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PUBLIC MEETING FOR PROPOSED PLAN

SITE 8

PERIMETER ROAD DISPOSAL SITE

NAVAL AIR STATION, BRUNSWICK

October 15, 1992

7:00 p.m.

Head Table:

JIM CARUTHERS, NASB, Environmental Project Manager

COMMANDER TOM BRUBAKER, NASB, Public Works Officer

CAPTAIN BOB RACHOR, NASB, Commanding Officer

BETH WALTER, ABB Environmental Services, Environmental Engineer

JIM SHAFER, Navy Facilities Engineering Command, Northern Division, Philadelphia, PA, Project Manager

MEGHAN CASSIDY, US EPA, Project Manager

MARK HYLAND, Commissioner's Office, Maine Department of Environmental Protection

Debra M. Joyce, RPR  
Court Reporter

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PROCEEDINGS

MR. RACHOR: Good evening all. Welcome to our public meeting to discuss the Department of the Navy's proposed plan for remediation of the Perimeter Road Disposal Site, also known as Site 8, aboard the Naval Air Station here at Brunswick.

I'm Captain Bob Rachor. I reported as commanding officer of the naval station in mid August. And as the new commanding officer, I want to assure you that I will continue to work the issues regarding site cleanup of the air station just as hard as my predecessors have.

The installation and restoration program has been a high priority at the Department of Defense and Department of the Navy, and many here have contributed greatly to the progress made to date in studying the planned solutions to remediate all the identified sites.

As many of you know, we are poised to start the physical cleanup on a number of those sites. As commanding officer of the air station I am additionally responsible for compliance with all environmental laws and regulations pertaining to the activities at the air station. And we will continue to fulfill our

1 responsibilities under these laws and keep faith with  
2 the community in preserving and protecting the  
3 environment in which we live.

4 Tonight we are here to discuss Site 8. Our  
5 ability to address the cleanup in discrete packages has  
6 been a key factor in our ability to move forward  
7 quickly and obtain funding. We will, therefore, keep  
8 focused on Site 8 this evening.

9 If you have questions regarding other aspects of  
10 the installation restoration program, please hold those  
11 questions until the basic meeting has concluded. Our  
12 personnel will be available to you after the meeting to  
13 answer any additional questions you may have.

14 Please be advised that this evening's proceedings  
15 are being both transcribed by a stenographer and  
16 videotape to ensure a record of the meeting. This will  
17 ensure we will be able to provide the best possible  
18 response to any questions you have and that we have an  
19 accurate record of your comments.

20 And for a few introductions, with us tonight are  
21 participants from several involved organizations, and  
22 many of you already know who they are, nevertheless, I  
23 will introduce them.

24 From the U.S. Environmental Protection Agency,  
25 Miss Meghan Cassidy, who has been with this project for

1 many years. From the Maine Department of Environmental  
2 Protection, Mr. Mark Hyland with the Commissioner's  
3 Office. From the Northern Division of the Navy's  
4 Facilities Engineering Command, Mr. Jim Shafer, who has  
5 guided this project for the past two years. Jim worked  
6 very closely with the EPA, DEP and our environmental  
7 contractor ABB Environmental Services of Portland. And  
8 from ABBES, Mr. Bill Webber, who will present the plans  
9 for Site 8. Also from the ABB, Miss Beth Walter, who  
10 will discuss the plans for remedial action. There are  
11 also two gentlemen from the Naval Air Station staff.  
12 Commander Tom Brubaker to my right is a civil  
13 engineering corps officer who has recently reported for  
14 duty as a public works officer, and  
15 Mr. Jim Caruthers is our officer for the IRP.

16 So I'd like to thank you for coming this evening,  
17 and I take this time to introduce Mr. Jim Shafer from  
18 the Northern Division of the Naval Facilities  
19 Engineering Command. Jim?

20 MR. SHAFER: Thank you, Captain. Does everybody  
21 have a copy of the handout that we have available at  
22 the back of the room? If you don't, you can -- Mike  
23 L'Abbe would be happy to give you one.

24 In the handout there's a copy of all the view  
25 graphs you will see tonight. Also there's a glossary

1 in the back of that handout. Hopefully we'll use words  
2 that you're familiar with. Every now and then we slip  
3 and use an acronym. Those acronyms are defined in the  
4 back of the handout.

5 Also in the front of the handout -- sorry, you  
6 can't hear?

7 In the front of the handout there's a copy of  
8 today's agenda, which is shown on the screen.

9 Tonight's presentation will last approximately 40  
10 minutes. I'll start out by giving an overview of the  
11 installation restoration program, which is a fancy term  
12 for the Navy's cleanup process for the hazard waste  
13 sites for the Naval Air Station at Brunswick, Maine.

14 Tonight's presentation will focus on Site 8. When  
15 the presentation is concluded, we would like you to  
16 limit your comments to Site 8. After the formal  
17 presentation concludes tonight, after the formal public  
18 comment period -- I'm sorry -- after the question and  
19 answer period if any anybody would like to, they can  
20 come up here and ask us any other questions they would  
21 like to talk about, any other environmental issues.  
22 But we we ask you to limit your comments tonight to  
23 Site 8.

24 Therefore, I'm done with my overview of the Navy  
25 cleanup process. Beth Walter from ABB Environmental

1 Services, the Navy's consultant, will give the  
2 technical presentation. That will last approximately  
3 30 minutes. After she's finished with her  
4 presentation, we can take a ten-minute break, or if  
5 you'd like, we can go directly into questions and  
6 comments. I'll give you that opportunity at that  
7 time.

8 As you can see, there's distinct steps in the  
9 general remedial investigation, feasibility study,  
10 Record of Decision process. This is the cleanup  
11 process, cleanup program that the Navy uses. It's  
12 modled after the EPA's program.

13 During the earlier portion of our program we  
14 conducted remedial investigations. This is the part of  
15 the program where we installed soil borings, took soil  
16 samples, we installed monitoring wells, we took  
17 groundwater samples.

18 AUDIENCE MEMBER: Could you use the microphone?

19 MR. SHAFER: Sure. Is this any better now? Any  
20 better? Okay.

21 So during the earlier part of our program the real  
22 investigations when we did a lot of sample analysis,  
23 this is the part of the program where we identify the  
24 types of contamination and the distribution of  
25 contamination. We call this characterizing the site.

1           During our remedial investigations we also conduct  
2 risk assessments. Risk assessments evaluate potential  
3 hazards to human health and the environment, and it  
4 also helps us to evaluate different remedial  
5 technologies to cleanup our sites.

6           This brings us into the feasibility study phase  
7 where we do a detailed analysis of each one of these  
8 alternatives.

9           After the feasibility study phase is done we then  
10 move into the remedial design, remedial action phase.  
11 That's where we're at today. This is a critical  
12 turning point in our program. We're moving from the  
13 investigative part of our program into the remedial  
14 action part of our program. The process that links  
15 those two portions of the program is called the Record  
16 of Decision process, and that's where we're at today.

17           The process for the Record of Decision has  
18 distinct steps in it. The first part, the Navy  
19 prepares a proposed plan. This plan is written for  
20 you, the public. The plan summarizes the findings, the  
21 remedial investigation, the feasibility study, and it  
22 explains the proposed remedial alternative that the  
23 Navy would like to use to cleanup the site. It's a  
24 proposal at this point. It also explains the other  
25 alternatives that the Navy evaluated.

1           This plan was developed in consultation with the  
2 United States Environmental Protection Agency Region 1  
3 and the Maine Department of Environmental Protection.  
4 It was also developed in consultation with our  
5 technical review committee.

6           Our technical review committee consists of members  
7 from the regulatory agencies, it also consists of  
8 members from the Brunswick Area Of Citizens For A Safe  
9 Environment, a citizens' group, citizens from the Town  
10 of Brunswick, the Town of Topsham and Harpswell are  
11 also represented on that committee. We have a member  
12 from the water district that sits on that committee.  
13 We meet quarterly, and their comments are reflected in  
14 this proposed plan.

15           When the proposed plan was completed, it was  
16 placed in the administrative library in the Curtis  
17 Memorial Library. Newspaper notification announcing  
18 the availability of this proposed plan was published on  
19 October the 2nd. The proposed plan was put in the  
20 administrative library -- Curtis Memorial Library on  
21 October the 1st.

22           We're required to hold a minimum of a 30-day  
23 public comment period. That public comment period will  
24 run from October the 2nd until October the 31st. We  
25 welcome your comments and we look forward to your

1        comments during the public comment period and also  
2        tonight. We will not make a final decision on which  
3        remedy to implement until we hear your comments.

4                After the comment period is completed the Navy  
5        then starts its final decision making process, and that  
6        process is the Record of Decision itself. Part of  
7        Record of Decision is the response to this summary. We  
8        will identify all of the comments we receive tonight  
9        and all the comments that we receive in writing or  
10       whatever means during the public comment period. There  
11       will also be a response to all of those comments. That  
12       will be included in the Record of Decision. The Record  
13       of Decision then serves as a legal document. It will  
14       certify that the Navy carried out their program in  
15       compliance with all statutory requirements and  
16       regulatory agency guidelines. And it also serves as  
17       the source of information for the public, because it  
18       will explain the rationale for the Navy making its  
19       final decision.

20               Once the United States Environmental Protection  
21       Agency Region 1 signs the Record of Decision, it is  
22       then placed in the administrative record and will be  
23       available for review at the Curtis Memorial Library.  
24       We will announce its review. There will be a newspaper  
25       notification.

1           The final step in our program after the ROD is  
2 done is the remedial design, remedial action; but most  
3 importantly is this last block here, long term  
4 monitoring and operation. Once we've implemented our  
5 remedial action we're not done. We are required to  
6 prepare operational maintenance plans to ensure the  
7 system's maintained properly, that routine maintenance  
8 is carried out properly. We're also required to  
9 prepare long-term monitoring plans.

10           The purpose of the long-term monitoring plan is to  
11 ensure that the remedial action performs according to  
12 the performance requirements stated in the Record of  
13 Decision. The monitoring can go on for many years. As  
14 a minimum after five years we will reevaluate the data,  
15 make a determination if there's any added risk, if the  
16 remedial action is performing the way we intended it  
17 to. If it's not, we are prepared to make adjustments  
18 to that remedial action. That includes the  
19 installation and restoration program process.

20           At this point in time I'd like to turn over to  
21 Beth Walter from ABB Environmental Services, and she  
22 will give you a technical presentation.

23           Thank you.

24           MS. WALTER: Thank you, Jim. My name is Beth  
25 Walter, and I'm a scientist with ABB. I've been

1 working on the Brunswick projects, specifically Site 8,  
2 since 1989. And what I'd like to do today is to  
3 review -- provide a little bit of the background  
4 information on the remedial investigation and the  
5 feasibility study that was conducted over the last  
6 three years.

7 I want to emphasize that the reports that I  
8 reference are all in the administrative record, which  
9 is located at the Curtis Memorial Library. Those  
10 reports go into much more detail than I'm going to go  
11 into tonight. And, in addition, as Jim mentioned,  
12 there is a glossary at the end of your handouts to help  
13 assist in some -- in defining some of the terms that I  
14 may inadvertently use.

15 But basically the process that we've been  
16 undergoing over the last three years include the  
17 remedial investigation at Site 8, the purpose of which  
18 is to determine the type and distribution of  
19 contamination at the site.

20 Once the remedial investigation was done we  
21 conducted a risk assessment to evaluate potential risks  
22 to both human health and the environment.

23 The results of the RI, or the remedial  
24 investigation, and the risk assessment were turned over  
25 to the engineers who conducted a feasibility study, and

1 that evaluates the different actions that can be taken  
2 at Site 8 to minimize the risks that were identified.  
3 And after the feasibility study comes the proposed  
4 plan, which is where we're at tonight, where we come  
5 today to present to you what the Navy's preferred  
6 alternative is and provide an opportunity for the  
7 public to comment.

8 Site 8, also known as the Perimeter Road Disposal  
9 Site, is a small site located on the northern portion  
10 of the base right near Route 24. It is reportedly used  
11 to dispose of trash, rubble and debris, and it has two  
12 small intermittent streams that border the site that  
13 eventually merge together and flow towards the  
14 Androscoggin River, which is located approximately  
15 1,800 feet north of the site.

16 Since 1989 we've conducted numerous investigations  
17 at Site 8, and they include qualitative evaluations  
18 just to try and determine whether or not there were any  
19 disposal areas at Site 8 to determine whether or not  
20 there may be contamination present all the way down to  
21 very quantitative analyses of samples from the  
22 groundwater, the sediments, the surface water at Site 8  
23 to identify any contaminants that may be present.

24 The summary of our evaluation is contained in that  
25 remedial investigation report and briefly summarized

1 here.

2 Polyaromatic hydrocarbons, or PAHs, were the main  
3 contaminants that were detected in the soils and  
4 sediments at Site 8. Polyaromatic hydrocarbons are a  
5 group of compounds that result from incomplete  
6 combustion. They result from automobile exhaust, plane  
7 exhaust, and they're very common contaminants that we  
8 see in urbanized areas that have been affected by  
9 surface runoff. They're also a constituent or they're  
10 also a component of asphalt, and asphalt was one type  
11 of construction rubble that we did locate and identify  
12 at Site 8.

13 DDT -- the pesticide DDT was also detected in one  
14 of the 19 soil samples that we collected at Site 8 and  
15 one of three leachate locations at Site 8. The  
16 concentrations that we detected were very low, less  
17 than a half of a part per million. And these are  
18 consistent with what we would expect to see, the  
19 residual or leftover concentrations of DDT due to its  
20 widespread use in the late '60s and early '70s.

21 There was one sample where we detected one PCB  
22 analysis at Site 8. We've gone back and sampled that  
23 location and have not seen any more -- or presence of  
24 PCBs since that one sampling time.

25 We also found elevated concentrations of inorganic

1 metals in the surface water of those two small streams  
2 that I mentioned. Inorganic metals are naturally  
3 occurring in surface waters, but we detected these  
4 metals at concentrations that were higher than expected  
5 background levels.

6 We also detected the same inorganic metals in the  
7 groundwater beneath Site 8, but they were sporadically  
8 and inconsistently detected, and we didn't see any sort  
9 of trend or identify any area of gross contamination.

10 I will mention that we did find one metal,  
11 cadmium, that was detected above its drinking water  
12 standard or it's MCL, maximum contaminated level.

13 Overall what we were able to show based on the  
14 results of the remedial investigation, we did not  
15 detect any volatile organic contamination in any of the  
16 media.

17 It had been reported that perhaps solvents and  
18 paint thinners may have been disposed of at Site 8.  
19 And the remedial investigation results did not show the  
20 presence of any of those constituents.

21 We did not identify any source areas of trash or  
22 hot spot locations of elevated contamination. The only  
23 thing that was detected out at Site 8 during our  
24 investigations were construction debris, large pieces  
25 of asphalt and concrete and other types of rubble,

1 which we normally attribute to construction debris  
2 landfill.

3 And some of the investigations I will point out  
4 were invasive type investigations. We went out there  
5 and actually dug test pits or holes into the ground so  
6 that we could see what was beneath the ground surface.

7 We also determined based on public comments that  
8 we had received at a meeting there was concern about  
9 the possible groundwater link between Site 8 and the  
10 Jordan Avenue wellfields. Our determination is that  
11 there is no hydraulic link between Site 8 and the  
12 Jordan Avenue wellfields.

13 The groundwater beneath Site 8 discharges into  
14 those two small streams and then flows towards the  
15 Androscoggin River. It does not migrate towards the  
16 wellfields.

17 The other piece of information which we learned  
18 was that there is no transport of the soil contaminants  
19 that we saw, those PAHs and the DDTs, from the soil  
20 into the groundwater. So we're not seeing any of the  
21 chemicals migrating from the soils beneath Site 8 into  
22 the groundwater subsequently discharging to the surface  
23 water and going towards the Androscoggin.

24 After the results of the remedial investigation  
25 were known, we conducted a risk assessment. And a risk

1 assessment is conducted at all Superfund sites and is  
2 conducted in accordance with the guidance that's  
3 prepared by the US EPA. And the purpose for doing a  
4 risk assessment is to identify what both the current  
5 and future potential risks may be due to the  
6 contamination that was detected at the site.

7 Based on that information we're able to determine  
8 if there is a need for and what the possible extent of  
9 cleanup actions may be. We also use results of the  
10 risk assessment when we develop our alternatives. We  
11 can evaluate each alternative against the potential  
12 risks to make sure that we are seeing some sort of  
13 benefit from any action that is taken and also want to  
14 identify any possible adverse impact that may be  
15 caused.

16 I'm going to briefly go over the risk assessment  
17 process. And, again, this is explained in a lot more  
18 detail in these reports. And if you have any questions  
19 and you'd like to know a little bit more about the  
20 exact process that I went through, I'd be happy to  
21 answer questions.

22 But risk as we define it here is really a function  
23 of two things: exposure to a contaminant and then how  
24 hazardous or toxic that contaminant is. So it's very  
25 important to evaluate both aspects of this equation.

1           The routes of exposure or the ways that we felt  
2 people may be exposed to the chemicals detected at Site  
3 8 were through the ingestion of groundwater, coming  
4 into direct contact with the soils and sediments,  
5 inadvertently ingesting soils and sediments and coming  
6 into contact with the surface water.

7           And I want to stress that we look at this both  
8 under current land use and we also are required to  
9 evaluate the same exposures assuming a future  
10 scenario. And EPA likes to evaluate that future  
11 scenario assuming a very conservative exposure  
12 condition whereby the site is converted for residential  
13 land use.

14           The second part of the risk evaluation involves  
15 the evaluation of the hazard. It's what type of toxic  
16 effect are we concerned about? Is it a  
17 non-cancer-causing contaminant that's present or is it  
18 a cancer-causing contaminant that we have present? And  
19 we were also able to look at the dose response  
20 evaluation, which is a quantitative measure of  
21 exposure, various exposure doses, and what type of  
22 toxic effects those doses may cause. And these are  
23 often converted into the standards and the criteria and  
24 the health base guidelines that the scientific  
25 community develops and EPA adopts and that are often

1 times used as state drinking water standards and the  
2 like. And we're able to use that information to  
3 provide a numerical or quantitative estimate of our  
4 risk.

5 As I mentioned, we're concerned with two  
6 distinctly different types of toxic end points: those  
7 that do not cause cancer, and then those that do cause  
8 cancer. And the agency has two quite different stands  
9 on these effects.

10 The non-cancer-causing effects are believed to be  
11 chemicals that have a threshold value, that there's a  
12 level, a safe level below which exposure occurs no  
13 adverse effect would occur.

14 Unlike non-cancer effects, carcinogen effects are  
15 conservatively evaluated assuming that any exposure  
16 results in some incremental risk.

17 And the way we're able to come up with risk  
18 estimates is for the non-cancer risks where we have a  
19 threshold value that we believe provides an acceptable  
20 level of safety is used. The criteria value in this  
21 example is just compared to the exposure dose that  
22 we've estimated.

23 The exposure through the ingestion of groundwater,  
24 we're able to assume that a person may drink two liters  
25 of water a day and how much contaminant might be in

1 that two liters. We're able to quantify that exposure  
2 and compare it to a criteria value. And then it's a  
3 simple ratio. And we compare that ratio to a value of  
4 one. Anything greater than one is cause for concern.

5 Carcinogenic risks, however, are evaluated as an  
6 increased probability; because we're making the  
7 assumption that any exposure has some finite risk.  
8 It's evaluated as an increased probability and is  
9 expressed in scientific notation. And what this means  
10 is, in this example a 2 times 10 to the minus 5 risk  
11 implies that based on the exposure conditions that  
12 we've identified, the incremental risk to that person  
13 based on a lifetime exposure as we have identified is 2  
14 times 10 to the minus 5. And to convert it to a  
15 population type effect would mean two people in a  
16 population of 100,000 may be at risk of developing  
17 cancer.

18 We can evaluate the risk numbers that we calculate  
19 to determine the need for remedial actions using  
20 guidelines that EPA has developed. And, as I mentioned  
21 with non-carcinogenic risks, you really just look at  
22 the ratio that was developed, the hazard index, which  
23 is just your comparison of your exposure dose to your  
24 standard value. If it's larger than one, it implies  
25 that a person is receiving more of an exposure than is

1 considered safe. And under those conditions we would  
2 consider cleanup actions to reduce those risks.

3 Now, for carcinogenic risks -- because exposure to  
4 any level causes some finite level of risk -- EPA has  
5 developed a risk range which they use and have used at  
6 Brunswick and they use pretty much at all other Circle  
7 or Superfund sites to determine the need for corrective  
8 action or cleanup. And that risk ranges from 1 times  
9 10 to the minus 4 to 1 times 10 to the minus 6. Very  
10 small numbers. One in 10,000 to one in a million.

11 So what did we find at Site 8? We evaluated the  
12 ingestion of groundwater and, as I had mentioned in my  
13 earlier slide, the inorganic metals were the  
14 contaminants of concern. They were the only  
15 contaminants that we detected at the site. However, we  
16 were able to correlate those concentrations that were  
17 detected to naturally occurring or background levels.  
18 Metals are contained in soil and those metals can leach  
19 or dissolve into the groundwater.

20 And what I have here is a summary of the  
21 groundwater analytical data to give you an indication  
22 of how the contaminants were detected in order -- at a  
23 range of values. And you didn't see contamination in  
24 all of your wells.

25 And this would -- the presence of inorganic -- for

1 people who have their own private or dug wells, the  
2 presence of inorganic metals -- you may have noticed  
3 iron is often a problem in those wells and oftentimes  
4 the hardness of your water is impacted by the amount of  
5 magnesium and other metals that may be present.

6 I do want to mention that cadmium was detected in  
7 one location at concentrations that exceeded the  
8 drinking water standard. I want to point out I have  
9 shown up here that the two wells, MW-801 and 804 -- in  
10 804 you see cadmium was present from ND or not detected  
11 in some samples from that well location to as high as  
12 23 parts per billion. That well location is located  
13 upgradient of Site 8. So that's a representation of  
14 the groundwater quality before it comes into Site 8.  
15 And that information helps us recognize that the  
16 cadmium that we're detecting downgradient or at Site 8  
17 and downgradient at Site 8 are in the natural ranges  
18 that we would expect to see.

19 Based on the results of the groundwater analysis  
20 and on the risk assessment, we did not feel there was a  
21 need to consider cleanup options aimed specifically at  
22 groundwater.

23 I also would like to just mention that the  
24 groundwater beneath Site 8 is not used for a drinking  
25 water source, and it is unlikely that this groundwater

1 would ever be used as a drinking water source. It's  
2 relatively shallow and, as I mentioned earlier, it  
3 drains immediately into these two small streams and  
4 flows off base. So it's unlikely that even in the  
5 future anybody would be exposed.

6 We also looked at the direct contact and ingestion  
7 of soil, and we found that risks associated with  
8 exposure to lead and DDT were below levels considered  
9 to pose a health risk. Those risks were below that  
10 hazard index value of one.

11 Lead and DDT were evaluated based on their  
12 non-cancer-causing toxic end points.

13 The risks associated with the polyaromatic  
14 hydrocarbons, some of those compounds are thought to  
15 cause cancer. So we evaluated the cancer risks  
16 associated with the exposure to the PAHs. And under  
17 the current land use, the land uses as it exists today,  
18 the risks were in that acceptable ranges that I  
19 mentioned,  $10^{-4}$  to  $10^{-6}$ .

20 We did, however, have a slight exceedance of the  
21 risk -- of the risk range when we evaluated exposure  
22 under future residential scenario. And I just want to  
23 point out that that only occurred when we assumed that  
24 a house was built on the site and that a person would  
25 come in contact with a maximum detected concentration

1 350 days a year over a 30-year exposure duration. So  
2 it was a very conservative exposure scenario that we  
3 evaluated.

4 The other routes of exposure that we looked at,  
5 the surface water and the leachate sediments, the risks  
6 were all within the acceptable risk range. And also --  
7 as part of our exposure assessment we also look at  
8 subpopulations which we feel may be at more risk such  
9 as children and -- just because their activities tend  
10 to bring them into contact with leachate sediments and  
11 stream sediments, which an adult may avoid. So we did  
12 look specifically at children, and the risks associated  
13 with that exposure were also within the US EPA risk  
14 range.

15 As part of the risk assessment we also evaluate  
16 the potential risks to the environment. And it's a  
17 very similar methodology to that used to evaluate human  
18 health risks, except here we're looking at the  
19 environment and the animals that may live within those  
20 environments rather than humans.

21 So when we define our exposure, we're looking at  
22 the types of eco systems that are present at the site.  
23 And at Site 8 we have aquatic eco systems, organisms  
24 that may live in the water of the streams that drain  
25 around Site 8, and we're also interested in terrestrial

1       eco systems, the animals that roam on the actual site  
2       itself.

3               The toxicity information that we obtain we try and  
4       obtain species specific or we look at toxicity  
5       information specific to birds or specific to fish so  
6       that we can make a much better analysis of the  
7       potential risks.

8               And we're also concerned with the potential for  
9       the chemicals that are at Site 8 to bioaccumulate or  
10      get into the food chain at a very low level and then an  
11      earthworm may be exposed to things in the sediment and  
12      then a small mamal may eat four or five earthworms and  
13      then a larger mamal or bird may eat that small rodent  
14      or whatever, and you can have the potential for  
15      bioaccumulation. And a particular concern was the DDT  
16      that we did detect.

17              And then risk is calculated similarly to human  
18      health where you're comparing your potential exposure  
19      to your toxicity information. However, for  
20      environmental risks there's a real need or an attempt  
21      to try and determine what the population level effects  
22      are. You're more interested in the population level  
23      effects versus the individual effects to a particular  
24      fish. You're looking more at how will that eco system  
25      be impacted.

1           The results of the risk assessment showed that  
2 exposure and risks to wildlife from drinking a leachate  
3 and/or uptake of the soil contaminants were minimal.  
4 It also determined that exposure and risk from leachate  
5 seep areas themselves were minimal.

6           What we did find is that aquatic receptors or  
7 those organisms that live within the small streams  
8 below Site 8 may be at risk due to the presence of the  
9 metals that are detected in the surface water. The  
10 concentrations of those metals exceeded the ambient  
11 water quality criteria, which are values that have been  
12 developed to provide an adequate level of protection to  
13 the most sensitive of the aquatic species. Similar to  
14 a drinking water standard for a human, it's a drinking  
15 water standard for fish.

16           The results of the risk assessment showed us that  
17 direct contact and ingestion of PAHs only under that  
18 future residential scenario posed a potential risk.  
19 And it also identified the ingestion and direct contact  
20 of the inorganics in the surface water.

21           Based on these results a feasibility study was  
22 conducted at Site 8. And as with both the RI and the  
23 risk assessment portion, the feasibility process is  
24 very well defined and outlined in EPA guidance. It was  
25 followed at Site 8 as it was followed at all the other

1 sites at Brunswick. And it is comprised of these six  
2 components:

3 The very first step you take is to develop your  
4 remedial response objectives. What are your objectives  
5 in cleaning up the site?

6 You also need to identify ARARs, which are  
7 applicable, relevant and appropriate requirements or  
8 basically all the other federal laws, both federal and  
9 state environmental laws which may apply to the site.

10 And based on your response objectives you identify  
11 remedial technologies that can be used to either reduce  
12 your contaminant concentrations, solidify or stabilize  
13 them.

14 And from that you develop remedial alternatives,  
15 actions that can be taken to achieve your objectives.

16 And then there's a very detailed screening and  
17 evaluation process which is undertaken to provide the  
18 rationale for selecting a preferred alternative.

19 So the objective of the remedial alternatives for  
20 the feasibility study at Site 8 were to limit exposure  
21 to contaminants in the soil and to properly close the  
22 site in accordance with Maine Department of  
23 Environmental Protection requirements.

24 And I will mention that there was no objectives  
25 specifically developed to address the high metal

1 concentrations that we detected in those small  
2 streams. And I want to just explain why that was.

3 If you take a look at the analytical results that  
4 we found, WT meaning the western tributary of Site 8  
5 and ET meaning the eastern tributary, there are two  
6 small low flowing streams that drain the northern part  
7 of the base as well as receive the groundwater flow  
8 from Site 8. And they eventually merge and, as I said,  
9 move off base.

10 We also had upstream sampling locations where we  
11 were able to select surface water samples prior to that  
12 surface water entering Site 8. And what we found was  
13 that there were sources other than Site 8 that  
14 contributed to the levels of iron, lead, cyanide and  
15 aluminum that were located upstream. And some of those  
16 source areas were a salt pile that was -- that used to  
17 be used by the Navy for road salt, in addition, road  
18 salting of Route 24, and just other surface runoff from  
19 the runways of the base and from the roads.

20 The cyanide, I will mention we were concerned when  
21 we detected the cyanide in the surface water, and we  
22 were able to show that the cyanide did come from the  
23 salt pile. Cyanide is used or was used as a decaying  
24 agent in the road salt that's applied. It prevents the  
25 salt from crystallizing.

1           That salt pile has since been moved from the  
2 location immediately upstream of Site 8 and is now  
3 covered. So the runoff from that has been contained,  
4 and that's my point where the Navy has taken actions to  
5 reduce some of these inputs into the streams.

6           And I will mention that -- as you'll see -- all  
7 the preferred alternatives incorporate long-term  
8 environmental monitoring. The Navy will continue,  
9 regardless of the alternative that is selected, to  
10 monitor the surface water and sediment at Site 8 and  
11 beneath Site 8 to ensure that we don't see an increase  
12 in these concentrations of metals, to ensure that our  
13 hypothesis that, you know, there are these other  
14 sources is correct.

15           The alternative that we developed for Site 8  
16 include these three alternatives:

17           The EPA guidance suggests or recommends that you  
18 develop a range of alternatives. These alternatives  
19 were developed and presented in the feasibility study,  
20 you know, which was reviewed by the state and by the  
21 EPA and by other various groups that Jim had mentioned  
22 earlier, and incorporated a lot of comments that the  
23 public had and that the regulators had. So it really  
24 is a reflection of the different inputs that the  
25 different concern -- or from the different concerns

1 that we had.

2 And the range of alternatives go from a no action,  
3 where we are required to say what would happen if we  
4 didn't do anything at the site. And the reason we do  
5 that is it provides a baseline for us to evaluate the  
6 benefits and/or impacts that may be caused by the other  
7 alternatives.

8 We also have a minimal action alternative, which  
9 is just proposing to do just some land use restrictions  
10 and fencing and posting of the site and, again,  
11 environmental monitoring and the five-year reviews.

12 And then our preferred alternative, the soil  
13 cover, which includes land-use restrictions, a cover  
14 system, environmental monitoring, and five-year  
15 review. And I'll get into that in a little bit more  
16 detail in a few slides.

17 But I wanted to point out that we developed these  
18 alternatives, and then there is a very specific  
19 evaluation process that is undertaken, and these are  
20 all in your handouts so you don't have to strain to  
21 read them up here.

22 But what we want to do is evaluate each  
23 alternative in the same way so that we're not biasing  
24 our decision or our selection process. And the first  
25 seven of these nine evaluation criterion are done

1 during the feasibility study, and the last two -- state  
2 acceptance and community acceptance -- are done pretty  
3 much through the entire process until the ROD is  
4 signed.

5 The community acceptance, what we're here tonight  
6 for, is to get input from the public to see whether or  
7 not the community will accept the preferred  
8 alternative.

9 And the state acceptance -- as you'll see in a  
10 minute -- we did receive some input from the state,  
11 which we did incorporate and did modify slightly the  
12 alternative that we're presenting tonight.

13 The evaluation that we go through is summarized in  
14 the next three pages of your handout, and I'll just  
15 throw some of these up.

16 But we're looking at how well the alternatives  
17 protect public health. We're looking at how the  
18 alternatives comply with all the state and federal  
19 regulations. We're interested in how easily these  
20 alternatives can be constructed and maintained, if  
21 they're proven, if they've been proven at other sites.  
22 We're interested in how long they will last as well as  
23 cost and the time it will take for us to reduce the  
24 risks that we're -- that we're interested in.

25 And I'm just throwing -- putting this slide up to

1 just kind of identify where in our evaluation  
2 process, you know, you start to see some similarities  
3 and some differences between the different  
4 alternatives.

5 And in this situation as one of the objectives  
6 that we identified was to comply with the State of  
7 Maine's closure requirements. You can see that the no  
8 action and the minimal action do nothing to cover the  
9 system and, therefore, do not comply with the state  
10 regulations.

11 You can also see that there's a variance in the  
12 amount of time it will take to achieve the objective of  
13 potentially reducing risks. The no action does nothing  
14 to reduce the risks, where the minimal action by  
15 posting a fence and posting some warning signs -- in  
16 two months we can get those signs and fences up. And  
17 it will take approximately seven months to construct  
18 the cap.

19 As you can see, all of the alternatives --  
20 similarity of all the alternatives is they all include  
21 environmental monitoring. And, as Jim mentioned, the  
22 Navy is required to come back every five years and  
23 evaluate all the data that has been generated to ensure  
24 that the alternatives are working properly. And during  
25 these five-year reviews the regulatory agencies and the

1 Navy can take a look at the information and determine  
2 perhaps that there's a need for additional corrective  
3 measures.

4 And then, of course, cost is something that we  
5 evaluate. We look at capital cost and long-term  
6 operation and maintenance, how much it's going to cost  
7 us to continue to maintain these remedial actions into  
8 the future. And you can see how the costs range from  
9 approximately \$160,000 upwards to \$484,000.

10 So just to present the preferred alternative in a  
11 little bit more detail, the components of this  
12 alternative include preparing the site to put a soft  
13 cover over it and then constructing a cover.

14 And I just want to mention a little bit when I  
15 said the state's involvement had some impact on our  
16 ultimate alternative that we're presenting tonight.  
17 Originally the Navy had considered placing just a 6  
18 inch soil cover over Site 8 -- and this is what I'm  
19 showing over here, Site 8. However, although the State  
20 of Maine recognized that Site 8 was not a landfill in  
21 the sense of the word that it had been operated as an  
22 open dump, there were no state regulations specific to  
23 the situation that we had out at Site 8. And so they  
24 asked the Navy if -- or they cited to the Navy  
25 regulations and requirements for a landfill cover

1 system, an attenuation landfill cover system, and  
2 requested that the Navy meet the performance  
3 requirements of those regulations. The cover system is  
4 more conservative. It includes a low permeability  
5 cap -- low permeability cover system covered over with  
6 a vegetative layer to protect the stability of that  
7 cover system.

8 So instead of the 6 inch soil cover that was  
9 originally proposed just to stabilize the site and to  
10 prevent any sort of physical contact or harm, the Navy  
11 is proposing to put on a low permeability cover system  
12 and as with that continue to inspect and maintain that  
13 cover system to ensure that the vegetative layer is  
14 maintained, preventing erosion; and also it's agreed to  
15 institute institutional controls to limit future land  
16 use at the site, place deed restrictions, if necessary,  
17 to inform people that -- of the current situation and  
18 that building or residential land use may not be  
19 appropriate; and, as I mentioned, continued  
20 environmental monitoring of the surface water and  
21 sediments of those two small streams will go on; and  
22 every five years the Navy will go back to the  
23 regulators and present the findings of these  
24 environmental monitoring results.

25 And this is just a schematic, a cross section of

1 the proposed cover system, and it's developed at -- you  
2 know, with a slope in mind for the water, rain water to  
3 drain off of it.

4 The approximate locations of the cover system is  
5 identified in this figure; however, the actual limits  
6 of that cover system will be determined during the  
7 design phase of the cover system.

8 And the final overhead is just a summary, which is  
9 presented in the facts sheet, which is a synopsis of  
10 the three alternatives, summarizes the key components  
11 of each alternative, some of the things we felt were  
12 important to identify, how long it would take to  
13 construct, and the time that we would carry out  
14 implementing this alternative. And you can see each of  
15 them have the five years of monitoring. And also the  
16 costs. And then the last column we kind of summarized  
17 which ones meet the state criteria and which ones  
18 reduce the health risks.

19 So that concludes the technical presentation, and  
20 I'll turn it back over to Jim.

21 MR. SHAFER: Thank you, Beth. We're at the  
22 fourth bullet item on our agenda. We can either take a  
23 break at this point in time or we can hear your  
24 questions, go right into the question and comment part  
25 of the meeting tonight.

1           If there's anybody that would like to take a  
2 break, we'll take a ten-minute break.

3           No one?

4           Okay. We'll open the floor up for questions and  
5 comments.

6           I just want to mention once again that everything  
7 today is being recorded by a stenographer. A  
8 transcript of tonight's meeting will be placed in the  
9 Curtis Memorial Library and everyone can -- that will  
10 be available for the public's review.

11           As you ask questions or make comments tonight, if  
12 you would like to state your name for the record, you  
13 may do so. If you'd rather not, don't do it.

14           Some people in the past of the public -- some  
15 comments were received from the public in the past.  
16 When they reviewed the transcript, they couldn't  
17 identify which person or which group was making the  
18 comment. So I'll leave that up to you.

19           At this point in time we'll open the floor up.

20           Yes, sir.

21           MR. MacLEOD: My name is Jim MacLeod. I live at  
22 the lower end of Jordan Avenue approximately 1,800  
23 yards from your site.

24           I'd like to preamble though my question with a  
25 statement. I spent nine years in the Navy. I was

1 there between 1961 and 1970 and with the attitude  
2 towards our -- the environment was nill, if  
3 nonexistent. I know because I personally threw paint  
4 cans overboard rather than bring them back, which I'm  
5 not very proud of today.

6 My question is how can you be sure that there  
7 still isn't a lurking time bomb in the near future at  
8 this site?

9 And, part two, have you tested for heavy metals?

10 And, number three, have you considered removal of  
11 this site from Brunswick? And if you have considered  
12 it, why was it rejected? This is such a small site.

13 Thank you.

14 MR. SHAFER: Okay. The first part of your  
15 question was how can we be sure there is not a lurking  
16 time bomb in the site?

17 I got two parts of your question. The first one  
18 was -- I didn't get the third part. The first one was  
19 how can we be sure there's not a lurking time bomb at  
20 this site?

21 That's why we have our long-term monitoring. We  
22 will continue to monitor the site. We will develop a  
23 monitoring program in consultation with the regulatory  
24 agencies and our technical review committee that will  
25 identify a sampling, what parameters we should sample

1 for, which wells we'll sample. It will also identify  
2 an interval that we'll sample. That interval may be  
3 every three months initially. Usually there's more  
4 frequent sampling in the beginning and as time goes on  
5 the interval decreases. But we will be constantly  
6 monitoring the site.

7 I know we said that we conduct five years of  
8 reviews, but that's at a minimum we conduct a five-year  
9 review. We monitor the site constantly. As we get  
10 data in if we start to see that concentrations are  
11 increasing for some reason or another, we don't wait  
12 for five years before we do something.

13 If we feel there's an eminent threat to human  
14 health and the environment, we'll take action. We  
15 don't expect that to happen. But as a minimum after  
16 five years, after collecting five years' of data we'll  
17 do another risk assessment, take a look at all the data  
18 we have and conduct another risk assessment and  
19 reevaluate the site. No further action may be  
20 necessary or we may have to take additional action. We  
21 may have to do, as you suggested, as far as removing  
22 the material.

23 As far as removing the material at this  
24 time -- I believe that was the third part of your  
25 question -- you said why didn't we just dig it up --

1 MS. CASSIDY: Heavy metals were tested.

2 MR. SHAFER: Yes, we did. The third part of the  
3 question --

4 MR. MacLEOD: Why haven't you considered removing  
5 the materials since it is such a small site?

6 MR. SHAFER: I think you said why don't we dig it  
7 up and move it all from Brunswick? Well, removing it  
8 all from Brunswick -- I'll explain to you why we didn't  
9 do that.

10 When we first -- when we concluded our remedial  
11 investigations and did our risk assessment, the data  
12 showed that there were no unacceptable risks at the  
13 site in the Navy's opinion. That opinion was supported  
14 by the US EPA.

15 The risks that showed -- the unacceptable risk  
16 occurred for future residential scenario and was only  
17 addressing that one part of the site, the maximum  
18 concentration that was detected. That generated a  
19 risk. And that isn't a realistic risk.

20 The risk assessment that was prepared fell within  
21 the acceptable risk range of the US EPA. Initially the  
22 Navy wasn't proposing a remedial action for this site.  
23 Since there wasn't a current risk and since there  
24 wasn't a future residential risk we didn't feel  
25 remedial action was warranted.

1           The reason we're putting a cover system on the  
2 site is because the State of Maine cited a regulation,  
3 a statutory requirement to close the site as an  
4 attenuation landfill. And we are complying with that  
5 requirement. That's the reason.

6           If we felt there was an unacceptable risk,  
7 excavation -- since it is a small site as you pointed  
8 out -- may be a good alternative.

9           We haven't made our final decision yet though.  
10 And that is a very good comment. And we will certainly  
11 consider that comment before we make our final  
12 decision.

13           Thank you.

14           The lady out here in front.

15           MS. RYDELL: I'm Charlene Rydell, the state  
16 representative from this area. And I have a couple of  
17 questions. One is a follow up on Mr. MacLeod's  
18 question.

19           In terms of actual removal, have you costed out  
20 what that would be and the time that it would take and  
21 in fact where you would be moving it to?

22           I think that's an important piece of your  
23 investigative procedures in your determination of what  
24 is the most cost effective, efficient, and best  
25 alternative for our community. Because if I listen

1           correctly, and I did hear that there may be -- although  
2           you're saying that the risk is acceptable in terms of  
3           future residential use of the land -- it is possible  
4           that we would have to restrict future use of that  
5           particular land, and since it is a very small site, it  
6           would be very difficult to plan for the future use of  
7           the entire area if you had to plan around that  
8           particular small site.

9           So I would just ask that you look at that as a  
10          fourth alternative or another alternative before a  
11          final decision is made.

12          And, secondly, on the slide here -- but this may  
13          be a question of semantics but I think it will be  
14          important for people who are not here tonight and  
15          reviewing this in the library on their own -- in the  
16          last slide it said summary for remedial alternatives.  
17          I'm just trying to make sense where it says minimum of  
18          five years of monitoring. If I hadn't heard what you  
19          said, I would interpret that to mean that the Navy  
20          could monitor this for only a minimum of five years.  
21          In other words, it would not be at five-year intervals  
22          but it would be at five years or before five years and  
23          not beyond that point.

24          MR. SHAFER: No. Okay. We can explain that  
25          properly. After five years if there's still a risk at

1 the site, and we will continue to monitor the site.  
2 The monitoring can go on indefinitely.

3 MS. RYDELL: Well, the first five-year monitoring  
4 may not show the risk. After ten years something else  
5 may show.

6 My understanding, if correctly, that there is a  
7 possibility that monitoring would end after five  
8 years?

9 MR. SHAFER: No, it would not.

10 MS. RYDELL: I think the materials need to  
11 reflect the fact that the monitoring would go on at  
12 intervals over whatever period of time the Navy is  
13 considering. That's going to be very important as we  
14 look at it in terms of state regulations but also as we  
15 look at it in terms of health and safety for the  
16 community.

17 MS. CASSIDY: I just want to clarify one thing  
18 for you on that. There is a statutory requirement  
19 that's not just something that the Navy is going to do,  
20 but when waste is left in place, such as we're doing  
21 here, those five-year reviews have to go on for a  
22 minimum of 30 years. So it's clearly written that that  
23 goes on for more than five years.

24 MS. RYDELL: I think the materials need to  
25 reflect that so anybody reading it on his or her own

1 would be able to understand that.

2 MS. CASSIDY: I think that's a good point.

3 MR. SHAFER: I just want to get something clear  
4 though. You said that you would prefer that the Navy  
5 excavate the material?

6 MS. RYDELL: I would prefer the Navy investigate  
7 that as a possibility.

8 MR. SHAFER: As a possibility. Okay.

9 MS. RYDELL: And we would know what would be the  
10 cost of that versus the cost of the preferred  
11 alternative that you now are selecting.

12 And I would -- the reason is that because it is  
13 such a small site, we have to think in the long-term  
14 basis of the use of the land, not just that particular  
15 site, but all the land around it. And if we would be  
16 restricted as a community in using the land around it  
17 because we have this small area that could only be used  
18 for certain purposes and not other purposes, then that  
19 might restrict the community's alternatives in the  
20 future.

21 MR. SHAFER: Okay. Thank you.

22 Yes.

23 MR. FUSCO: My name is Tom Fusco. I'm with the  
24 Brunswick Area Of Citizens For A Safe Environment.

25 The first thing I want to say is as a member of

1 the Brunswick Area Of Citizens For A Safe Environment I  
2 think we've been satisfied with the process that's been  
3 occurring and the responsiveness of it. Frankly,  
4 entering into this process we anticipated the same  
5 kinds of problems that other groups have had in dealing  
6 with the military. And I think our experience has been  
7 significantly different than other sites have been  
8 around the responsiveness and willingness to work with  
9 us.

10 One of the concerns that I have in talking about  
11 the institutional controls that will be there and  
12 looking at what's written, I really think you need to  
13 expand on that, because it talks about a fence and it  
14 talks about signs and -- but I would like to see a  
15 little more description of exactly what the  
16 institutional controls are going to be.

17 MR. SHAFER: Okay.

18 MR. FUSCO: And the other thing is I agree with  
19 Charlene and with the gentleman over here, that not  
20 only on Site 8 -- I know we're talking about Site 8 --  
21 but Site 8 and all of the sites, whenever possible, not  
22 to do the cleanup to meet for a controlled environment  
23 but to really look at the cleanup for where it's going  
24 to be open to the public.

25 I know it would be nice for the community to think

1           that the base is going to be here forever, but I think  
2           we have to take a look at the possibility that it's not  
3           going to be here and it's going to revert back to the  
4           community.

5           And I think that in all of the sites -- to really  
6           do that review, to take a look at when possible the  
7           removal of the waste. And I know that there are sites  
8           that you can't do that, because it's more dangerous to  
9           dig it up than it is just to leave it where it is. But  
10          just in that area specifically I'd like to reinforce  
11          looking at that for Site 8.

12          But the other thing on the monitoring, in talking  
13          with our consultant I do -- you know, I have to -- I  
14          guess that's what we're paying her for. She concurs  
15          that there does seem to be -- the water is not moving  
16          towards Site 8, that it's really moving away from it in  
17          that -- the contaminants in that I would like to see  
18          with the monitoring the -- specifically taking a look  
19          at that issue of where is it going? And not just  
20          monitoring what's at the site, but really monitoring  
21          that process of flow. And I'm not --

22                 MS. WALTER: Tom, can you just clarify for me,  
23                 are you talking about groundwater or surface water?

24                 MR. FUSCO: Groundwater.

25                 MS. CASSIDY: Okay. Thanks.

1           MR. FUSCO: I believe that's what it is. It's  
2 the groundwater that we're talking about. Yes.

3           MS. CASSIDY: Okay. I just wanted to make sure I  
4 understood.

5           MR. FUSCO: I'm concerned that that monitoring  
6 continues. Again, I think that there are issues, at  
7 least in my mind, what happens if construction starts  
8 to occur outside and that changes what happened with  
9 groundwater? I don't know whether the Navy would be  
10 responsible for that, but there should be some  
11 monitoring that goes on at least that would say that  
12 there's been a shift and that something needs to be  
13 done. We could always decide later who's going to do  
14 it.

15           And I also -- and it might be my paranoia, but I  
16 really like to see things in writing, and I like to see  
17 things really clear and really spelled out; because I  
18 don't trust government, whether it's state or local.  
19 There have been too many times when all of a sudden  
20 laws have been passed and they're made retroactive six  
21 months or a year -- I would really like to see some  
22 real clarity in what's going on. And I'm not sure what  
23 the process is to whether -- whether there's a contract  
24 that's entered into between the government and the  
25 state or whether it's the government and the community

1 or is it between the Navy and the EPA? But somehow or  
2 another I guess -- I don't know whether I'm being  
3 paranoid, you know, again, I'll admit that I enter into  
4 processes with government always with skepticism. But  
5 it's just that I hear things that we're going to  
6 monitor it for five years or we're going to do this.  
7 But where's the guaranty that those things occur?

8 And it -- I know -- I know, Meghan, you said that  
9 there's a law that says it has to go on for 30 years.  
10 But, again, it sounds like we're talking about  
11 something between the government and the government.  
12 And that -- and government has been known on numerous  
13 occasions to change something so it's to their own  
14 convenience. But I'm looking at where's the clear  
15 contract between the military or the government and  
16 either the town or the State of Maine? How does  
17 that -- where does that come into play?

18 MR. SHAFER: Okay. I think there were four parts  
19 to your comment. I'll try to answer the best that I  
20 can. If I don't answer these questions adequately  
21 today, we will in our final decision document -- there  
22 will be a further explanation on that.

23 Number one, you wanted a better description of  
24 institutional controls I think you said.

25 MR. FUSCO: Yes.

1           MR. SHAFER: We have a number of ways of doing  
2 that. One, the base in its current status as a naval  
3 air station, as an active military base, we have a  
4 master plan that we prepare similar to a community.  
5 Any time anything is built on the installation it has  
6 to have approval. It goes through a set approval  
7 process. Just as a community, if someone in your  
8 community wanted to erect a housing project or put up a  
9 grocery store, they would have to go before your  
10 planning board and your zoning board. It's the same  
11 way with the Navy. And we do it not to be  
12 bureaucratic, but we do it for safety concerns.

13           When we look at a site, siting requests for a new  
14 facility -- and it's looked at by another agency even  
15 outside of the naval air station. We look at it for  
16 fire protection requirements, we want to make sure it  
17 meets all the fire codes; if there's building  
18 separation requirements; we'll look at environmental  
19 considerations, are there any wetlands in the area, are  
20 there any flood planes that will be impacted? So  
21 there's a number of -- does it make common sense from  
22 utilities point of view? So it goes through that  
23 approval process. So that's our own internal control  
24 that we have. So we impose our own -- that's one way  
25 of checking it.

1           We also have master plans where different types of  
2 land use are identified. There are certain areas on  
3 the base where family housing is encouraged and planned  
4 for. There's certain part of the air station where,  
5 oh, maybe operational type functions will be carried  
6 out.

7           We have other concerns. We have an air field  
8 here. There's air field safety criteria. We have  
9 clearance zones next to our runways, we have clearance  
10 requirements in our approach/departure zones of our  
11 runways. So there's a lot of factors that we consider  
12 before we start building. We don't arbitrarily put  
13 something up. So we do have very strict controls  
14 internally.

15           In the event that the Naval Air Station were to  
16 close someday, that's the next concern. We have -- we  
17 can put a restriction in the deed that -- it just  
18 places a restriction in the deed on that portion of the  
19 property. If the final decision is to close this as an  
20 attenuation landfill, it will -- from a legal point of  
21 view no one will be able to build anything on that  
22 site. That's a legal document.

23           So I don't know if that answers your question,  
24 that part of your question.

25           MR. FUSCO: It does. I'll say the same thing I

1 did at the TRC meeting, Hooker Chemical had that  
2 restriction on the property, too.

3 MR. SHAFER: Accidents can happen. One of the  
4 things we're talking about Dillon is perhaps any sites  
5 where we have institutional controls, making that  
6 information available to local planning board, and I  
7 think the time to do that though is once we finished  
8 our design. For example, we have another site, another  
9 large landfill that you're aware of that's being closed  
10 as a landfill. Once that design is complete --

11 MR. FUSCO: I guess what what I'd like to hear is  
12 not maybe make that available --

13 MR. SHAFER: We will. We have made the decision  
14 to make that available to them. The proper time though  
15 is when we have completed design and we can show the  
16 exact configuration of the landfill site.

17 The second part of your comment I believe was  
18 you'd like to see us excavate it. And that's a point  
19 well taken. We will certainly consider that.

20 It's not clear to me though from the comments that  
21 have been made whether the preference is to excavate,  
22 remove off site or be acceptable to excavate and  
23 perhaps consolidate with another landfill that we have  
24 on site.

25 As you pointed out, there are some sites where

1 it's just too -- to use your words -- too dangerous to  
2 remove it, and certainly too costly in some areas.

3 That wasn't clear to me.

4 MR. FUSCO: Well, I think that looking at both  
5 those options, removing it somewhere else or moving it  
6 to a site that you know you're not going to be --  
7 you're going to be covering.

8 MR. SHAFER: That's a good comment, and we will  
9 look at that.

10 MR. FUSCO: At least that way there you'll be  
11 minimizing the number of sites that you'd have to work  
12 around.

13 MR. SHAFER: That's a good point. That's  
14 correct.

15 Monitoring groundwater flow, we do that as part of  
16 our long-term monitoring plans.

17 See things in writing. You don't trust the  
18 government.

19 We -- well, there's a couple of documents that  
20 have things in writing. One is we have a Federal  
21 Facility Agreement. It's a three-party agreement  
22 between the State of Maine, the United States  
23 Environmental Protection Agency Region 1, and the Navy  
24 for the Naval Air Station here at -- that document  
25 establishes a framework and a schedule for cleaning up

1 the sites at the Naval Air Station in Brunswick.

2 The other thing you'd see in writing as far as the  
3 final remedy for this site and where things are  
4 documented, what we're going to do, these long-term  
5 monitoring plans we say we're going to prepare and what  
6 our cleanup goals are going to be for any site, that's  
7 in the Record of Decision, that's a legal document.

8 MR. FUSCO: Does that constitute a contract?

9 MR. SHAFER: I don't know if you'd call it a  
10 contract.

11 MS. CASSIDY: It's a legally enforceable  
12 document. I can't speak legally, but it's a legally  
13 enforceable document. Whether it is a contract I guess  
14 is open to interpretation. It's a legally enforceable  
15 document.

16 If the Navy were to not do what was specified in  
17 the ROD, EPA and the state -- but particularly the  
18 EPA -- has the ability to go back and, you know, they  
19 have -- they have not done what was specified in a  
20 legal document. So it's -- I mean, we could stipulate  
21 penalties or go after them in some mechanism. That's a  
22 legal document.

23 MR. FUSCO: Are there going to be penalties?

24 MR. SHAFER: We hope not.

25 MR. FUSCO: I don't mean are there going to be

1 penalties imposed, are there going to be potential for  
2 penalties that are spelled out in the document?

3 MS. CASSIDY: There are potential for penalties.  
4 We have no instances at Brunswick where we would -- in  
5 the Federal Facilities Agreement that's specified. And  
6 if there were a case we felt they had missed deadlines,  
7 things like that, those are all reasons for having them  
8 give stipulated penalties. So we could do that and  
9 that's specified in the Federal Facilities Agreement.

10 MR. FUSCO: Not to get too crazy about this, what  
11 role does the state have in saying we think that this  
12 has been violated? I mean, can that come from the  
13 state saying we believe this is violated -- looking for  
14 some penalty? Who initiates that?

15 MR. HYLAND: The state can initiate its own  
16 separate legal action against the Navy for violations  
17 of the Record of Decision or the Federal Facilities  
18 Agreement.

19 MR. SHAFER: The woman right here.

20 MS. LOFCHIE: My name is Loukie Lofchie, and I'm  
21 also with Brunswick Area of Citizens For A Safe  
22 Environment.

23 Has any estimate yet been developed to approximate  
24 the extent to which Site 8 has been compromised by  
25 waste of the approximately 25 nuclear weapons that are

1 reported by the Lewiston Sun are situated at the air  
2 base? If this has not yet been done, when will it be  
3 done?

4 MR. SHAFER: The question was concern about  
5 nuclear waste --

6 MS. LOFCHIE: Right. The question I have -- and  
7 I'm trying to say it accurately -- has any estimate yet  
8 been developed to approximate the extent to which Site  
9 8 has been compromised by waste of the 25 nuclear  
10 weapons that the Lewiston Sun reported are stationed at  
11 the base, are placed at the air base, are situated at  
12 the air base? If this has not yet been done, when will  
13 it be done? In other words --

14 MS. WALTER: We have no reason to believe that  
15 any nuclear weapons or nuclear waste were disposed of  
16 at Site 8. So we do not believe Site 8 has been  
17 impacted by any nuclear waste.

18 We -- any time anyone goes out onto the site they  
19 wear a radiation badge, and we have those analyzed.  
20 And we've never received a hit to indicate the presence  
21 of nuclear weapons. And there's no reason for us to  
22 believe that there would be any nuclear waste there  
23 based on extensive site investigations, reporting with  
24 people who worked or disposed of things at the site.

25 MS. LOFCHIE: You're speaking strictly about Site

1 8.

2 MS. WALTER: Correct.

3 MR. SHAFER: Right. Are you talking about --

4 MS. LOFCHIE: I have a real problem with these 25  
5 weapons. I feel as a citizen, quite safe, thinking  
6 here there are, and I haven't -- besides this article  
7 in the Lewiston Sun the local press has not informed me  
8 to any extent about what the plans are for these  
9 weapons.

10 MS. CASSIDY: Can I just clarify -- I'm  
11 unfamiliar with the article that you're speaking of  
12 obviously, as I think Jim is. And it's not Site 8,  
13 just Site 8. We, EPA -- and I don't believe -- we have  
14 no reason to believe, there have been no records and no  
15 anywhere on the site where they have taken -- gone out  
16 with radiation badges have there been any indication  
17 that there was any nuclear waste anywhere. But, as I  
18 said, I'm not familiar with this article that you're  
19 speaking of.

20 MS. LOFCHIE: You are not familiar?

21 MS. CASSIDY: No.

22 MR. SHAFER: No. Is this a recent article?

23 MS. LOFCHIE: August 20. I have a copy of it. I  
24 think this is mysterious. Several of us have talked  
25 about this.

1 MR. SHAFER: We'd like -- if you'd like to, we'd  
2 like to -- we'll review that. We'll review that  
3 article, and we will respond to your comment.

4 MS. LOFCHIE: I'd really appreciate it.

5 MR. SHAFER: Okay. Thank you.

6 Michael L'Abbe will take that for you.

7 Okay.

8 Do you need a copy of this back?

9 MS. LOFCHIE: No. I think I'll be able to get  
10 another copy.

11 MS. KADZIAUSKAS: My name is Victoria  
12 Kadziauskas, and I live on the Woodward Point Road.  
13 And I was concerned about all the sites -- and John  
14 spoke some about if the base was to close down. Now,  
15 you have these -- going to review these sites every  
16 five years. What if the base closed down, then what  
17 happens? Are they going to be reviewed after that or  
18 what?

19 MR. SHAFER: Okay. Yes. If the base were to  
20 close down and if there were still sites that contained  
21 contamination on the Naval Air Station, the Navy is  
22 required to maintain those sites and to finish cleanup  
23 on the sites. As long as there's property with  
24 contamination on it, we can't walk away from it.  
25 Congressional law says that we have to -- we have to

1 finish cleaning up the site. And that's what we'll  
2 do.

3 There's a lot of different concepts being explored  
4 right now. One of them is, you know, the Naval Air  
5 Station is a large piece of property. The hazardous  
6 waste sites actually constitute a very small portion of  
7 the Naval Air Station. One concept that's being  
8 considered right now between the Department of Defense  
9 and the United States Environmental Protection Agency  
10 is to -- if there were a base closure -- to allow the  
11 Navy to access those parcels of land that they could  
12 certify as being free from contamination and maintain  
13 ownership of the parcels of land that still contained  
14 contamination. And we would have to completely cleanup  
15 those sites and certify they are clean before we can  
16 access -- this is a concept there's being discussed.  
17 That would allow us to free up the land we know is  
18 uncontaminated.

19 But, in any event, whether that concept goes  
20 through or not, we are required -- we will maintain  
21 some type of a presence, whether it's an environmental  
22 staff, to ensure that the monitoring goes on and until  
23 the sites are cleaned up, that's what we will do. If  
24 that takes forever, that's what we do.

25 Yes.

1 MS. WEDDLE: I'm Susan Weddle, I'm the Brunswick  
2 community representative and also a member of Brunswick  
3 Area of Citizens For a Safe Environment.

4 One concern that has been expressed to me by some  
5 citizens who are members of Friends of Merry Meeting  
6 Bay is concern for anything at any of the sites  
7 impacting the bay itself.

8 Now, we know for a fact that the surface water at  
9 Site 8 is contaminated in excess of ambient aquatic  
10 water quality criteria, and I know you propose things  
11 to decrease contributions to that from the salt pile  
12 and things like that with a provision that you will  
13 monitor and you'll take no further action on the  
14 surface water contamination at this point in time.

15 However, my question is if we've already exceeded  
16 the water quality criteria for aquatic life, at what  
17 point in your long-term monitoring are you going to  
18 consider it to be a problem to take any further  
19 action?

20 In other words, this is all going into the bay and  
21 that's a concern to me and others as well that could be  
22 adversely impacting the aquatic life of the bay.

23 Now, I know that you say some of this is  
24 background and upgradient although granted it's coming  
25 upgradient from the base, because all the sources from

1 those small tributaries are on base.

2 MR. SHAFER: Okay. I'll try to answer part of  
3 the question and let Beth answer the rest.

4 You're talking specifically now about the streams  
5 on the Naval Air Station --

6 MS. WEDDLE: Well, I'm talking about Site 8,  
7 because this is the night for Site 8. But I'm talking  
8 about -- yes --

9 MR. SHAFER: Okay. We -- first of all, we don't  
10 feel Site 8 is a source of these organics that are  
11 seeded in the surface water, the inorganics that exceed  
12 ambient water quality criteria. I'll let Beth talk  
13 about that some more. But the as far as other  
14 potential sources that could be contributing to  
15 elevated levels of iron and zinc I guess you're talking  
16 about in the surface water, the air station does  
17 have -- they do have an environmental staff and they do  
18 evaluate different potential sources from current  
19 operations on the base.

20 They have finished some studies already, and we  
21 cannot identify any point sources on our base that are  
22 causing elevated levels of iron and zinc.

23 We're happy to discuss this at any other time with  
24 you. At our technical review committee meetings we can  
25 show you that information. We can't identify that, but

1           it's something that we constantly look for. We have an  
2           ongoing program where we evaluate our operations.

3           But as far as the background, I'll let Beth speak  
4           to that.

5           MS. WALTER: Yes. As you know, the tributaries  
6           or the small streams that we're talking about at Site 8  
7           converge immediately beneath the site and flow probably  
8           no more than 20 yards before they leave the base and  
9           flow through a culvert underneath Route 24 and towards  
10          the Androscoggin River.

11          In addition there are two culverts that -- or at  
12          least one culvert recently that is a drainage from the  
13          Route 24 area that discharges into the Site 8 streams  
14          before the eastern tributary merges with the western  
15          tributary.

16          And what our analytic results have shown -- the  
17          slides I put up about the downstream -- actually, I  
18          didn't include this portion. We have downstream  
19          monitoring locations, and by downstream I mean right  
20          before the tributaries flow under Route 24 and then  
21          after it comes out, after it's traveled under 24, and  
22          the levels of contaminants we're seeing there are also  
23          in excess.

24          Our belief is that there is not much we could do  
25          at Site 8 that would remedy that situation because we

1 have other non-point sources and because there are  
2 going to be contributions from areas that are off the  
3 base that the Navy really has no control over.

4 Does that kind of address --

5 MS. WEDDLE: Well, yes. But I guess my question  
6 was in the handout here you talk about preferred  
7 alternative includes long-term environmental monitoring  
8 of surface water as if at some point you see something  
9 come up, you would address that, so you'd put that on  
10 five-year interval monitoring.

11 My question is we're already exceeding the levels  
12 here. At what point are you going to say, you know,  
13 there's a problem?

14 In other words, do you have any target values or  
15 are you going to say, okay, if we have a 25 percent  
16 increase in concentration -- how are you going to  
17 address that? Because you're already above those  
18 levels now.

19 MS. WALTER: Right. And we would establish --  
20 the data base that we have now is kind of our baseline  
21 data base. And then after we take a remedial action we  
22 would be able to make some sort of comparison, whether  
23 it turns out to be a statistical comparison or whether  
24 it's a qualitative observation or trend in increasing  
25 concentrations I can't speak for right now. That would

1           come out as part of the long-term monitoring program.

2           MS. WEDDLE: Will that be put out in your Record  
3 of Decision in other words?

4           MS. WALTER: The details of the long-term  
5 monitoring are --

6           MR. SHAFER: Our long-term monitoring plan will  
7 be a separate document itself. And that will be  
8 prepared -- the sampling, the parameters we sample for,  
9 you know, the different medium we sample, the intervals  
10 will be identified in that document. And it will be  
11 prepared in consultation with TRC members, state of --  
12 Department of Environmental Protection and EPA, and  
13 we'll get comments back so we can develop a plan that's  
14 acceptable to everyone.

15           MS. CASSIDY: Susan, let me just briefly -- the  
16 problem in trying to do something with that surface  
17 water there is we're looking at contribution from Site  
18 8 in this instance. The cyanide was clearly -- well,  
19 we didn't find it at Site 8, we think, you know, with  
20 the help of the state that we tied it to that salt  
21 pile.

22           One of the things we'll be looking for is, you  
23 know, has some of that -- have the levels of cyanide  
24 gone down for one thing? That salt pile has been gone  
25 now. So we would expect to see some decreases.

1           We also have to consider that there is -- the  
2           levels are exceeding ambient water quality coming onto  
3           the base. And there's some -- it's difficult to  
4           enforce a cleanup standard, you know, what would we  
5           have them cleanup for? Because they would continually  
6           be cleaning up -- cleaning water that's dirtier coming  
7           into their waters. It's a difficult situation.

8           And also from the ecological standpoint our  
9           ecologists are looking -- are satisfied at this point  
10          with monitoring it to see if there's an increase in  
11          levels.

12          Cleanups of surface waters and sediments  
13          associated with them are fairly complicated and can  
14          sometimes do more damage to the eco system than  
15          anything else, than the actual cleanup would do if you  
16          have to -- if you're in a situation where you have to  
17          dredge or something. That is not necessarily the best  
18          alternative. But that's part of the reason that  
19          monitoring -- I mean, there are several things, that  
20          upgradient sources, the Navy has taken some actions to  
21          move those or to take care of those sources.

22          So we may -- Beth can maybe speak to this, but we  
23          should start to see some decrease from say the cyanide  
24          source. And if that's not the case, that monitoring  
25          obviously will show us that maybe there's something

1 else that we need be looking at. But right now, I  
2 mean, there's no clear link to Site 8.

3 There are upgradient both off site, off base and  
4 on base problems that complicate the situation  
5 admittedly. And it's difficult to say what we do at  
6 Site 8 that would improve anything on the -- over the  
7 long term.

8 So rather than just, you know, cleaning up the  
9 surface water in a small reach of that rather intimate  
10 brook is not necessarily going to get us anything.

11 MS. WEDDLE: I agree with what you propose now.  
12 My only concern is regarding the levels -- since you've  
13 already exceeded the levels, monitoring then will it be  
14 addressed or significant -- you know, it's already been  
15 exceeded, therefore, we're not going address it --

16 MS. CASSIDY: I don't think so. That's not the  
17 case. As I said, the cyanide -- you know, we should  
18 start to see a decline over the short -- you know,  
19 shorter term since that source has been removed.

20 MS. WALTER: And I think you're right, the  
21 cyanide could be a good indicator. Because that was a  
22 point source that we identified.

23 MR. SHAFER: Yes.

24 MR. KATZ: Any name is Josh Katz. I'm a member  
25 of the Brunswick Area of Citizens For A Safe

1 Environment.

2 Can we discuss the aluminum at Site 8? Am I to --  
3 am I being told that Site 8 does -- is not a  
4 contributing source of the aluminum found in the  
5 surface waters?

6 MS. WALTER: In what respect? Aluminum is a  
7 naturally occurring element. It is associated with  
8 subsurface soils that we see on Brunswick. We did not  
9 find a source of aluminum contamination --

10 MR. KATZ: It seems that some of the  
11 concentrations that you found are far in excess of any  
12 the backgrounds --

13 MS. WALTER: In the surface water or the soils or  
14 the sediments?

15 MR. KATZ: I believe -- I'm looking at a table  
16 with results. I haven't had a chance to review --

17 MS. WALTER: Is that the surface water?

18 MR. KATZ: There's a column labeled WT and ET,  
19 western and eastern tributaries.

20 MS. WALTER: Correct.

21 MR. KATZ: So I assume these are surface water  
22 concentrations in parts per billion?

23 MS. WALTER: Correct. In this case you can see  
24 for aluminum the maximum concentration that was  
25 detected in any of the surface water samples we

1 collected was identified both in an upstream sampling  
2 location and that same concentration was detected in  
3 the western tributary. We had two sampling  
4 locations --

5 MR. KATZ: The upstream was a ditch along the  
6 road before it entered the tributary?

7 MS. WALTER: No. It was following -- I'm not  
8 sure how familiar you are with the site. Perimeter  
9 Road -- it was on the southern side of Perimeter Road.  
10 Perimeter Road -- the site is located on the northern  
11 side of Perimeter Road. So we took the sample on the  
12 southern side of Perimeter Road before that surface  
13 water flowed through the culvert into the western  
14 tributary.

15 Maybe you misunderstood. We're not saying these  
16 are background levels in the sense of naturally  
17 occurring background. We are stating that we're seeing  
18 elevated concentrations in our upstream or background  
19 samples.

20 MR. KATZ: Let me state this all a little  
21 differently then. I was out there for a site visit  
22 several years ago and we walked down into the gully and  
23 there were black oily seeps coming out of the bank, you  
24 know, at least one or two locations that we  
25 photographed, and we didn't have very fancy equipment,

1 but it was there.

2 And it's hard for me to imagine, say during a rain  
3 storm, that's not washing -- the water is not washing  
4 down the slope, coming in contact with that material,  
5 putting it into the water. And as this is a dump, you  
6 can cap it, but you'll still have some groundwater  
7 flowing under it, which could contribute to the surface  
8 water.

9 And I guess my final feeling is that I would like  
10 to see the material -- the material removed from that  
11 site, because it's a source area, the headwaters for  
12 these streams, and possibly consolidated elsewhere on  
13 the base.

14 It seems that if all the waste was consolidated in  
15 one area, you'd have an easier chance to monitor it and  
16 reduce some long-term cost. But it's hard to imagine  
17 how Site 8 is not contributing to some of these  
18 things.

19 I understand what you're saying about upstream  
20 sources, but I wonder if further exploration of that  
21 site would reveal potential sources for these materials  
22 there, too.

23 I know there are some monitoring wells scattered  
24 around, but it's possible to miss them, particularly if  
25 the source is a very concentrated area.

1 MR. SHAFER: But your main concern is you would  
2 prefer to see the waste removed.

3 MR. KATZ: Yes. If the waste is not there, then  
4 we know it's not contributing.

5 MR. SHAFER: Okay. Your comment is noted. Thank  
6 you.

7 Are there any other comments?

8 Yes.

9 MS. SWANSON: Listening to this gentleman's  
10 question I just wondered if your sampling was done  
11 after rain events?

12 I've been involved in sampling in other areas and  
13 the weather at the time is very important when you do  
14 your sampling, and I would question whether they were  
15 done before and after rain.

16 Eleanor Swanson is the name.

17 MS. WALTER: The sampling program was designed  
18 and developed, and we included three rounds of sampling  
19 of the leachate areas and the surface water and  
20 streams, and they were not -- there was no connection  
21 to say after the most recent rain event we need to get  
22 a sample. I believe they were collected -- they were  
23 collected back in '88 and '89 at different seasons. So  
24 I think that they do reflect the seasonal variation  
25 that you may see. But I do not believe that they were

1 linked to a storm event or rain event.

2 MS. SWANSON: I would think after listening to  
3 this gentleman's comment that perhaps it might be wise  
4 to do some sampling after rain events. Because it does  
5 make a difference. And of course it's all pollution  
6 whether it's before or after the spring, summer or  
7 fall, it's after a rain event.

8 MR. SHAFER: Okay. We'll discuss that, and we'll  
9 look into that as part of our monitoring.

10 Are there any other questions?

11 If there are no other questions or comments --  
12 before we close I just want to mention that we did mail  
13 out fact sheets. We mailed out approximately 200 of  
14 these. These fact sheets are a summary of the proposed  
15 plan. And if you did not receive a fact sheet and  
16 you'd like to get on our mailing list, please see Mike  
17 L'Abbe at the back of the room.

18 And these proposed plans that we write and these  
19 fact sheets we try and use clear and concise language  
20 to help. We'd like some feedback also from you on  
21 that.

22 MR. MacLEOD: Didn't you say if we have other  
23 concerns in Site 8 that after the meeting we could ask  
24 them?

25 MR. SHAFER: Sure. We're receiving comments now

1 for the record for Site 8.

2 We've heard some good comments tonight. We will  
3 certainly take those into consideration before we make  
4 a final decision on this site.

5 If there's other matters you'd like to talk about,  
6 for the sake of the people here I'll close the comment  
7 period for the meeting. We can close the meeting  
8 tonight and we'll be around and glad to talk to you  
9 about any other environmental concerns you may have.

10 If there's no other comments, that's it. We thank  
11 you for coming. And we encourage you to -- if you have  
12 any other additional comments, send them in writing to  
13 me. My address is in the fact sheet. Call Mike L'Abbe  
14 up, and contact the state or the EPA.

15 Thank you.

16 (Hearing was concluded at 8:37 p.m.)

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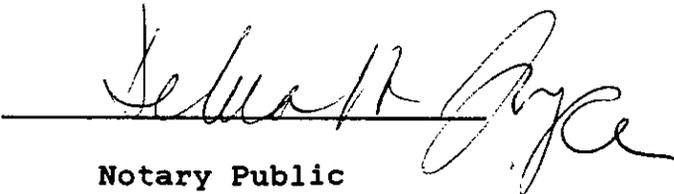
## CERTIFICATE

1  
2 I, Debra M. Joyce, Notary Public in and for the  
3 State of Maine, hereby certify certify that this  
4 hearing was stenographically reported by me and later  
5 reduced to print through Computer-Aided Transcription,  
6 and the foregoing is a full and true record of the  
7 hearing.

8 I further certify that I am a disinterested person  
9 in the event or outcome of the above-named cause of  
10 action.

11 IN WITNESS WHEREOF, I subscribe my hand and affix  
12 my seal this 23<sup>rd</sup> day of Oct 1992.

13 Dated at Falmouth, Maine.

14  
15  
16   
17 Notary Public

18 My commission expires

19 September 27, 1998  
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22  
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