both on- and off-site of the contamination of
6 soils, shallow groundwater, the deep groundwater and
7 surface water caused by NAWC? And I believe, based on
8 what you have said a little while ago, you gave us a term
9 of about one year before any cleanup with regard to the
10 shallow, let alone anything else, would take place.
11 Since this process has been ongoing since 1979, will we
12 have to wait years and years before the next phase of the
13 cleanup is implemented? And based on what I've heard
14 this evening, apparently, that's true. They stated that
15 there's no funding, they've stated -- well, why keep
16 stating it. It has been stated, you have heard it, it
17 has been recorded, you know our feelings. Please make
18 sure you understand that Warminster's feelings are
19 strong. EPA is the people we are looking for to clean
20 this place up. Maybe you feel the Navy is the lead, but
21 EPA is the agency that's responsible to us.

22 In conclusion, how does the United States
23 Navy intend to address the residents of Warminster
24 Township who have spent millions of dollars cleaning up
25 asbestos from the Navy housing development currently

18

1 known as Warminster Heights? Further, what remedial
2 action is the Navy anticipating to take with regard to
3 the asbestos water plant that they constructed in the
4 same Navy housing development and is still being used?
5 The United States Environmental Protection Agency and the
6 Navy owes to the residents of Warminster Township a
7 cleanup of this Navy base past and present that removes
8 all contaminants that we have been living with for many,
9 many, many years.

10 You know it's there, I know it's there.
11 Identify it. Clean it up and clean it up now. I think
12 we're tired of waiting. This thing started in 1979 and
13 it is continuing and it's nothing but talk and paper. We
14 probably could fill four rooms full of the paper -- in
15 fact, to be very truthful with you, I think the township
16 has four rooms full of that paper right now and we really
17 don't need any more paper. What we need is some good,
18 basic, sound field engineering. Get it done. Do it for
19 us now. Thank you.

20 MR. MONACO: Okay. In the next portion, there are
21 several letters that people have sent in requesting that
22 they be read.

23 MS. JADICK: We could probably use, like, maybe a
24 two-minute stretch and I think my court reporter's
25 fingers might be falling off. So with that, I'd like to

19

1 take -- I mean, a for-real two-minute stretch and please
2 have a break.

3

4

(Whereupon, break was taken.)

5

6

MR. BURSTEIN: I just have a few comments I'd like
7 to make. I'm Frank Burstein, general board of
8 supervisors for Warminster Township. And I concur with
9 Bob Taylor's comments earlier this evening and Judy
10 Borger from Congressman Greenwood's office and Gene
11 McGough's comments for the township. We had a big
12 snowstorm back on March the 22nd. I think so far the
13 information you've got exceeds that snowstorm. I think
14 we've been snowed, as far as the township, in getting
15 information.

16

Comment was just made a few minutes ago
17 before the break that there was no decision made as to
18 what type of program was going to be used to address this
19 issue. Where, in fact, a half-hour was spent completely
20 describing Number 3, groundwater extraction and treatment
21 at the municipal authority's plant. They're both
22 basically the same, only one's going to be discharged
23 through the creek and one through the municipal
24 authority. I'm reading under Number 2 which goes
25 directly to the creek, it says "on-site treatment." And

19

1 under Number 3, which would go through the municipal
2 authority, would be "on-site pretreatment."

3 The other thing on the next page, Page 11 or
4 12, it says, "If the Center's treatment plant were to
5 cease operation, pretreated groundwater would be
6 discharged to publicly-owned treatment works such as
7 the Warminster Municipal Authority's wastewater treatment
8 plant." From what we're hearing, that's probably what's
9 going to happen. I can't understand how a proposal can
10 be put together without contacting or presenting a
11 program to the Municipal Authority or giving information
12 to the township so they can make an informed decision.

13 Problem of the whole matter is that the
14 township and the municipal authority has not had enough
15 information to even come up with the input they would
16 like to give the Navy. My perception is basically the
17 Navy's going to do what they want hopefully with the EPA
18 overseeing that and with the township's assistance that
19 we'll be able to get the matter taken care of and things
20 done the way we would like to have it done in the
21 community. Thank you.

22 MS. JADICK: Two individuals have sent letters to
23 my office, one from the Northampton Bucks County
24 Municipal Authority, the other from the municipal
25 authority of the Township of Upper Southampton, Upper

19

1 Southampton Sewer Authority. And they ask that these be
2 read here.

3 "Dear Ms. Jadick" -- again, I apologize.
4 From the Northampton Municipal Authority.

5 "Dear Ms. Jadick: I will be unable to
6 attend the May 10th meeting concerning the
7 pollution at the Naval Air Warfare Center.
8 Because of the importance of this subject,
9 I would like you to enter this letter into the
10 record and have it read at the meeting.

11 "Parts of the discussion concern the
12 three alternatives listed by the Navy's
13 consultants regarding the remediation efforts.

14 "Alternative 1: No action with groundwater
15 monitoring. This is a continuation of what is
16 happening now. It is merely making additional
17 studies and is not providing any remediation at
18 all. It provides for continuing studies for 30
19 more years. Studies provide no solution. This
20 is a totally unacceptable alternative.

21 "Alternative 3: Groundwater extraction,
22 on-site pretreatment and discharge to NAWC
23 Warminster Wastewater Treatment Plant or
24 Publicly-Owned Treatment Works. This considers
25 the use of the Warminster Wastewater Treatment

1 Plant. Pretreatment would be necessary, but
2 from reading Alternative 3 in the report, it
3 would appear that pretreatment should take
4 care of most of the contaminants. This means
5 that the discharge to the Warminster Municipal
6 Authority Wastewater Treatment Plant would be a
7 huge dilution of clear water. This obviously
8 would have a very serious effect upon the
9 Wastewater Treatment Plant.

10 "More amazingly, however, in discussions
11 with Warminster Municipal Authority officials,
12 I am told that no one, at any time, has ever
13 approached them about this use of their plant.
14 No permission has been given, no design
15 information offered, nor any requests for
16 opinions. It is incredible that this report,
17 which has taken hundreds of pages and countless
18 man hours to prepare has ignored such a
19 critical issue when preparing an alternative
20 recommendation. This, too, must be
21 considered a totally unacceptable alternative.

22 "Alternative 2: Groundwater extraction,
23 on-site treatment and discharge to surface water.
24 This is the only truly viable alternative. It
25 puts the full treatment squarely on the Navy's

20 1 shoulders. This alternative should be pursued
 2 aggressively to stop the migration of
 3 contaminants to domestic wells within the area.
 4 Any other action would be unthinkable.

 5 "Finally, I must express my strong
 6 objections to the lack of progress in treating
 7 deep-water wells at this time. As the person
 8 responsible for providing safe drinking water
 9 to the residents of Northampton, which has ten
 10 deep wells in the area, I cannot understand the
 11 delay in trying to stop the spread of the
 12 contaminants in the Stockton Formation.

 13 While alleviating the conditions for shallow
 14 groundwater, as highlighted in this report,
 15 this does not serve the purpose of protecting
 16 deep wells affecting hundreds of thousands of
 17 people. The exposure is tremendous and action
 18 must be taken immediately. We cannot afford to
 19 wait for more reports that continue
 20 interminably. We must act -- we need action
 21 and we need it now.

 22 Very truly yours, Richard E. Lander,
 23 P.E., executive director."

 24

 25 The Municipal Authority of the Township of Upper

20

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Southampton, Upper Southampton Sewer Authority.

"Dear Ms. Jadick: I have just reviewed the three interim remedy alternatives for OU-1. Alternative 1 has merit in that it suggests continued study, however, the quote 'no action,' unquote is a very negative and unacceptable choice of words. We must still question how serious the suspected groundwater pollution can be if we can take, quote, 'no action,' unquote, since 1989, or possibly 1977, and continue to take, quote, 'no action,' unquote, for possibly 30 more years. It appears a problem does exist and action should have been taken long ago.

"Alternatives 2 and 3 do not differ significantly as far as treatment criteria is concerned. The costs appear to be the same. What seriously concerns us is the final disposition of the effluent in the event of base realignment and closure which sadly must be considered a given.

"To the best of my knowledge, the part of Alternate 3 that concerns the Warminster or other POTWs was never discussed with any of the authorities that, due only to their proximity

20

1 and not capability, are in a location to
2 receive the effluent. I do not see where it
3 is relevant whether or not the base is closed.
4 From all indications, the intention is to
5 continue to have some branch of the military
6 at this site, possibly along with private
7 industry. You also have an existing operating
8 facility which will be a further capital loss
9 if you close it and pay the high cost of
10 treatment to a local POTW. It is also a known
11 fact that on occasion, the NADC, slash, NAWC
12 has invited bids from private firms to operate
13 your on-site WWTP. If realignment or closure
14 dictates it is not feasible for U.S. Navy
15 personnel to operate the facility, it can
16 surely be privatized. Operating personnel will
17 have to be on board to operate the extraction
18 wells and pretreatment. How much more effort
19 would be involved to operate the on-site WWPT?

20 "The high cost of treatment at a local
21 POTW is mentioned above. This is not to imply
22 the treatment at the plant is overpriced. For
23 example, the Warminster Municipal Authority
24 WWTP is a newly-improved facility meant to
25 treat sanitary sewage. The pretreated

20 1 effluent from your extraction wells cannot be
2 considered sanitary sewage. At 56 gallons per
3 minute, you will be taking 86,000 gallons a
4 day of valuable sanitary sewage treatment
5 capacity from the community when that level of
6 treatment is not needed.

7 "Also, it does not shed a favorable
8 light on the Navy. It is bad enough that the
9 military is closing so many installations in
10 Pennsylvania and New Jersey. Now it appears
11 you are attempting to walk away from some of
12 your cleanup responsibilities by overloading
13 a community system with your effluent.

14 "Use of the Upper Southampton system is
15 also not feasible. We cannot speak for the
16 capacity of the City of Philadelphia Northeast
17 Treatment Plant, however, our pump stations
18 and lines leading to Philadelphia are not
19 intended to transmit the type of discharge
20 you propose. To provide for this flow with pump
21 station and line improvement would require a
22 revision in your capital cost estimate.

1 23 "I must complain again about how long
24 this project is taking. When we compare the
25 duration of World War II, the Korean Conflict

and even Vietnam with this project, it makes one wonder which is the most challenging.

"Upper Southampton Township Sewer Authority would like to go on record that if any of the alternatives are accepted, it be Alternative Number 2.

"Very truly yours, Henry R. Cole, manager."

MR. MONACO: Okay. The next portion will be the questions and answers for Operable Unit 1. We ask that you use a microphone, come down here, state your name and I guess that's it and we'll take it from there.

MS. BROWNSTONE: My name is Judith Brownstone. I'm here representing Congresswoman Marjorie Margolies-Mezvinsky of Montgomery County. I also happen to be a resident of Upper Southampton Township. I have three questions. I'm a layperson. I'm going to ask you if you will answer the questions. I would also like Bruno Mercuri, who's here in the audience and who is a hydrogeologist, from Upper Southampton to also answer some questions for me. Thank you.

My first question is: How do you determine the metal contaminants that are not left in the soil when you remove the groundwater? You mentioned lead, cadmium, the heavier metals, some of them from paint residue; what

1 guarantee do we have that when you withdraw the
2 groundwater, this lead is not left in the soil or on the
3 bedrock and then when the groundwater comes back in, that
4 the ground is not still not contaminated thereby
5 contaminating the new groundwater? That's my first
6 question.

7 MR. TEAMERSON: I'll try to repeat the question at
8 least so I understand it. I guess your question was that
9 by treating contaminated groundwater without treating the
10 soil that the groundwater may continue to be contaminated
11 even after it's cleaned up and then, number two, what are
12 the plans to clean up any soil or subsurface waste.

13 MS. BROWNSTONE: Yes.

14 MR. TEAMERSON: As Lonnie alluded to -- and this is
15 part of the plan of attack that the EPA and the Navy and
16 the rest of our team puts together. The investigation of
17 other contaminated media due to the releases of hazardous
18 substances from the facility which may be surface water,
19 sediments, soils, deep aquifer groundwater, the work plan
20 or the proposed work for that still has to be developed
21 as part of continuing Superfund activities at the
22 facility.

23 So as far as whether or not they need to
24 clean up subsurface waste or contaminated soils, I don't
25 think the information's there to determine whether or not

1 1 the contaminants in the soil may continue to cause
2 2 contamination of groundwater. I will say two things,
3 3 that is that soil samples were collected during the
4 4 second remedial investigation and it was selected soil
5 5 sampling, subsurface soil sampling and very few
6 6 contaminants that's given in concentration were found
7 7 underneath the subsurface. Now, that may be a function
8 8 of the samples or may be a function that there isn't a
9 9 lot in the soil. A lot of it is sanitary waste, not
10 10 necessarily the most hazardous substances come from
11 11 chemical manufacturers.

12 The answer about how you clean up groundwater
13 13 without cleaning up subsurface waste without
14 14 contamination, generally by looking at analytical data
15 15 from the subsurface from the soils, based on
16 16 relatively simple and more complicated models, the amount
17 17 of groundwater contamination at the area of waste may
18 18 reach the groundwater if they're not cleaned up. It's
19 19 based on rainfall, groundwater -- a number of physical
20 20 parameters as to what's in the ground, what's in the
21 21 soil.

22 Once the analytical data is collected, types
23 23 of subsurface contaminants, then the Navy can use one or
24 24 more models to determine whether or not the soil would
25 25 have to be cleaned up or determined an unacceptable risk

1 of groundwater.

2 MR. MERCURI: My name is Bruno Mercuri. I'm a
3 local hydrogeologist. I'm here not in a professional
4 capacity but as a local resident. My office is located
5 in Upper Southampton and I reside in Warminster Township
6 to west of the NAWC. And as a hydrogeologist, I like to
7 hear that we cannot resolve all the problems, but I like
8 to hear that we can at least do something to improve the
9 situation.

10 Your statement that you have several media
11 that you have to investigate of the metal situation, is
12 not completely on the up and up. You have two media,
13 solvent and the lead-paint types of contaminants. On the
14 one hand, you have the volatile organic compounds. And
15 on the other hand, you have the heavy metals at least
16 from my review of the information that you handed out
17 tonight at this meeting. The two require different
18 approaches and different technologies. Also in the
19 volatile organic compounds, you have two categories; one
20 that we call the "sinkers" to use a layman's term and the
21 other one that we call the "floaters."

22 The sinkers, in more scientific terms, are
23 defined as DNAPL. The axiom of DNAPL is when you
24 investigate a test for DNAPL, you look at depth. You are
25 not going to resolve a DNAPL contamination by building

2 1 one well in the Stockton formation. Every site we know
2 of in Southeastern Pennsylvania which is located in the
3 (inaudible), we know that they do not go much deeper than
4 that. We also know, or at least some hydrogeologists out
5 there know, how to investigate those sites, where to
6 position the wells, how deep to drill the wells, how to
7 construct them to avoid gross contamination, et cetera,
8 et cetera.

9 The fracture trace analysis is a very
10 important tool that we use in determining the mass
11 migration of the pollutants, but a fracture trace
12 analysis does not end by (inaudible) geologic analysis
13 and that's drawing the lines on a section of the USPS
14 (inaudible.) It must be ascertained by doing actual
15 drilling. And it appears to me that that is not enough,
16 so we've got fracture traces on paper that in practice,
17 don't mean anything. We can draw lines -- I'm a firm
18 believer in fracture traces. I use them every day in
19 groundwater resource development and there are some other
20 hydrogeologists in this group that use them every day.
21 And I'm not looking for work here.

22 The fact of the matter is that once we have
23 identified a fracture trace, we follow them up by
24 positioning a drilling rig on the fracture trace. An
25 experienced geologist will log in information that we

2 1 obtain from drilling. They have not offered a technique
2 on the sound option, a technique on the sound remedial
3 investigation and, therefore, they cannot offer a very
4 technically-sound remedial implementation. As long as
5 they stay within the limit of the substantive
6 information. It's very superficial and it's contrary to
7 the axiom that concerns DNAPL.

8 MR. BROWNSTONE: Thank you, Bruno. I have two more
9 questions, not necessarily that Bruno needs to address.
10 The first one I guess goes to the Navy and to the EPA.
11 If Warminster -- if you decide on Option 3 and the
12 Warminster Municipal Authority refuses to accept your
13 treated water, what is your next step?

14 MR. MONACO: Well, that sounds like -- we're not
15 making a selection. I don't want to say that everything
16 that is being said here tonight is going to be brushed
17 aside and we're going to go ahead with Alternative 3.
18 When we do a proposed plan, we select the one that we
19 think for our own reasons is the one to go with and then
20 we open our discussion. We're getting a lot of feedback
21 that's telling us that we really should strongly consider
22 Alternative 2 and I can tell you that that's what we're
23 going to do. That is not to say that we're going to
24 strongly consider it and just go with Alternative 3
25 anyway.

2 1 In the event that we do go with Alternative
2 2 3, it's going to be with concurrence of somebody,
3 3 Warminster or whatever other facility is available to us,
4 4 to accept that water. It's not going to be, again,
5 5 making a decision of (inaudible) and then
6 6 saying, "Okay. Warminster," or whoever, "you have to now
7 7 accept our water." We want to make this decision in
8 8 conjunction with the people that it's going to impact,
9 9 the facilities, in this case, Warminster, that would have
10 10 to play a key role in taking the water.

11 Alternative 2 is one of those that doesn't
12 12 need a receptor. I mean, we're just going to go to a
13 13 stream. It sounds like that's the way -- at least the
14 14 people -- the people that have made their opinions known,
15 15 they're the ones that want Alternative 2.

16 MS. BROWNSTONE: I have one more question. I want
17 17 to thank everyone for their patience. My last question
18 18 is along with the article today in the Philadelphia
19 19 Inquirer Metro Section telling us about this meeting
20 20 tonight, there was another article that said the EPA's
21 21 questioning DER's water standards. If this water is to
22 22 be cleaned to meet DER standards, who sets the rules as
23 23 to what is an acceptable level of cleanliness. That's my
24 24 question. Is it EPA-accepted standards or DER-accepted
25 25 standards or is the EPA going to override the DER's

standards which was implied in the article today? Thank you.

MR. OSTRAUSKAS: Well, the proposed plan refers to, both in the case of Alternative 2 and Alternative 3, the plan states that the alternative would have to be -- answer to both NPDES requirements or National Pollution Discharge Elimination System requirements. That is -- that particular system is mandated by the Federal Clean Water Act and in the State of Pennsylvania, the Department of Environmental Resources -- Pennsylvania Department of Environmental Resources has been given authority by the EPA to implement that program in the State of Pennsylvania.

Also, the State of Pennsylvania has their own water quality standards as well. In those cases where those standards are more stringent than those mandated by the Clean Water Act, then those standards are applicable. I haven't read the specific article that you're referring to, so that's about all I can say at this point.

MR. MAYER: My name is Lawrence Mayer, executive director of Warminster Heights. We are south of the Navy base. I've read your documentation here, okay, and certain things are spreading at a rate of a couple of inches to a couple of feet to whatever. Then it's the shallow part. I have 300-foot wells, two of them to be

3 1 exact, no more than a mile from the Navy base. What
2 guarantees me or the people that I represent that these
3 deep-water wells are not being affected? Is it possible
4 for the Navy to begin deep-water testing in the bedrock
5 aquifers?

6 MR. MONACO: As we had mentioned earlier, this
7 Operable Unit 1 is only to address the -- what we say as
8 the first round of what will probably be several rounds
9 of total remediation. What you're talking about is
10 something that we sort of have a handle on, but we don't
11 have everything that we need to know about. The work
12 plan, which is the document, if you will, that says
13 here's what we're going to go out and test and here's how
14 many wells we're going to put in and samples we're going
15 to take and that's the document that is prepared by the
16 Navy, through its contractor, submitted to the members of
17 the TRC which includes a lot of the township people that
18 are here tonight, plus the EPA, plus the State of
19 Pennsylvania. Once that document has been approved, we
20 will ask our contractor to implement that work plan, go
21 out and take all the samples. And then, depending on
22 those results, we will formulate a plan of action as to
23 what's the best course of action and we'll prepare a
24 remedial investigation like you saw tonight. We'll
25 prepare either a full-blown feasibility site or a focus

3 1 feasibility site.

2 MR. MAYER: We're south of you, downhill. If
3 arsenic comes to my property, who's responsible? You
4 can't answer that. Okay. You can't answer that. I'm
5 just throwing it out as food for thought, okay?

6 My other question is the Record of Decision.
7 I know it's after all this, okay, after you get public
8 feedback and everything like this, when will it be made
9 public?

10 MR. MONACO: It will be part of the administrative
11 record that will be made public and that will include a
12 response to this summary portion which will list all the
13 questions that we receive here verbally tonight or in
14 writing throughout this whole public comment hearing
15 along with our responses.

16 MR. MAYER: Now, is it my understanding that EPA is
17 going to run this show or EPA is going to be the
18 overseer? You, the Navy, have to answer to the EPA; am I
19 correct?

20 MR. MONACO: In what way? As far as --

21 MR. MAYER: As far as cleaning up and things of
22 that nature?

23 MR. MONACO: EPA is the enforcement agency.

24 MR. MAYER: That is correct.

25 MR. MONACO: We're the lead agency to accomplish

3

1 this remedial process.

2 MR. MAYER: That is fine, but will you still have
3 to answer to EPA guidelines, right or wrong?

4 MR. MONACO: I'm not sure -- we have a federal
5 facility agreement between the two agencies that says we
6 will play by a certain set of rules and it includes
7 having varying differences of opinion, but the EPA
8 does have the final say.

9 MR. MAYER: One other question. If you decide to
10 do deep-water testing, will you affect the deep-water
11 wells, i.e., I have a 300-foot-deep-water well. If you
12 decide to drill 500 feet, 600 feet, 1,000 feet, whatever
13 it takes, of course you know if you sink the hole deeper
14 than what you got, the water rushes into that hole. I
15 don't know how deep the actual water table is at this
16 moment in time, okay. I will know tomorrow, but I don't
17 know now.

18 My question is: Is it possible when you
19 do -- if you do deep-water testing that you will drain
20 wells that are less than what you're going to drill?

21 MR. MONACO: I don't know.

22 MR. TEAMERSON: Your question is: Will the
23 drilling of wells in deep bedrock affect municipal supply
24 wells?

25 MR. MAYER: No, anybody's well.

3 1 MR. TEAMERSON: Anybody's well?

2 MR. MAYER: Because I know for a fact somebody
3 drilled a 125-foot well on Jacksonville Road right across
4 from Fischer and Porter and it drained a 75-foot well.

5 MR. TEAMERSON: Well, I don't know if I can give
6 you an exact answer. I will say that one of the ways
7 that you design where you're going to install wells or
8 you're going to place wells, how deep those wells are is
9 looking at what information you can already collect. For
10 example, probably -- it's unlikely that, I'll say,
11 "unlikely," but I won't say, "not possible," it's
12 probably unlikely that a minor well will be installed
13 immediately adjacent, let's say, of the wells in
14 question. It is possible to collect a sample or obtain a
15 sample from -- already from a monitoring well.

16 MR. MAYER: But there are no guarantees? Hey,
17 nobody can guarantee everything.

18 MR. TEAMERSON: I think the way I would like to
19 leave it is that to the extent possible, we rely on
20 existing monitoring wells, existing domestic wells,
21 municipal wells, commercial wells for groundwater samples
22 to avoid the possibility of installing another well that
23 will affect the quality of water there. Now, in some
24 cases, those wells might not be constructed the way we
25 want to construct the wells for purposes of sampling.

4 1 MR. MAYER: Let me fill you in a little bit. My
2 property was built as housing for the Brewster Air Force
3 Base, therefore, the Navy built the wells. Whether they
4 meet the construction standards or not, I don't know.
5 That's a little bit of history on my property, okay? My
6 question to you, again, if you can't give me a guarantee
7 whether my wells will run dry or not, okay, what I want
8 to point out to you folks, I have a 300-foot well, two of
9 them, I have air stripping towers, chlorine, anything you
10 can think of to treat water. I think you should test
11 deep water because it's costing me thousands of dollars
12 every year to treat, what I call, deep-water wells and I
13 think you really ought to consider that. Shallow water
14 ain't doing me any good. Shallow-water testing isn't
15 doing me any good. 300 foot, that will do some good.
16 That will do Warminster Township some good.

17 The point is everything that you've mentioned
18 here concerning treatment of water is coming from a
19 300-foot well, two of them. And I really think you ought
20 to consider deep-water testing. Thank you.

21 MR. REGAN: Good evening, my name is Ray Regan.
22 I'm one of the township supervisors and I'm here to
23 persuade these people (inaudible). If you could get your
24 slide out, the one showing Area 1 and area 2. I have a
25 couple brief questions. I have a question relative to

4 1 the cost of the engineering study. Did you measure the
2 amount of population in Area 1 and Area 2?

3 MR. TEAMERSON: Are you talking about --

4 MR. REGAN: People, population of Area 1 and 2.

5 MR. TEAMERSON: Home wells or --

6 MR. REGAN: Human beings. Human beings.

7 MR. TEAMERSON: No, the reason I ask the question,
8 there are municipal wells in that area. If you want me
9 to include.

10 MR. REGAN: I asked a simple question. Doesn't
11 take a college degree. Did you measure the population in
12 Area 1 and Area 2?

13 MR. TEAMERSON: No.

14 MR. REGAN: Why not?

15 MR. TEAMERSON: I think a couple of reasons. If
16 you're talking about individual bodies, that we did a
17 door-to-door search to find out how many residents in
18 each home, the answer to that question is no.

19 MR. REGAN: Did you try the Department of Census
20 data?

21 MR. TEAMERSON: The one thing I say is prior to the
22 listing of this facility on the National Priorities List,
23 the number of people served by well was estimated at that
24 time and we have that information.

25 MR. REGAN: In the Area 2 -- I'll say in Area 1, do

4 1 you notice anything unusual about the map?

2 MR. TEAMERSON: It includes a lot of residences.

3 MR. REGAN: Includes the fact that there's about a
4 thousand well units. The map is 21 years old. If that's
5 the most recent map you looked at, you did a damn poor
6 job. To be specific, areas like Byron Road, Parmentier
7 and that area where we have a series of birth defects,
8 only eleven or twelve years are conveniently missing from
9 your map.

10 MR. TEAMERSON: My answer to that question is that
11 we used the recent street map to get our specific homes
12 and streets and residences --

13 MR. REGAN: I'm on the board of supervisors. We
14 adopt street maps. We've adopted street maps since 21
15 years, I assure you.

16 MR. TEAMERSON: You didn't let me answer the
17 question. What I'm trying to say is I could have shown a
18 map up there that's dated 1992 with all the streets that
19 are in that area, but I thought that it was easier to
20 display the information on this one.

21 MR. REGAN: That's baloney. That's absolute
22 bullshit. You have missed an area where cancer. And
23 where just twelve years ago we asked why children
24 were dying and we have no answers from the military. The
25 cold war was on, we shut them out, now we want the

4 1 answers. There are a lot of cancer deaths in that area
2 and they have to be related to what you're producing off
3 that site. Also, have you measured springs at all? Take
4 for example, the Speedway section, the 43 wells that you
5 showed in the area, that represents the oldest part of
6 Warminster Township. According to the map, in the 1960s
7 the board of supervisors approved or demanded the use
8 of the source when you came through and dynamited the
9 area. I was a kid then. I sat on the side. It looked
5 10 kind of neat. It broke the geology up on the near
11 surface so badly that the wildlife that was previously
12 growing (inaudible). I have no idea what impact it has
13 had in the area that I live in, but I know that we've had
14 substantial illnesses there as well.

15 I have a question: Will your cleanup be affected
16 by the type of zoning that is in the area on the site?
17 Do you have to meet different standards with different
18 leniencies?

19 MR. TEAMERSON: Typically, when we estimate the
20 types of resident hazardous substances in the waste area
21 that a facility such as this poses, we look at the worst
22 possible use of the land which in this case would be
23 future use of residential housing and the risk we're
24 calculating based on that assumption.

25 MR. REGAN: Have you asked the POTW whether they

5 1 can accept water in Scenario Number 3? Have you asked
2 the Warminster Municipal Authority --

3 MR. TEAMERSON: No.

4 MR. REGAN: Did you ask for a capacity?

5 MR. TEAMERSON: No, we haven't.

6 MR. REGAN: Gentleman, I assure you that we do not
7 have the capacity because I bothered to check and
8 speaking for myself, there's no way in hell I'm going to
9 let you put the water in there. I'm going to fight you
10 tooth and nail because all you're trying to do is dump on
11 this municipality the irresponsibility of the Navy in
12 hooking up the facility. If you guys worked as hard on
13 cleaning up the environment as you are as hard moving
14 these jobs fast, this town would be (inaudible) in a
15 short period of time. You are our problem. We want to
16 redevelop the site after the Navy is gone, we're going to
17 miss them, God bless them, we want to wish them well. We
18 want to redevelop this site, get our community moving
19 again. What you're telling us right now is basically
20 it's absolutely unacceptable.

21 I don't think you can find five people in
22 this town that will agree with your position. I would
23 suggest that you go back to the drawing boards damn quick
24 and pull hard and come up with something, first of all,
25 that's not a bunch of baloney because that's the only

5 1 offense I have here tonight. Secondly, workable.
2 Thirdly, is quick. And fourth, that is convincingly
3 accurate. Thank you very much.

4 MR. PICKFORD: Can I use the microphone down here.
5 I'm Italian, I speak with my hands. I heard a lot about
6 surveys and everything, okay, and I have a survey that I
7 want to tell you about and it's very sad. I live on Kirk
8 Road. 400 feet one direction is Number 4 contaminant
9 section and 600 feet the other way is where they burned
10 all the gasoline. Now, I have proof, statistics: 200
11 feet from me my neighbor died, 52 years old, with cancer.
12 And his next-door neighbor died also with cancer at 53.
13 The contaminant section is right out in front of their
14 houses.

15 We had our water checked and we have twelve
16 parts of that TCE, or whatever it is, all right, and from
17 what I understand, the normal that you're allowed to
18 accept in drinking water is five parts and we have
19 twelve. And I want to know what the Navy's going to do
20 about my well. I want to know what's going to happen
21 because I sure as hell didn't cause the problem.

22 MR. MONACO: Earlier in our discussion, Neil
23 Teamerson had presented, along with the study that
24 identified what we were planning to do under this
25 Operable Unit 1, that there was ongoing sites of local

5 1 residents' wells in the area and I assume that your --
2 2 you use well water?

3 MR. PICKFORD: That's the only water I can get.
4 4 There is no municipal water. I got to use that. Now,
5 5 what am I going to do?

6 MR. MONACO: We're in the process of conducting
7 7 well search. We put together an inventory of wells that
8 8 are in the area. Neil spoke on those where different
9 9 ones are located and we will be conducting, in the near
10 10 future, sampling of those wells, contacting people in the
11 11 area. I won't say who specifically, but people in the
12 12 area to find out just what it is we have in these wells.
13 13 If we're seeing widespread contamination, we will, numbe
14 14 one, expand that search to find out how far it goes.
15 15 We'll also be taking steps to correct those issues.

16 MR. PICKFORD: Well, how long is this going to
17 17 take?

18 MRS. PICKFORD: It's already taken 14 years.

19 MR. PICKFORD: I mean, do I have to die first?
20 20 I mean, let's go now. You have 14 years of surveys. The
21 21 bullshit's done. Let's get something going. When can I
22 22 get somebody out there to help me out?

23 MR. MONACO: We will be taking these samples and --

24 MR. PICKFORD: I already had that done.

25 MR. MONACO: -- we will be analyzing the results

5
1 and evaluating the data by the end of this month.
2 Depending on what we find, like I said, that range will
3 be expanded and also depending on what we find, we'll
4 take steps, in accordance with the EPA, what we need to
5 do and whether that means bottled water or some kind of
6 air stripper or stripper process to take care of your
7 situation, that's what we plan to do.

8 MR. TEAMERSON: One other thing we can do for the
9 stenographer and court record is the people that ask
10 questions or speak, we need each of you to say who you
11 are, what your name is because we'll just have "person
12 said such and such."

13 MR. PICKFORD: My name is Jim Pickford,
14 P-I-C-K-F-O-R-D.

15 MR. MONACO: I thought you said you were Italian?

16 MR. PICKFORD: I'm part Italian, the shady side.

17 MR. TEAMERSON: Address, sir?

18 MR. PICKFORD: 205 Kirk Road.

19 MR. MYERS: My name is Richard Myers, M-Y-E-R-S. I
20 reside at 1105 Sackettsford Road, Ivyland, which is
21 actually in Northampton Township. I'm a member of the
22 environmental subcommittee of the Naval Air Warfare
23 Center Economic Adjustment Committee and also president
24 of the Neshaminy Water Shed Association.

25 Several concerns. First of all I would say

6 1 that as a member of the environmental subcommittee, I do
2 support the conclusion or support of the given three
3 alternatives would be Alternative Number 2 as the most
4 acceptable. My reasons for that are, first of all, that
5 my understanding of Alternative 2 -- and correct me if
6 I'm wrong -- is that a new treatment facility will be
7 constructed with the intent of treating contaminants that
8 are found on the site and if that's not a fact, I do have
9 some reservations.

10 MR. MONACO: Yeah, a pumping treatment system would
11 be constructed.

12 MR. MAYER: Okay. The reason I feel that's
13 appropriate is it puts the entire responsibility on the
14 Navy's Department of Defense to create any structure you
15 need to treat the water on-site. I do have one concern
16 and that is the ultimate destination of that water
17 that will be discharged into a stream and my thoughts on
18 that are that I believe rather than discharging into the
19 stream, particularly in consideration of the fact that
20 you've got several compliances to play with here, that
21 land application would be a more appropriate method of
22 treating that wastewater once it goes through your
23 system.

24 And, in fact, once it goes through your
25 system, you set up your land application so that

6 1 the water goes back on the land, percolates down and is
2 simply drawn through the system wells that you're going
3 to be putting in so that we keep filtering the same water
4 over and over again till we get it all out and you're not
5 certain to get rid of the problem like diluting in the
6 stream that eventually ends up down near where I live.
7 And that's part of the problem with Alternatives 2 and
8 3 is the fact that any contamination that remains in that
9 water, you're going to ultimately get rid of it by
10 dumping into a stream making it somebody else's problem.
11 And I can tell you, living very close to the
12 Neshaminy Creek where it joins the main stem of the
13 Neshaminy, that we're downstream from a whole lot of
14 other problems and we're getting pretty tired of it.

15 And that brings up a final problem that I see
16 with the study here and that goes back to the draft copy
17 of the remedial investigation. I'll just read to you one
18 paragraph from Page ES6 of Document Number C-51-2-7 and
19 in talking about the tributary flow into the Neshaminy
20 Creek that flows off of the site, your Site A, you
21 mentioned that "large, colored seeps were observed at
22 several points along the creek bath north of Sites 2 and
23 3 during both phases of the remedial investigation."

24 That, I think, brings up a real problem and I
25 think that you need to take immediate steps to intercept

6 1 and contain any contaminants that you know are flowing
2 into the stream. I mean, it doesn't take any further
3 studies since you can walk along the stream bank
4 apparently and see orange seeps going into the stream.
5 And to allow that to continue -- we're not even guessing
6 here; you can see it going into the stream and to allow
7 that to continue while you do further studies is just not
8 acceptable. If I did that, if I was physically dumping
9 contaminants into the stream, our friends from the EPA
10 and DER would probably deal with me very quickly.
11 Probably because I don't have as much clout as the Navy.

12 I would say that if you could see that going
13 in the stream, it's time to clean it up now. I mean,
14 this poor gentleman here, he knows what's in his well and
15 he's still asking for cleanup. I understand his
16 frustration. I lived in a home that had TCE
17 contamination levels considerably higher than his. The
18 only way I found out about it was after I moved out of
19 the house and somebody else did the investigation to
20 his own complaints. But, you know, he has a valid
21 concern. Those of us that have concerns for the streams
22 also have very valid concerns, but we already know what
23 the contamination is and we still don't study the
24 problem. It's time to take some steps to prevent
25 additional contamination now.

6 1 MR. FENMORE: I'm David Fenmore. I am an
2 environmental consultant. I'm a consultant to Warminster
3 Township and also a member of the environmental
4 subcommittee. There are a number of issues, technical
5 issues that have been raised which I think are very
6 misleading and I've waded through the entire
7 administrative record, all the RIs. I think that the
8 site fundamentally has been characterized wrong and as
9 such, the RI does not provide a firm basis for
10 decision-making.

11 My main concerns regards these folks over
12 here and my question to the EPA: I've personally been
13 involved in cleanups of NPL sites and I know that there's
14 a mechanism under CIRCLA that compels the EPA to make the
15 responsible party provide litigating -- or take
16 litigating action to make impacted well owners whole
17 again, thereby, providing them with bottled water or
18 a carbon-filtration system, something, and it's
19 interesting, if not scary, to me why jobs that I'm
20 working on, EPA is applying a certain set of rules in
21 this instance where we're just going to do more sampling.

7
22 MR. OSTRAUSKAS: First of all, in this particular
23 case, as I said, the Navy is the lead agency and what
24 that means is that in any instance where the Navy detects
25 contaminant levels of concern in their own wells, they

7 1 are obligated under CIRCLA to supply alternative drinking
2 water supply or alternative water supply to eliminate the
3 risk of concern and that is no different than any other
4 site. The Navy's basically playing by the same rules as
5 a private party would as required by CIRCLA.

6 The difference is that they're basically --
7 what's the best way to explain it? The EPA and Navy are
8 both federal agencies, so the relationship between the
9 EPA and the Navy is somewhat different than between the
10 EPA and a private party. But, in any case, the important
11 thing is here that the Navy is, in fact, responsible for
12 providing an alternative water supply for people who are
13 affected and that's the point of the studies that does
14 not describe -- it is, in fact, to determine whether
15 there is anybody that is at an unacceptable risk. And if
16 they're found to be so, then the Navy is required by law
17 to deal with them.

18 UNIDENTIFIED SPEAKER: These people have got
19 hydraulical-drawn gradients. They've got similar
20 contaminants.

21 MR. OSTRAUSKAS: It's the Navy's responsibility to
22 deal with that.

23 UNIDENTIFIED SPEAKER: You're the enforcement
24 agency. Why doesn't the Navy take enforcement action to
25 make them do it?

7
1 MR. OSTRAUSKAS: If we see the data. At this
2 point, the EPA has not seen all the -- I'll be glad to
3 accept the data after the meeting, but I simply haven't
4 seen it. If the data indicates there's a problem and the
5 information indicates to the Navy there's a problem --

6 UNIDENTIFIED SPEAKER: It's twelve parts per
7 billion. It's unsafe drinking water.

8 MR. OSTRAUSKAS: What are you asking me to do?

9 MRS. PICKFORD: They did nothing. They told me
10 they don't even start to investigate it until it's .69.

11 MR. OSTRAUSKAS: All I can say is give me the
12 information personally after the meeting. All I want to
13 see is a piece of paper. Give us all the information you
14 have and the EPA will make sure that the Navy does what
15 it's supposed to do. I mean, that's the best I can do.
16 I can't operate on verbal descriptions during the
17 meeting.

18 MR. PICKFORD: We're neighbors to the Captain.
19 I'll walk across the street and hand it to him. How's
20 that; is that all right?

21 MR. OSTRAUSKAS: That's what we need. To my
22 knowledge, samples haven't been conducted from that
23 particular home.

24 MR. PICKFORD: We had to do it independently on
25 our own.

7 1 MR. YOUNG: My name is Charlie Young. I live right
2 next door to them right on Kirk Road. I got a creek
3 running right alongside my property that when you look
4 across the street, it comes right out from the ground
5 from the base. So I mean, right there's a prime testing
6 spot. Has anybody went to look at that?

7 MR. OSTRAUSKAS: The type of information you're
8 giving us, both the EPA and the Navy, are very interested
9 in. Anything that you provide us --

10 MR. YOUNG: They're the ones that -- it's the
11 groundwater right from the base. I mean, there's a creek
12 across the street, you look over there, there's nothing.

13 UNIDENTIFIED SPEAKER: They drain their water in
14 our backyards and they won't test our water?

15 MR. PICKFORD: Why are we here? Test our water.

16 UNIDENTIFIED SPEAKER: One of the things we've been
17 doing over the course of the past week or two is that
18 we've gotten some of the analytical data back and some of
19 the levels in it has caused us to initiate a plan where
20 we're going to be going out and sampling selected homes
21 or selected areas where we have information that
22 indicates that some of the levels may be high and
23 unacceptable, et cetera. Okay. We've started to do
24 this. We've got negotiations going on with the Navy.
25 Some of this may be occurring in a very short time frame

7 1 and we're looking at all the alternatives we have with
2 regard to taking action.

3 What I'd like the people in here to do is if
4 you have any type of well data, any analysis data to
5 either give us your name and your phone number and your
6 address today and what we want to do is we want to get
7 ahold of that information as soon as possible and rather
8 than wait for us to get around to determine what pockets
9 we want to be looking at first, you can help us to
10 prioritize which ones we should do. We can't do 100 or
11 200 homes. We can only do ten or 15 at a time.

12 MR. MERCURI: That's not only -- I'm sorry. You
13 are running in Solebury Township to test wells, the
14 Delaware River Canal and things like that where there is
15 no known contamination except somebody thinks that there
16 is a contamination. This should have been initiated 14
17 years ago. At other NPL sites, one of the --

18 UNIDENTIFIED SPEAKER: That's besides the fact.
19 We've become aware of the situation and we're acting
20 quickly.

21 -----
22 (Whereupon, argument ensued.)
23 -----

24 UNIDENTIFIED SPEAKER: I can't tell you what
25 happened 14 years ago. What I can tell you is I can

3 1 guarantee that we're looking at the problem now and we're
2 going to react as quickly as we can and in some cases,
3 will be soon.

4 UNIDENTIFIED SPEAKER: My name is Frank
5 (inaudible). What I would like to know: Who polices the
6 Navy when they discharge any waters into the stream?
7 Does the EPA oversee that or do they disregard that or
8 just hoping that they're discharging waters into the
9 stream and it meets the quality standards such as we're
10 regulated by in Warminster Township?

11 UNIDENTIFIED SPEAKER: I think primarily it would
12 be DER. If you're talking about wastewater treatment
13 contaminants and so forth, if that's what you're
14 referring to.

15 UNIDENTIFIED SPEAKER: Correct. I would like to
16 know if documentation is available for us in the
17 community to see where DER or EPA has actually reviewed
18 records of the discharges into the creeks or surrounding
19 areas if they meet the same quality standards as we do at
20 our Warminster Township wastewater treatment plant.

21 MR. TEAMERSON: The existing waste treatment plant
22 operated at the Center discharges to a mundane tributary
23 and there is a permit, I think an EDS permit. And under
24 that permit, there are requirements to conduct periodic
25 monitorings to make sure the effluent going into the

8 1 tributary does not exceed certain concentrations of
2 specific chemicals and that's part of the process that's
3 administered under the Clean Water Act. That handles
4 wastewater discharges from the Center and handles the
5 same requirements for treatment of the shallow
6 contaminated property water.

7 UNIDENTIFIED SPEAKER: I would like to know if
8 there's documentation for the public and the surrounding
9 area that we actually see it, the last time it has been
10 checked, the sample. We feel that the Navy may be doing
11 things and no one else is policing the Navy. When we do
12 administration here in the municipality, the EPA or DER,
13 they're right on top of us. We want to know if they are
14 being policed like the surrounding communities are being
15 policed.

16 UNIDENTIFIED SPEAKER: Yes, the Navy has an EDS
17 permit for the discharge from the treatment plant. That
18 permit is at our Conshohocken office. The telephone
19 number is 832-6000 if you wish to make a call and make
20 arrangements to come and review it --

21 UNIDENTIFIED SPEAKER: You're not answering my
22 question.

23 UNIDENTIFIED SPEAKER: I will. The parameters for
24 the discharge don't pay any attention to who's making
25 the discharge. So whether it's the Navy or whether it's

8 1 XYZ corporation that's making discharge into the stream,
2 what our water quality department looks at is the nature,
3 the content, the flow of the stream, other sources of
4 contamination perhaps in the stream. Discharge is going
5 to --

6 UNIDENTIFIED SPEAKER: I beg your pardon. You're
7 saying to me that you will go into a neighboring stream
8 and will take samplings from the stream, but you will not
9 take samplings before the water is actually discharged
10 into the stream? You aren't taking samplings before it
11 goes into the stream?

12 UNIDENTIFIED SPEAKER: Yes.

13 UNIDENTIFIED SPEAKER: How often do you take
14 samplings?

15 UNIDENTIFIED SPEAKER: That depends on the size or
16 the amount of gallons that are going in. If it's a large
17 treatment plant, for example, they may have to sample it
18 every day. Smaller treatment plants, perhaps once a
19 week, perhaps once every two weeks. City of Philadelphia
20 can spend a lot --

21 UNIDENTIFIED SPEAKER: It's not necessarily the
22 amount of flow that's going into the stream. In other
23 words, you can be producing a lot of harmful chemicals in
24 very small intervals and they're being discharged from
25 the stream. Not just because it's discharged in large

8 1 amounts of water, I mean, how often during the course of
2 a month are they --

3 UNIDENTIFIED SPEAKER: I don't know.

4 UNIDENTIFIED SPEAKER: Would you say at least twice
5 a month?

6 UNIDENTIFIED SPEAKER: My guess, it's probably
7 about that often, but as I said that would be a --

8 UNIDENTIFIED SPEAKER: Is that plan in compliance?

9 UNIDENTIFIED SPEAKER: Yes, sir.

10 UNIDENTIFIED SPEAKER: No citations?

11 UNIDENTIFIED SPEAKER: I'd have to check with water
12 quality.

13 UNIDENTIFIED SPEAKER: You just said, "No" --

14 UNIDENTIFIED SPEAKER: It is in compliance, but
15 past difficulties, I can't answer that.

16 UNIDENTIFIED SPEAKER: It's my understanding that
17 your plan is not under the capacity to take care of the
18 treatment of the water. That's why you're requesting
19 Warminster's plant. If we decline -- if Warminster
20 Township declined or a few people declined, does the EPA
21 -- do they have the power to say Warminster Municipal
22 Authority, you must treat their waters?

23 UNIDENTIFIED SPEAKER: I think part of your
24 question is Navy, EPA. Can the EPA enforce Warminster
25 Municipal Authority to handle any waste treatment if they

9 1 decline to build a waste treatment plant?

2 MR. OSTRAUSKAS: If there's a reasonable
3 alternative that can be selected, then it will be
4 selected. In this particular case, if Warminster
5 Township simply won't accept the water, the other
6 alternative is to discharge the water into a stream. I'm
7 not aware that the Navy or the EPA legally can tell
8 Warminster Township to accept this water.

9 MR. MONACO: Before we go on with any more
10 questions, we have a hydrogeologist from the EPA who
11 asked me for a few minutes if he could speak. I'd like
12 to open the floor up to him.

13 UNIDENTIFIED SPEAKER: There seems to be a
14 perception out there that we haven't done a good job.
15 That we have ignored the deep groundwater contamination
16 and that we're just looking at shallow. Fortunately,
17 a hydrogeologist brought up the points I would like to
18 engage with them the reasons why we supported the Navy.
19 I'd like to explain a couple things here. I'm not saying
20 that this is what is happening at the Navy site. I want
21 to make that clear.

22 I've used this data at a lot of sites that
23 have a similar setting as the Navy; in other words,
24 fracture media that contaminated the -- contaminants that
25 have a potential of seeping to the bottom of the aquifer.

1 At this site we don't know whether we have a DNAPL
2 problem. I don't want to give the wrong impression that
3 we have a DNAPL problem.

4 This is a simplified diagram of really the
5 potential problems we may have on the site and the
6 reasons why we chose the alternatives we did. Now, if,
7 say, we have a DNAPL problem and contaminants are moving
8 down the aquifer through fractures, it is extremely
9 difficult to just come in here and start pumping wells in
10 the deep aquifer. In fact, it is a better alternative to
11 start taking care of the problem from the surface rather
12 than moving down and moving up.

13 If we assume that the contaminants have sunk
14 down to the bottom and we have contaminants in the deep
15 aquifer while we still have contaminants in the shallow
16 aquifer, which at this point in time, we have a reason to
17 believe there are (inaudible) make it more or less. The
18 fact of the matter is that pumping of the wells off-site
19 have shown that there is a connection between what's
20 happening at the top and what's down at the bottom. So
21 therefore, it makes sense to go in first and remove what
22 you could remove off the surface and then take care of
23 what's at the bottom later. If you go down and remove
24 what's at the bottom without removing what's at the top,
25 then the chances are you will continue to introduce

9 1 contamination down into the aquifer. So that's why we're
2 taking this approach.

3 And eventually -- I mean, Bruno out there,
4 talked a lot about fracture-trace analysis, et cetera.
5 The fact of the matter is that when it boils down to
6 remediating contaminated fractured media, you have to do
7 a tremendous amount of study to even start coming up with
8 solutions to say, okay, should we have a problem. What
9 you may be doing is those private wells who are clean, by
10 you going into the deep aquifer, you may be introducing
11 contamination into those areas that are clean. You don't
12 want to do that.

13 It's not a simple picture at all. In fact,
14 there are some sites where we have situations like this,
15 the best solution is to prevent the fuller migration of
16 contaminants. To trace DNAPLs is like tracing a needle
17 in a haystack sometimes. So I just want to bring this up
18 so you at least recognize it. But we have to do
19 something. We know there are residents out there whose
20 wells are contaminated and we want to start doing
21 something. And to start to do something, we have to
22 start with things that you can take care of, taking care
23 of those things that may be the problem.

24 DNAPL is a contaminant that is heavier than
25 water. When it's introduced into the aquifer, it will

9 1 sink down into the bottom as this picture shows. I'm not
2 2 saying this is the situation we have.

3 MS. BURNS: My name is Mary Burns and I live on
4 4 Hostman Avenue in Warminster. I was just wondering --
5 5 where I live on Hostman Avenue, and it's within a
6 6 circumference of about 200 yards, there has already been
7 7 in the past few years ten people, including myself,
8 8 operated on for cancer. Seven have already died in the
9 9 past couple years. I was just wondering, is it a
10 10 coincidence or has the Navy kept any records at all,
11 11 keeping for any Navy personnel that live around the base,
12 12 do they know that we are living under these
13 13 circumstances?

14 The thing is, I'm 63 years old and I'm not
15 15 concerned about myself, but our area has so many young
16 16 people that have moved in and my daughter is not too far
17 17 away, I'm really concerned about the young people. Is it
18 18 just a coincidence with all this cancer.

19 MR. MONACO: The first part of your question, you
20 20 had asked if there was any records or some such being
21 21 kept, none that I know of. I don't know if the facility
22 22 itself will address that. As far as the coincidence, I
23 23 really can't answer. Neil alluded to a risk assessment
24 24 that is done. That has been done in the first operable
25 25 unit which really only deals, again, with the shallow

10 1 groundwater on our facility. As the investigations
2 continue, the risk analyses that proceed that goes into
3 the deep bedrock aquifer or goes into off-site
4 contamination, or what have you, those risk analyses will
5 also be performed and we'll have a better handle on the
6 questions you're asking, but I don't have an explanation
7 for you right now.

8 UNIDENTIFIED SPEAKER: My name is Jim (inaudible).
9 I live at 693 Newtown Road within Area 2. I have a
10 private well. I have several questions concerning the
11 testing that will be done: Where will you get the
12 information, who has wells in the area, what tests will
13 be conducted. I applaud the Navy's effort to start
14 removing the contaminants that are already in the areas
15 that have been tested and I have a second concern as we
16 draw down on the 25 wells that are dug, will that affect
17 my private well as far as the water table in my area?

18 MR. TEAMERSON: You live in this general area
19 (indicating)?

20 UNIDENTIFIED SPEAKER: No, on the other side.

21 MR. TEAMERSON: The types of tests that have been
22 done on home wells have been limited to volatile organic
23 compounds at a very low detection. The reason it's a low
24 detection is because some of the degradation products,
25 TCE or PCE, can often be something like vinyl chlorides.

10 1 And using a low detection of that will allow us to detect
2 almost to the extent of (inaudible) the best possible way
3 for very low levels of concentration. To answer your
4 question, it's volatile organic compounds using a
5 low-detection monitoring. I didn't catch your other
6 question. Would your well be one of them?

7 UNIDENTIFIED SPEAKER: How do you select wells?
8 How do you identify those wells?

9 MR. TEAMERSON: Okay. There are approximately --
10 within the vicinity of Area A, there was potentially 93
11 wells. That's 3,000-foot radius from the Sites 1, 2 and
12 3. What happens after we identify the numbers of wells
13 based on a process of possibly contacting the local
14 municipal water authorities trying to find out where the
15 water distribution wells are. But looking at municipal
16 water, we can -- unless they had a well and chose not to
17 hook up to municipal water -- we can start locating
18 people which own individual wells.

19 So number one, you find where the municipal
20 water is, then you look at those people that you have
21 that are on wells. The decision to sample off-site wells
22 is based on, number one, those that are in Area 1 which
23 is a 3,000-foot radius primarily for the Center of Area
24 A. And Area 2 which is about 3,000 feet from a
25 contaminated well in the vicinity of Sites 5, 6 and 7.

10 1 What we're doing is progressively moving out within those
2 areas to find those people that immediately have the
3 highest likelihood of the possibility of the well being
4 contaminated. Once that data is collected, what we'll do
5 then is we'll move out a little bit farther based on
6 whether or not the wells can go so far. The incremental
7 approach is showing contamination. The whole point of
8 that is that if we sample a whole neighborhood and not
9 one well was contaminated in that neighborhood within
10 more than 1,500 feet of the facility property boundary,
11 then we have to ask questions about whether they want to
12 continue to sample 2,000 feet, 2,500 feet.

13 So we're trying an incremental approach. Th
14 homes we sampled initially were the ones we thought with
15 the highest level of potentially being contaminated to
16 hazardous substances attributed to the Center and that's
17 been expanded and the schedule has been firmed up and I
18 would think this month at least 30 additional homes will
19 probably be sampled this month with any additional homes
20 sampled in the month of June

21 UNIDENTIFIED SPEAKER: I heard of 15, now 30.
22 There's approximately 131 wells in Area 1 and 2 at Kirk
23 and Newtown Roads.

24 MR. TEAMERSON: There's a potential of 92 wells
25 within that Area 1 in the northwest corner. There's a

10 1 potential of 84 wells within Area B. And we're right now
2 looking at contacting homeowners closest to the facility
3 property boundary for sampling. We sampled nine, we're
4 looking at 30 in the next couple of weeks with the
5 remainder of those -- I can't quantify those -- during
6 the month of June.

11 7 UNIDENTIFIED SPEAKER: If you draw down the aquifer
8 that will affect the residential wells that are in place,
9 what actions is the Navy going to take in the event that
10 we lose our wells?

11 MR. TEAMERSON: Well, number one, under the
12 alternatives we've described, I think it's important to
13 note that they're fairly low ratings. They're not
14 necessarily aggressively trying to restore the aquifer.
15 What we're trying to do is minimize the further migration
16 of contaminants in the shallow groundwater. So number
17 one, those wells, extraction wells, will not be pumped
18 hard enough, it's believed, and it's part of the design,
19 but the extraction wells will not be pumped long enough
20 at a sufficient rate to affect the water supply for
21 those wells.

22 UNIDENTIFIED SPEAKER: Is the municipal well a deep
23 well?

24 MR. TEAMERSON: If you're referring to Warminster
25 Well 26, yes, it's a fairly deep well. It's a well over

11

1 a couple hundred feet. One of the things that you find
2 in a fracture environment like this one is that other
3 wells just open wells in the ground.

4 UNIDENTIFIED SPEAKER: What about the two
5 production wells that are nearby closer to Area A; are
6 they also deep wells?

7 MR. TEAMERSON: One of those is a deep well. We
8 don't know how deep it is.

9 UNIDENTIFIED SPEAKER: Well, can you assume from
10 that there is some deep-water pollution going on? The
11 very fact that the municipal water in the well that
12 supplies the township itself is being polluted, which is
13 a deep well, doesn't that show that there is some
14 evidence that the pollution travels deeper?

15 MR. TEAMERSON: I think my answer to that -- my
16 answer to that question and if somebody wants to correct
17 me -- is I'm not sure that the municipal well is
18 contaminated because of the Center. The evidence does
19 suggest that the production wells are just immediately
20 north of the facility property boundary.

21 UNIDENTIFIED SPEAKER: How far north is the
22 municipal well from the hot spot in Area A?

23 MR. TEAMERSON: I think Warminster Well 26 --

24 UNIDENTIFIED SPEAKER: I have a different problem.
25 I get township water. I assume that the township -- we

11

1 know that that municipal well has some pollution. I
2 assume they're correcting that situation.

3 MR. TEAMERSON: Warminster Well 25 is presently
4 being treated.

5 UNIDENTIFIED SPEAKER: So my question is how far is
6 the municipal well from the hot spot in Area A?

7 MR. TEAMERSON: The Warminster municipal well is
8 approximately four-tenths of a mile from Area A.

9 UNIDENTIFIED SPEAKER: Four-tenths of a mile.

10 MRS. BLACKWAY: I'm Mrs. Blackway of Newtown Road,
11 north of Street Road. I came tonight because I was
12 worried about when I hear "a series of wells." Are you
13 going to start digging wells to treat this water like
14 option 3? I've owned my own well for 46 years, 176 feet
15 deep into an underground stream. I don't want my well to
16 go dry and then hook me up to township water. I like my
17 well water.

18 But I came tonight, for the record, I am
19 concerned about anything happening to my well that I
20 can't use that that I've had 46 years and I want that on
21 the record. Thank you.

22 MR. YOUNG: What we were talking before about Jim's
23 got the twelve parts per million in the water; now, if
24 they come along and test all Kirk Road and Newtown Road
25 and say I got ten parts per million, my next-door

11

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

neighbor here, he's got 15 parts per million, that problem's not going to be resolved in one day. What are you going to do about that if there is that much of a contaminant problem? Are we still supposed to bathe in that water and still drink it? You know, we're just dying. What's going to be done about that?

MR. OSTRAUSKAS: As I stated earlier, the Navy is obligated to respond in this case the same way the EPA would. If the contaminant levels you're describing were actually in your water, the EPA would respond probably within two days providing bottled water and within a week, provide you with treatment for your full water supply. So we would expect in any case if the Navy encounters that situation, they would respond the same way.

MR. YOUNG: She's saying she did call before. See, I'm a new resident in this area. She's had this problem for a while.

MR. OSTRAUSKAS: Again, if after the meeting if I could take down your phone number, your name and what I'd like to do is discuss the information you have, take a look at it in the actual hard copies of data that you have and you can provide that both to the EPA and the Navy and certainly a role that the EPA has here is to assure that the Navy basically does what the law requires

11 1 them to do. And in the event that the Navy does not do
2 what the law requires them to do, the EPA can step in
3 and basically do what's necessary. But obviously, we
4 don't want to get into that situation. But that's our
5 role basically to advise the Navy that under these
6 circumstances, this is how the EPA would respond and so
7 far, the Navy has responded as we would.

8 MR. YOUNG: Is the Navy going to pay for the
9 testing of all this stuff?

10 MR. OSTRAUSKAS: That's right.

11 UNIDENTIFIED SPEAKER: I reside at 621 Jefferson
12 Avenue, Warminster. I can understand these people's
13 concerns about their private wells and they have a real
14 concern about it, but I haven't heard you mention one
15 thing about this material and removing it. I would think
16 that you want to remove the material first before you go
17 into doing all this stuff to the water and the expense of
18 cleaning it.

19 Now, if you're going to put more wells down,
20 a lot of these people -- I heard numbers they're, 66 feet
21 from you. If you put 19 wells down in one area and 26
22 down in another area, you're going to draw a lot of water
23 in there. My concern is remove the materials and then
24 it'll stop leaking. Now, youse made studies because I
25 read the report on where all these here contaminations

12 1 are and on this site. Now, the biggest ones are A and B.
2 You know how deep we are, you know
3 approximately how long we are, remove the materials, get
4 rid of the materials and then do something about the
5 water. If you start drilling wells here, who is to say
6 you're not going to fracture more of the ground and put
7 more of this contaminated water down? The material's
8 still there. I don't understand that. Would you explain
9 it to me?

10 MR. OSTRAUSKAS: The sampling today at these waste
11 sites has not identified elevated levels of TCE, the main
12 contaminants of concern in this case in the soil. At
13 this point, there is no specific soil we know of that has
14 to be removed. Apparently, what may have happened is,
15 years ago spill incidents of some sort, basically the TCE
16 being a so-called DNAPL or sinker system, went down
17 through the soil into the groundwater into the bedrock.
18 At this point, the available data suggested that's what
19 happened and as a result, you're just simply not seeing
20 elevated levels of TCE, for example, in the surface soil.

21 UNIDENTIFIED SPEAKER: You still didn't answer my
22 question. The contaminants are there.

23 MR. OSTRAUSKAS: No, what I'm saying is they're not
24 there. As an example, again, the TCE has migrated from
25 the surface soil down into the groundwater. There is no

12

1 obvious source of TCE to remove in terms of contaminated
2 soil.

3 UNIDENTIFIED SPEAKER: Well, I can't believe that.

4 MR. OSTRAUSKAS: At least based on available data,
5 it simply hasn't been found.

6 MR. PICKFORD: I watched them plant 55-gallon drums
7 on Kirk Road where they dug the holes. That young man
8 saw them, too. Now, we don't know what was in them, they
9 didn't have it written on them.

10 UNIDENTIFIED SPEAKER: They had suits on. The guys
11 putting them in the ground had Gumby suits on, but it was
12 safe?

13 MR. TEAMERSON: I can fairly quickly answer that.
14 What we use for the installation of wells is for --

15 MR. PICKFORD: No-no-no. They were burying drums,
16 55-gallon drums. They dug slits, lowered them in and
17 covered them up. Went another 20 yards and dug another
18 slit, put the drums in and covered them up. It was right
19 around dark they did this. I don't know why they did it
20 that way, you couldn't see very well.

21 MRS. PICKFORD: If you don't know where they are,
22 we'll be glad to show you.

23 UNIDENTIFIED SPEAKER: It used to be a gully.
24 They had a nice little drainage ditch there, then about
25 three years later, it was a nice smooth plot of grass

12 1 filled right out.

2 MR. MONACO: I'd like to say one of the positive
3 things that we see coming out of this meeting is your
4 feedback. It's good to hear that there's a lot of
5 concerns about wells because we had spent, I would say, a
6 relatively long amount of time in trying to get
7 information regarding these wells, having a lot of people
8 come out tonight saying that we have these problems and
9 will you be able to give us information regarding the
10 well, the woman up here said how deep her wells is,
11 that's been one of our problems, to find out how deep the
12 wells are.

13 If people have, for whatever reason, have
14 contamination levels that they've had some kind of
15 sampling done, I'm certainly interested in getting that
16 information. If you can make that information available
17 to us, that will only expedite our own process because
18 it's been a little bit painful not only in trying to
19 assess the situation as to who is still on well water and
20 where they live, but even to the point of access, trying
21 to reach the residents. We realize a lot of people are
22 not home during the day and they don't appreciate being
23 contacted at night for whatever reason. But if we
24 establish some kind of contact and if you feel
25 comfortable in coming right to me at Northern Division,

12 1 you can do that. If you want to write to the Center, our
2 public affairs is the person you contact. I believe
3 there are some phone numbers on the information that you
4 picked up tonight. So I would encourage you in talking
5 to your neighbors in making as much information available
6 as you can to us, it will only help our investigation.

7 What I'd like to say, before we take any more
8 questions, it is getting a little bit late for some of
9 us. If we can cut it down to another two or three
10 questions and we encourage you to provide any other
11 question that you might have that you couldn't verbalize,
12 write them down and they will surely become part of the
13 record tonight.

14 UNIDENTIFIED SPEAKER: My name is Bill (inaudible).
15 I'm a member of the township as well as the township's
16 subcommittee. I have a comment, not a question and just
17 basically, I'd like to tell the people that are still
18 here that this meeting -- this is a personal observation
19 or opinion -- I think it's obvious that what we've seen
20 is how ill-prepared you are. It has nothing to do about
21 the ultimate cleanup of the Superfund site at the
22 facility, absolutely none. This meeting is another
23 checkmark on the list for the Navy to comply with the
24 base closure that was passed by Congress.

25 Once they have this public hearing, they get

13

1 their Record of Decision, the Navy is going to move out
2 of this base, this township, this county and Montgomery
3 County is going to be left with eight Superfund sites
4 that will not be cleaned up for the next 30 years. Cut
5 and dried. Cut and dried, gentlemen. If you honestly,
6 honestly, wanted to effect the cleanup at this base, you
7 would have never walked in here tonight the way that you
8 did. You don't have answers for the private citizens
9 that are here, nonetheless, the paid professionals that
10 the community's brought here just in case we got into the
11 technical aspects of this.

12 For two years I've been listening to smoke.
13 I was hoping for a little bit more tonight on an issue
14 that's as serious as this is that directly affects the
15 health and welfare of residents in this community and
16 you're doing the same doggone thing you've done for the
17 last two years. Again, that's my opinion. (Applause).

18 Just one other comment. I hope that
19 everybody that's sitting here tells their neighbors to do
20 the same thing and I'm sorry they've left. The only way
21 that we're going to effectively get any type of cleanup
22 on this base is going through our elected officials.
23 They've got to change the legislation that oversees the
24 base realignment closures. Absolutely. You people
25 should not be able to leave this base until it's fully

13 1 cleaned up for these communities. Positively.

2 I am really distressed to see the members of
3 the EPA sitting here and hearing the tone at which you're
4 talking. I went to Newport, Rhode Island, 18 months ago
5 to a conference on these closures. One of the things
6 that made me happy was that the EPA was not welcome
7 there. What makes me sad tonight is how user-friendly
8 you now are with the Department of Navy. You're supposed
9 to be an independent, autonomous organization that's
10 looking out for our welfare. I will make sure Mr.
11 Greenwood and Senator Wofford and Senator Spector hears
12 it tomorrow. Absolutely.

13 MR. KELLY: My name is Norm Kelly. K-E-L-L-Y. I
14 live at 17 Lincoln Avenue, Ivyland. That's that loving
15 little borough on the other side of the fences you hear
16 them talking about tonight. We are very much concerned
17 about the pollutants -- contaminants we have been hearing
18 about. Tonight, from Ivyland, we have had listening, the
19 president of borough council, the vice president of
20 borough council, a member at large of borough council who
21 is also a subcommittee member of the county and I, at the
22 moment at least, am lucky enough to be the mayor of that
23 little borough.

24 Three of us are positive in what we would
25 like to say, one of those members wants to do a little

13 1 more reading before he decides whether he likes
2 Alternative 1, 2 or 3. Since we are elected officials
3 and speak for the people of the community, we would like
4 to go on record. Now this is definitely the three of us.
5 The one that can't make up his mind has got some small
6 reading to do. We definitely want to go on record as not
7 being in favor of 3, but definitely supporting Warminster
8 in favor of Alternative Number 2 and that is an
9 afterthought.

10 I never thought about it until I sat here
11 tonight and listened to these things. Am I going to
12 sleep well tonight? I don't know, because for the first
13 time since I've had cancer, which is now a few years, I
14 never gave thought to what it might have come from. It's
15 possible it might have been something to do with the
16 water I have been drinking for the last 40 years. I
17 hope it has nothing to do with it, but it has given me
18 something to think about.

19 MS. LINCOLN: My name is Eleanor Lincoln. I live
20 at 923 (inaudible) Lane, Warminster. I have collected
21 articles since 1986 when the Navy has repeatedly denied
22 there was any pollution or contamination from the Navy.
23 Every time it was brought up, every argument I've had
24 from Congressmen that have written, called, sent me
25 articles, there is no contamination from the Navy base

13 1 and I wonder now if they weren't leaving, if they would
2 still be denying it. They're admitting it now because
3 they're leaving. And I think they're going to leave us
4 with their dirt.

5 MR. MONACO: Can we have one more question and then
6 M.J. has another letter that she needs to read just for
7 the record.

8 UNIDENTIFIED SPEAKER: Yes. I think if you can't
9 hear from all the residents of this township that you
10 should hold another meeting because we have a lot of
11 people who wanted to be here, but were not able to make
14 12 it. And I am really disgusted with what I'm hearing down
13 there tonight. I think all of you should be ashamed of
14 yourselves. The EPA should be particularly ashamed of
15 himself.

16 If I had chemicals leaking from my property,
17 you would definitely go and investigate surrounding
18 properties and you would hold me liable. I'm hearing
19 from the Navy and people who have their wells
20 contaminated, people who are telling you your water is
21 going onto their property, you want them to come to you
22 and give you that information. It's not their job to
23 come to you. You have been awarded a Superfund. You
24 have \$13 million plus. You only have thousands of
25 dollars to use. You're sitting there, you're lying out

14

1 the side of your mouth to these people who have
2 contamination. You aren't going to do any super thing
3 and do cleanup just like that.

4 The base is closing. You didn't want to hear
5 about the base closing. I'm going to use it in reference
6 to what's happening here. I think they're closing the
7 base and they're tiptoeing out of town. They've done a
8 minimum amount of testing and they're trying to snow us.
9 How in the world can you take and clean up, by airing
10 that stuff out into the air, and clean the water? The
11 ground is contaminated. If you do not clean the ground,
12 that will be there for years to come and you will be
13 gone, leaving Warminster to hold the bag. As councilmen
14 mentioned here, it's a serious thing.

15 We have men and women in the military who went out
16 to fight for our rights and to save our land so that we
17 could walk in freedom and now the base is leaving us and
18 trying to kill the residents of Warminster with deadly
19 toxins and not caring what's happening to the future of
20 Warminster. They don't care if the people die of cancer
21 because you are not thoroughly investigating the
22 surrounding land, you are not thoroughly investigating
23 the base, you are not digging deep enough and you're just
24 making light of this because it's costly. It's very
25 important that you spend that money wisely and clean this

14 1 base up, not waste our tax dollars and not try to snow us
2 all in because we are not fools here in Warminster or
3 the surrounding areas, we are not fools. So don't think
4 for one minute -- it seems like your issue here is do we
5 want Choice 1, 2 or 3. It doesn't matter if we have 1, 2
6 or 3. That's not what this meeting's about. The meeting
7 is about cleaning up and making the residents safe just
8 like the military was intending to do, to protect us, not
9 to sneak out of town, try to fool us.

10 I personally have members who have died of
11 cancer. It is no joke. And these people deserve to be
12 treated properly and not be badgered and snowed in. And
13 I hope the EPA will come forward and straighten
14 themselves out instead of being shameful and sitting
15 there and telling us some lies and protecting the Navy
16 because they would not do this if it was my house. They
17 would thoroughly investigate and you owe the same
18 courtesy to the residents of this township to thoroughly
19 investigate the grounds of the Navy and clean it up.
20 Thank you.

21 MR. MONACO: M.J.?

22 MS. JADICK: Mr. (inaudible) had originally said
23 that this letter can be submitted as part of public
24 record and he did not feel that he was given an
25 opportunity to speak. So he had asked me if I would read

14 1 it before he left -- he asked me before he left if I'd
2 read it and I said, "Yes."

3 So from Joseph Butch at the Warminster
4 Municipality. "Subject: Proposed plan to address
5 groundwater in overburden and shallow bedrock.

6 "Dear Ms. Jadick: Inasmuch as it is
7 highly unlikely that anyone from the Warminster
8 Municipal Authority will be able to attend
9 your public meeting scheduled for May 10th,
10 1993, we are submitting our written comments
11 and request this letter be entered into the
12 official record and that it be read at the
13 public meeting.

14 "The proposed plan, which was
15 distributed for review and comment indicates
16 that at this time the Navy and the United
17 States Environmental Protection Agency have
18 selected Alternative 3 as the preferred
19 alternative. Your publication states that
20 the treatment would be utilized to reduce the
21 volume and toxicity of the contaminants in
22 the groundwater prior to discharge to either
23 the NAWC Warminster Wastewater Treatment Plant
24 or a publicly-owned treatment works. We
25 question how the Navy and the United States

14 1 EPA can list this as a viable alternative when,
2 to the best of our knowledge, no publicly-owned
3 treatment works has agreed to receive this
4 contaminated water into its system for
5 treatment. The Warminster Municipal Authority
6 wastewater treatment plant does not have
7 capacity available or allocated to a use such
8 as this. No request has ever been made of the
9 Warminster Municipal Authority to consider the
10 possible receipt of this water for treatment.

11 "Warminster Municipal Authority is strongly
12 opposed to Alternative 3 unless the Navy plans to
13 keep its wastewater treatment plant in
14 operation for as long as is necessary to complete
15 the cleanup of the contaminated water in the
16 overburden and shallow bedrock. In the event
17 that the Navy proposes to close its
18 wastewater treatment plant, to the best of our
19 knowledge and belief, there is no publicly-owned
20 treatment works which can assume the
21 responsibility of accepting the contaminated
22 water for treatment.

23 "Alternative 1, the quote, 'no action,'
24 unquote, alternative is not acceptable. Under
25 this alternative no remedial action would be

15

1 taken to treat the contaminated water in the
2 overburden and shallow bedrock aquifers.
3 Additional studies would be done for some
4 long, undefined period of time. Studies
5 have been ongoing for four years already
6 and the time for appropriate action is long
7 past due.

8 "Alternative 2, in our opinion, is the
9 only viable alternative that has been proposed.
10 Under this alternative, contaminated
11 groundwater would be extracted using a series
12 of extraction wells. The contaminated
13 groundwater would be pumped to an on-site
14 treatment system constructed to properly treat
15 the contaminated groundwater. Treatment would
16 include air stripping and carbon adsorption.
17 Air emissions would be treated by vapor-phase
18 carbon adsorption as necessary. Metals in the
19 water would be removed via precipitation and
20 filtration. The plant would be designed and
21 operated so as to comply with the national
22 pollutant discharge elimination system, NPDES,
23 requirements. The treated water would
24 then be discharged to an unnamed tributary
25 of the Little Neshaminy creek as the Navy

15

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

discharges the treated effluent from its existing wastewater treatment plant.

Alternative 2 represents the only complete, adequate system proposed in your plan. Under Alternative 2, the proposed treatment would be adequate so that the treated effluent that would be dischargeable to the creek. It is the only alternative that provides a complete solution by the U.S. Navy which caused the contamination which now exists.

"The removal and treatment of the contaminated groundwater in the overburden and shallow bedrock should be started as soon as possible. Complete treatment, as described in Alternative 2, should be the method used. At the same time, additional studies necessary to identify the full nature and extent of contaminated groundwater in overburden and shallow bedrock aquifers should be conducted. In addition, examinations into the remediation of the contamination in the deep aquifers should also be thoroughly studied. Additional studies should be conducted to determine the best methods of contaminated soils and the elimination of potential air-pollution problems.

15 1 "Studies should be continued to effect a
2 total remediation of the site. As quickly as
3 possible, appropriate action should be
4 implemented.

5 "Navy Department activities, over a long
6 period of time, have resulted in the
7 contaminations which exist in and around the
8 Naval Air Warfare Center site. The
9 federal government and the United States Navy
10 Department should take whatever action is
11 necessary and appropriate to restore the site to a
12 safe, nonhazardous condition. It should not be
13 the responsibility of Warminster Township, the
14 Warminster Municipal Authority, Southampton
15 Township or Northampton Township to clean up
16 the mess created by the United States Navy.
17 The only acceptable plan of action is that
18 which will require the United States Navy to
19 perform a total cleanup and remediation of the
20 site. Alternatives 1 and 3 are not acceptable
21 to the Warminster Municipal Authority.
22 Alternative 2 is the only viable acceptable
23 alternative.

24 "We urge the United States Navy to stop
25 its stall tactics and move forward with

15

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

immediate decisive action to restore this site
to a safe condition.

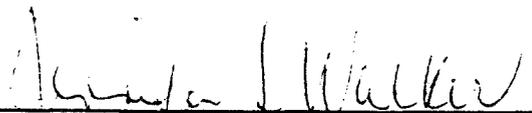
"Very truly yours, Joseph Butch, General
Manager."

With that, ladies and gentlemen, I would like to
thank you all for coming. That concludes the meeting.

(Hearing concluded at 11:00 p.m.)

C E R T I F I C A T E

I hereby certify that the proceedings taken by me to the best of my ability, capability and understanding are contained herein and that the foregoing is a transcript of the same.



Jennifer S. Walker
Court Reporter and Notary Public