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NCBC GULFPORT  
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PUBLIC MEETING MINUTES REGARDING PROPOSED COVER FOR FORMER LANDFILL  
SITE 5 13 MAY 2008 NCBC GULFPORT MS  
5/13/2008  
NCBC GULFPORT

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NCBC GULFPORT PUBLIC MEETING  
CTO 292, SITE 5  
HEAVY EQUIPMENT TRAINING  
AREA LANDFILL  
\* \* \* \* \*

The public meeting was held at the  
Crystal Inn, Gulfport, Mississippi on the  
13th day of May 2008, commencing at  
approximately 7:00 p.m.

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A P P E A R A N C E S

INTRODUCTIONS:

ART CONRAD  
NANCY ROUSE

SITE 5 PROPOSED PLAN:

ROBERT FISHER  
JOE LOGAN

Q & A:

ROBERT FISHER  
JOE LOGAN

ALISA MARIE DORILMA, CSR-1792  
COURT REPORTER

ALSO PRESENT:

CHARLES REESE, VIDEOGRAPHER

1 MR. CONRAD:

2 I'm Art Conrad. I work for the Navy,  
3 and we're here to present a proposed plan  
4 for Site 5 on base. It's a called a heavy  
5 equipment training area landfill. It was a  
6 landfill that received refuse from the base  
7 and trenches. And trenches were covered.  
8 And then about 6 or 8 feet of sand was put  
9 on top of the whole site and then the base  
10 used the area for crane training, forklift  
11 training and bulldozer training so that's  
12 where the name came from.

13 But Bob Fisher is gonna go over what  
14 we propose to do the cleanup for the site  
15 and this will start the comment period for  
16 the community if you have concerns about  
17 what we are doing, you could identify your  
18 concerns. We can talk about -- we can have  
19 a discussion about anything to do with the  
20 site, but the specific concerns need to be  
21 identified in writing so listen to the  
22 discussion and, you know, then voice your  
23 concerns. But then, if you -- if there are  
24 things that are not addressed, put them also  
25 in writing and then we will respond to your

1 concern within the 30-day period. And those  
2 responses will also be apart of the plan.

3 Okay. Bob Fisher from Tetra Tech --

4 MS. ROUSE:

5 I just have a few comments.

6 MR. CONRAD:

7 Okay. Yes. Yes.

8 MS. ROUSE:

9 I just have a few comments about how  
10 the meeting is set up. Okay. First, I just  
11 want you to know there's a court reporter  
12 here tonight because it's a public meeting,  
13 and also we're videotaping the presenter not  
14 the group, and that's just so we get a  
15 better transcript. You know, it's really  
16 difficult to capture a lot of discussion in  
17 a court report like this so we're just doing  
18 this to capture as much as we can.

19 If -- This is Alisa, and if she's not  
20 able to hear something that she needs to  
21 record, she -- either she or I may ask you  
22 to repeat your question or comment. So,  
23 again, that's all just to get the best  
24 verbatim transcript that we can get.

25 And then, as Art has said, comments

1 will be accepted in writing during the  
2 public comment period. And we have some  
3 forms in the back and there's also a form in  
4 the very back of the proposed plan which is  
5 the document that's gonna be presented  
6 tonight. And you can also present them by  
7 e-mail to Gordon Crane.

8 And then if there are any questions  
9 that you have that aren't related to Site 5,  
10 please hold those until after we complete  
11 the discussion of Site 5 so that we can,  
12 again, get a good, clean transcript.  
13 We'll be happy to answer any questions you  
14 have, but again, until we close that Site 5  
15 part of the meeting, we'd like to hold those  
16 comments or questions.

17 And it is okay to interrupt during --  
18 raise your hand and ask questions or, you  
19 know, make a comment about Site 5 during the  
20 presentation.

21 And I think that's pretty much what --  
22 you know, I just wanted to share with you  
23 before we start.

24 MR. FISHER:

25 All right. My name is Bob Fisher as

1 Nancy mentioned. I'm actually gonna handle  
2 about the first half of the presentation.  
3 I'm gonna go over the investigative portion  
4 of it. I'll get into the remediation just a  
5 little bit so that we can start the  
6 discussion, and then I'll hand it over to a  
7 Tetra Tech engineer, Joe Logan. He'll go  
8 ahead and carry it out from there. So let's  
9 get started.

10 Okay. This is the proposed plan. You  
11 have copies of it. It provides  
12 environmental information about the site.  
13 It summarizes the alternatives that we  
14 looked at for completing the site remedial  
15 activities and it also explains our  
16 recommendations for what we would like to do  
17 with the site.

18 Obviously at this point, the decision  
19 is still out there for the public to comment  
20 on. And we will certainly take any of those  
21 comments into consideration as we take this  
22 final.

23 The public comment period starts  
24 tonight and a period of time until June  
25 13th. We will have an interactive

1 conversation here. We'll have comments and  
2 discussions and I may say things in response  
3 to those questions, but if we want to get  
4 that into the record, it's best to have it  
5 in writing because just a question and  
6 comment session, some of those will get  
7 skipped so please go ahead and fill out  
8 those comment cards and we'll respond to  
9 those and that'll be part of the record.

10 The rest of the documents that support  
11 what we're doing here tonight are the  
12 remedial investigation and feasibility study  
13 those are available in the information  
14 repository and we can now get copies of  
15 those as PDFs if anybody requests those.

16 Okay. A little bit about the site.  
17 Site 5 is a former landfill located in the  
18 southwest corner of the Seabee base and I'll  
19 have a picture of that here in just a  
20 second. It's about six acres -- the site is  
21 about six acres large. It's current -- it  
22 was used for heavy equipment training.  
23 Currently, they are trying to stay off the  
24 sandy area that is -- that covers the  
25 landfill. It is flat. There's a mound on

1 the site near the center that was used for  
2 forklift training and just driving up and  
3 over the mound. As we mentioned, there's  
4 very little vegetation. And two of the most  
5 important features of the site are the  
6 ditches along the south and western sides of  
7 the site.

8 Here it is. This is the site itself  
9 within the blue line. We determined that  
10 using primarily geophysics. That's an  
11 instrument like a metal detector. We go out  
12 there and we canvas the site up and down in  
13 rows and cover the entire area. We find  
14 what was disposed out there because of its  
15 signatures with metallic energy that we pick  
16 up with the instruments.

17 What we determined is, this is the  
18 edge of the site. We confirmed that using  
19 drilling and direct push technology,  
20 collecting the soil samples and surface soil  
21 sample across this area.

22 We further studied the ditches by  
23 collecting soil and sediment from the ditch  
24 and surface water. So the remedial  
25 investigation is the -- is the sum total of

1 all that information that we put into a  
2 document. While we've gone into the real  
3 detail of that in previous meetings, we're  
4 gonna cover some of the highlights of the RI  
5 here tonight.

6 Here's an image of the site looking to  
7 the north. This is essentially standing on  
8 that earth of mound I discussed. As you  
9 see, it's flat, sandy, you have a monitoring  
10 well right there, and you can see from some  
11 of the -- just scrubby grass growing there,  
12 but it's not been a lot of activity on that  
13 area which is really what we wanted.

14 Again, looking a little bit further to  
15 the northeast, this is towards a little more  
16 industrial areas on the base. Again, that  
17 pretty much is the site. This is the sandy  
18 cover. The landfill itself is 3 to 4 feet  
19 below this sand. It was a trench landfill.  
20 This is very common with the military. They  
21 did incinerate within those trenches until  
22 the whole area was covered over with the  
23 fill you see here.

24 A little more of the history of the  
25 site. Was operated for approximately four

1 years in the early to mid '70s. The waste  
2 that were put there were on-base dumpsters,  
3 construction debris, general refuse. Some  
4 of the liquid waste that we know of are  
5 probably some solvent-type waste or fuels.  
6 Those were used as accelerants for  
7 consideration that happened on a really  
8 regular basis.

9 As I mentioned, after the landfill  
10 activities was stopped and the site was  
11 covered with sand and then it was used for a  
12 number of years for heavy equipment  
13 training. Then the guys that were out there  
14 doing the equipment training, did push that  
15 covered soil around quite a bit. So one of  
16 the problems we had was to look at that  
17 covered soil as part of landfill and not a  
18 separate unit from it because of the  
19 potential for mixing.

20 History of the investigations. It  
21 started in 1987. Initial assessment study.  
22 That was the Navy's first look at confirming  
23 whether or not the records of landfill and  
24 other things like that were true. The 1987  
25 studies confirmed that it was the landfill

1 we had in the reports. Not a lot of  
2 activity was taken between '87 and '97.

3 Part of the reason for that was, they  
4 did an initial set of studies that didn't  
5 find any of the contamination that we would  
6 find later. Part of that was due to the  
7 technology they had available to them at the  
8 time. The laboratory they're using now is  
9 more extensive. And part of that was, they  
10 didn't have a good understanding of the  
11 geology. They collected a lot of samples in  
12 the areas that we later find out were up  
13 gradient of the site.

14 We have got a lot more intensive to  
15 the site in 1997, what we call the  
16 groundwater monitoring report. They  
17 collected a full range of samples from the  
18 subsurface and from the ditches around the  
19 site.

20 What we learned from this study in  
21 1997 was that we should continue on in and  
22 conduct a remedial investigation. We did  
23 that. We initiated the investigation in  
24 2001. We continued into 2002. And when we  
25 looked at -- further looked at the surface

1 soil, we were concerned enough to collect  
2 some additional samples in 2006 to make sure  
3 we had a good understanding of everything at  
4 the surface.

5 Okay. Next slide. All right. The  
6 surface soil concentrations that we're  
7 looking at here in the rest of this -- next  
8 couple slides, this is going to cover the  
9 major findings from the remedial  
10 investigation. So when we talk about  
11 individual compounds or metals or things  
12 like that, these are the major findings from  
13 the remedial investigation.

14 So I'll start with surface soil. Our  
15 concern there with surface soil is that it's  
16 the way it would be contaminated. That's  
17 when people walk across the site, this is  
18 the first thing they're gonna come into  
19 contact with. It was very important for us  
20 to have a good understanding of the surface  
21 soil conditions. And secondarily, we needed  
22 to know how big of an area we're gonna cover  
23 with a landfill cap. And really, the --  
24 while the geophysics told us the extent, we  
25 needed to confirm that with actual soil data

1 and that's what we had here.

2 When you look at the results of the  
3 surface soil, we did see arsenic, and it was  
4 above what we would call the residential use  
5 numbers but below restricted or industrial  
6 numbers.

7 When we evaluate that, when you see  
8 something between residential and  
9 industrial, you have to look at the risks of  
10 how people would come into contact with it.  
11 And since we have residents living adjacent  
12 to the site, even though the site itself is  
13 industrial, we have residents very close by  
14 so we're gonna look at this on more of a  
15 residential standard.

16 We did collect dioxins and furans.  
17 And the reason we were looking at dioxins  
18 and furans in every reading in here, that  
19 means surface soil, sediment, groundwater  
20 because that landfill was open at the same  
21 time the drums of Herbicide Orange was  
22 stored at the Seabee base.

23 What we found were dioxins and furans  
24 above the screening of the residential use  
25 standards but less than industrial. Again,

1           like surface soil and the arsenic we  
2           mentioned, we're more concerned about the  
3           residential use because of the proximity of  
4           the houses.

5                       Once we get to the subsurface, this is  
6           soil that's greater than a foot or two deep.  
7           We're looking at, again, dioxins and furans.  
8           Again, they were less than the restrictive  
9           level but above the residential level. What  
10          all that tells us is that we need to take  
11          action. To leave those there the way it is  
12          opens up the site to the potential of  
13          exposure. So when you've got a site like  
14          Site 5, we're looking at how do we prevent  
15          exposure in the future.

16                      When we see the numbers that exceed  
17          residential use and we have a residential  
18          community nearby, that triggers us early on  
19          to start thinking about taking action to  
20          prevent that exposure.

21                      When we looked at groundwater, we saw  
22          some other concentrations of some other  
23          contaminants; benzo anthracene -- the PH, it  
24          was greater than the MDEQ regulatory levels.  
25          When we talk about groundwater, we're

1 talking about one level, and the standard is  
2 drinking water. There's no residential or  
3 nonresidential standards for groundwater.

4 Again, with the dioxins and furans,  
5 the totals are greater than the drinking  
6 water standard. And we found that there  
7 were no plumes (phonetic) or groundwater  
8 concentration leaving the site or migrating  
9 away from the site.

10 For the ditches around the Site 5,  
11 those would be surface water and sediment  
12 samples. What we found there were the --  
13 again, with this arsenic in the sediment.  
14 We saw dioxins in the sediment that also  
15 prompted us to take action here because they  
16 were above the screening standards. The  
17 surface water we found that was leaving the  
18 site, we didn't get contaminants above the  
19 regulatory levels.

20 One of the things that we were looking  
21 for, there had been reports of buried drums  
22 and other buried metallic debris. We went  
23 after -- with the geophysical survey looking  
24 for those magnetic signatures of those  
25 drums. Unfortunately even if they were

1           there, the drums are probably old enough to  
2           degrade at the subsurface so that survey  
3           probably wouldn't have found it, but we went  
4           after it anyway just to make sure.

5                     And again, I note on the dioxins and  
6           furans, we collected every sample set from  
7           every media that had dioxins and furans,  
8           collected it and analyzed it. What we found  
9           in the site were a lot of these dioxins and  
10          furans associated with burning. These are  
11          the aqua chlorinated dioxins, the hexa  
12          furans (phonetic.) Those types of dioxins  
13          and furans are not generally associated with  
14          Herbicide Orange although we did find some  
15          TCED, but the TCED generally was below  
16          screening concentrations.

17                    That's a lot to say for a proposed  
18          plan and certainly if you have questions,  
19          you can ask right now or hold those. We can  
20          get into more detail on dioxins and furans  
21          or any of those others.

22                    Part of the remedial investigation  
23          involves evaluating the concentrations that  
24          we find in the samples and determining if  
25          there are risks to both humans and/or the

1 environment. One of the things we look at  
2 is whether human health risk assessment  
3 actually calculates that risk.

4 The State of Mississippi has a  
5 standard which is actually more stringent  
6 than the USEPA, but we do use USEPA methods  
7 to benchmark it against these more stringent  
8 MDEQ standards.

9 And the conclusions we have from risk  
10 assessment were that groundwater would not  
11 be suitable for drinking water which we  
12 pretty much knew from the earlier samples.  
13 And the contaminants with the highest  
14 potential risk to people were the arsenic,  
15 those dioxins and furans and again the PHs.

16 The ecological risk assessment looked  
17 at the same data but from the perspective of  
18 the environment meaning with animals and  
19 plants that would be there. The  
20 concentration did exceed some of the  
21 screening concentrations of Eco but the --  
22 to be a risk, you have the receptors there  
23 so the plants and animals that might be  
24 impacted by some of these concentrations  
25 just were not at that site so the ecological

1 risk assessment determined them not to be of  
2 a high risk. In fact, what this tells you  
3 here -- this information tells us that the  
4 actions taken were based on human risk and  
5 not ecological risk.

6 Okay. The approach to what we're  
7 doing here. For common types of sites, as I  
8 said, the USEPA standardized the approach  
9 for cleaning up some of these sites. One of  
10 these kind of standardized approaches is for  
11 an old landfill like this one. And this  
12 area, they call these presumptive remedies.  
13 And the reason they have these is so that we  
14 don't keep trying to reinvent the wheel each  
15 time we are investigating the site like Site  
16 5, and they have certain standards they want  
17 you to -- and certain processes to follow.

18 When you look at a presumptive remedy  
19 for a landfill to be consistent with other  
20 sites that have been accepted, we're looking  
21 at a type of cover that will prevent  
22 exposure while limiting infiltration of  
23 water and preventing exposure to any of the  
24 contaminants. And when we look at this type  
25 of site, municipal-type landfill or a

1 nonmilitary landfill because we did not have  
2 any radioactive waste or things that might  
3 be exclusions for using this presumptive  
4 approach.

5 Again, with the presumptive remedy for  
6 a municipal landfill. We're looking at a  
7 cover. The cover provides a barrier to  
8 access to the site. It prevents exposure to  
9 contaminants within the site. The rainfall  
10 that passes over the landfill will no longer  
11 infiltrate into the contaminants, and that  
12 prevents the contaminants from migrating  
13 away from the site to potentially become a  
14 problem later on either through surface  
15 water or migrating through groundwater.

16 One of the other things that we have  
17 to always look out for with landfills is the  
18 gases. When we looked at Site 5, we did  
19 find methane and we did find some hydrogen  
20 sulfide. They weren't in very high  
21 concentrations, but it's certainly enough  
22 that if you put a cap, you think of it like  
23 putting a plastic bag over the site, you  
24 could trap those gases eventually to create  
25 a hazard.

1                   So when we looked at those gases, we  
2                   decided that a venting system would also be  
3                   part of our actions to prevent the buildup  
4                   of those gases and potential hazards from  
5                   coming back.

6                   So from that point, I think it's  
7                   probably a good spot to stop and see if  
8                   there are any questions about the  
9                   investigation.

10                  At this point, we're gonna turn it  
11                  over to Joe and he's gonna talk about the  
12                  specifics of the cap and how that's gonna  
13                  take place.

14                  So if not, I'll turn it over to you,  
15                  Joe.

16                  MR. LOGAN:

17                  Thanks, Bob, for that.

18                  My name is Joe Logan. I'm an engineer  
19                  from the Tetra Tech Pittsburgh office and  
20                  I've been working on the feasibility study  
21                  and that's the part I want to go over now.

22                  The first step of the feasibility  
23                  study is putting together what's referred to  
24                  as remedial action objectives. And in this  
25                  particular case and as it applies to

1 presumptive remedy to prevent unacceptable  
2 human health risk following a remedial  
3 action objectives were identified. One,  
4 prevent direct exposure to contaminated  
5 soil and waists disposed at Site 5,  
6 therefore, eliminating unacceptable human  
7 exposure to the contents.

8 Number 2 is to reduce the movement of  
9 contaminants into the groundwater. Number  
10 3, prevent residential use of the  
11 groundwater, and Number 4, comply with  
12 federal and state legal requirements and  
13 guidelines referred to as applicable and  
14 relevant and appropriate requirements or  
15 ARARs. And those are the basic regulations  
16 in this particular case for groundwater  
17 quality, soil quality and also how to close  
18 the landfill.

19 Next one please. By using this  
20 presumptive remedy approach, the number of  
21 alternatives -- the whole family of remedial  
22 -- that need to be evaluated for feasibility  
23 studies, reduced it significantly at other  
24 sites, say, a nonlandfill site, many more  
25 different approaches might be considered,

1 different cleanups, different technologies,  
2 different processes whereas a landfill and  
3 especially the one typical -- that received  
4 typical municipal-type wastes. There's  
5 really just two alternatives that were  
6 really worth considering one, is the  
7 no-action alternative which is just part of  
8 the process that all the other alternatives  
9 were compared to. And the second and  
10 combined alternative is a cap and then  
11 lining the ditch that you saw earlier in the  
12 picture; land use controls to restrict the  
13 type of activities that's gonna take place  
14 at the site; and then finally monitoring.  
15 Monitoring groundwater; monitoring of gases  
16 that can come out.

17 Next please. Now, the first  
18 alternative is simply no action, and it's  
19 always used as the baseline for comparison.  
20 And this alternative is part of the  
21 superfund process, and that's why all  
22 alternatives are -- all our feasibility  
23 studies have this first alternative. And it  
24 basically assumes that no changes would be  
25 made at the existing conditions at the site.

1           There will be no monitoring, no cover, no  
2           inspection.

3                   Okay. Next one. Alternative 2,  
4           though, is the -- again, the approach that  
5           is best for and typical for a landfill. The  
6           first is a waist containment with a cap.  
7           The cap would be designed to meet the  
8           Mississippi DEQ landfill regulations. It  
9           would prevent direct contact with  
10          contaminated surface. It would minimize  
11          rain passing through the soil and through  
12          the waste and into the groundwater. And it  
13          also prevents contaminants from the landfill  
14          from eroding into the ditch.

15                   For this particular site, the final  
16          cover would be grass cover and the Navy  
17          plans to use it for recreational activities.  
18          Still hasn't said yet if it may be --  
19          currently they're looking to include it as  
20          part of the driving range.

21                   The next one, please. In addition and  
22          as part of this, some of the sediment that  
23          was found to be contaminated along the sides  
24          of ditch and at the bottom of the ditch that  
25          would be excavated, removed, put on the

1 landfill, and to reenforce the sides of the  
2 ditch, it would be lined with a grouted  
3 rock. And then the surface water and  
4 sediment control -- in other words, to keep  
5 more of the sediment from getting in it  
6 provided by capping the site and lining the  
7 ditch to keep waist from going into the  
8 ditch.

9 Next one, please. Land use controls  
10 would prevent residential development from  
11 the site; digging, and it would prevent  
12 groundwater use at the site. And after the  
13 cap is put in place, there will be periodic  
14 inspections to make sure that the cap hasn't  
15 been damaged. It's to make sure -- I'll get  
16 that later -- any of the wells or -- make  
17 sure they haven't been damaged.

18 Our last item is landfill gas vents  
19 along the perimeter and they would be  
20 sampled regularly. And the landfill gas  
21 vents is pretty much standard landfill  
22 closure procedures.

23 This particular site -- the last waste  
24 was deposited in '76, over 30 years ago.  
25 And the nature of this site compared to

1 other sites, there's probably very little  
2 gas being generated.

3 Okay. Next one. And then finally,  
4 the last is monitoring groundwater would be  
5 routinely collected for monitoring wells and  
6 analyzed for arsenic, dioxins and furans and  
7 benzo anthracene.

8 Next please. And then here's a  
9 drawing of some of the things that I've  
10 talked about. You can see here, the extent  
11 of the cap. Along the ditch, we would  
12 excavate the sediment along the bottom and  
13 some of the soil long the sides, and then  
14 that would be lined with a stone called rip  
15 rap. It's a heavy rock covered with  
16 concrete to keep it stable. I haven't  
17 really shown them but the number of  
18 monitoring wells and existing monitoring  
19 wells that would be along the site and  
20 within the site would be used to monitor the  
21 groundwater; check for contamination.

22 And then as part of the base  
23 operations, any activities in this area  
24 would be restricted to industrial or in this  
25 case, recreational and more importantly, it

1 wouldn't be used for residential-type  
2 activities.

3 Okay. Next. As part of the  
4 feasibility study -- as part of the  
5 methodology for doing the feasibility  
6 studies, evaluation of the alternatives and  
7 this alternative is evaluated against nine  
8 criteria that are established for superfund  
9 regulations.

10 Next one, please. And these nine  
11 criteria are -- there's first two threshold  
12 criteria which any alternative to be  
13 acceptable has to meet these two. And that  
14 would be overall protectiveness of human  
15 health and the environment and then  
16 compliance with the ARARs.

17 And then the alternatives are also  
18 compared for what's referred to as balancing  
19 criteria which are long-term effectiveness  
20 and permanence, reduction of toxicity,  
21 mobility or volume of contaminants through  
22 treatment, short-term effectiveness  
23 implementability and the costs.

24 Next one. And then the last two refer  
25 to modifying criteria is the state or

1 supporting agency acceptance and also  
2 community acceptance. In other words input  
3 such as what would come out of this meeting.

4 Next one, please. On overall  
5 protection of human health. Okay. That's  
6 talking about how Alternative 2 meets these  
7 criteria or how they fit in with these  
8 criteria.

9 Alternative 2 would be protective of  
10 human health and the environment. The cover  
11 and land use controls would prevent exposure  
12 of the contents of the landfill and the  
13 groundwater.

14 Next one, please. Okay. Compliance  
15 with the ARARs. The main thing is exposure  
16 to soil and groundwater with contaminant  
17 concentrations greater than criteria would  
18 be prevented. Again, this is part of the  
19 cover system and restricting the use.

20 Next, please. Long-term  
21 effectiveness. Again, this alternative is  
22 considered to be long-term effective.  
23 Capping of landfill is typical practice and  
24 this requires maintenance and long-term  
25 inspection.

1                   Okay. Next. The reduction of  
2                   toxicity and mobility for volumes of  
3                   treatment. There is very little, if any,  
4                   reduction of volume or toxicity. However,  
5                   with a cap, it would reduce the amount of  
6                   groundwater that goes through the waste and  
7                   it would limit the mobility of it.

8                   Next one, please. Short-term  
9                   effectiveness. Short-term effectiveness  
10                  refers to actions or effects while the  
11                  alternative's being implemented and during  
12                  the cover installation, there will be  
13                  engineering controls, dust suppression, and  
14                  also workers working under the construction  
15                  part of it would have to comply with health  
16                  and safety procedures.

17                  Next, please. Implementability.  
18                  Covering the landfill is a pretty standard  
19                  operation that's using common cover  
20                  materials and common lining materials. The  
21                  equipment and materials are readily  
22                  available. Technology for installing  
23                  monitoring wells and the like is very  
24                  common. And then land use controls would be  
25                  developed by the Navy with -- in concurrence

1 with MDEQ and the EPA.

2 Next, please. The cost for  
3 Alternative 2 is estimated to be  
4 approximately \$3.7 million. Annual costs  
5 associated with inspections, repairs and the  
6 like are estimated to be on the order of \$50  
7 to \$70,000 per year.

8 Next, please. So, again, the  
9 preferred alternative is the cap, the ditch  
10 lining, land use controls, then the  
11 monitoring as talked about here.

12 Comments on the proposed plan, again,  
13 I want to point out, there's a copy of the  
14 proposed plan on the back table. The last  
15 page has a comment form and Gordon Crane's  
16 address, and comments are to be sent to  
17 Gordon Crane at NCBC Gulfport, 2401 Upper  
18 Nixon Avenue, Gulfport, Mississippi 39501 or  
19 you can e-mail him at  
20 gordon.crane@navy.mill.

21 And questions about Site 5.

22 AUDIENCE MEMBER:

23 Earlier in the presentation, there was  
24 a photo of the map. And I see you had  
25 something in red on this and I went to look

1 at this. It's not on here. And go back.  
2 One of the first ones that shows the  
3 landfill.

4 MR. LOGAN:

5 Okay. Keep going to the very first  
6 one.

7 AUDIENCE MEMBER:

8 It's like the first --

9 MR. LOGAN:

10 It's like the second or third slide.

11 AUDIENCE MEMBER:

12 There. What is that right there?

13 MR. LOGAN:

14 That's underground. This is part of  
15 the drainage ditch system, and that really  
16 just shows a reinforced concrete pipe that  
17 extend up a little bit.

18 THE WITNESS:

19 Okay. It wasn't in here and I just  
20 didn't really catch what it was.

21 MR. CONRAD:

22 That's a drainage under the road.

23 MR. FISHER:

24 You're right. What we didn't talk  
25 about is how thick the cap would be.

1 MR. LOGAN:

2                   Yeah. I didn't include any detail on  
3 the cap. That would all might depend on the  
4 final use. The capping of itself, it  
5 usually may be a foot or two of material  
6 just to even it out and also to provide some  
7 slope to it. EG 1 to 4 percent slope. Over  
8 that, is a small clay liner, and then over  
9 that is another layer of approximately 18  
10 inches of sand and then that would be  
11 planted with top soil and grass.

12                   And like I said, the uses -- the  
13 Navy's current plan to use this site is for  
14 recreation-type activities. And I think  
15 right now, it's being considered apart of  
16 another driving range.

17 AUDIENCE MEMBER:

18                   How did you all identify that site?

19 MR. LOGAN:

20                   Pardon?

21 AUDIENCE MEMBER:

22                   What prompted the investigation that  
23 allowed you to --

24 MR. FISHER:

25                   The Navy has a program called

1 "Installation and Restoration Program" that  
2 looks at previous sites that may be  
3 hazardous or may have been used to dispose  
4 of material, and part of the kickoff of that  
5 program was to identify any potential sites,  
6 not just the NCBC, but all the Navy. So  
7 that was part of their earlier program to  
8 identify sites. They interviewed people,  
9 they look at records, and Site 5 was one of  
10 the sites they initially identified when  
11 they first looked at the base. They  
12 identified others as well that we talked  
13 about on a regular basis.

14 AUDIENCE MEMBER:

15 I'm just kind of curious how far out  
16 past the landfill would this cap extend?

17 MR. LOGAN:

18 Can you go to that other drawing?  
19 This is preliminary. It really  
20 wouldn't extend too far beyond the waste  
21 itself.

22 AUDIENCE MEMBER:

23 You mean, in the square area?

24 MR. LOGAN:

25 Yeah. That's generally showing what

1           it is. Again, this is a preliminary-type  
2           drawing.

3 AUDIENCE MEMBER:

4                   And this is pretty well gonna take  
5           care of any moisture coming into that  
6           contaminated area?

7 MR. LOGAN:

8                   That's the idea, yes. There's a clay  
9           liner.

10 AUDIENCE MEMBER:

11                   When you did your study and your  
12           drilling into it, what was the water level  
13           in there?

14 MR. FISHER:

15                   We did a water level that was 6 to 8  
16           feet.

17 AUDIENCE MEMBER:

18                   How deep is that? Did you do a  
19           sediment? Did you do a side dig and go in?

20 MR. FISHER:

21                   We didn't do any angle drilling. We  
22           did -- we did about 75 drills through the  
23           landfill all over. So we covered the site.

24 AUDIENCE MEMBER:

25                   I'm just really curious because I'm

1           thinking of how shallow it is because I know  
2           my land on Canal Road, I can take a shovel  
3           and walk out in the backyard and I always  
4           dig less than 2 feet and I can get water.  
5           So you got me curious. That's why I'm  
6           asking these questions.

7   MR. FISHER:

8                       This is a little bit higher area and  
9           that's why they have it a little bit deeper,  
10          more on top of it. I think where you're  
11          getting at, yes, they intended to dig those  
12          trenches into two groundwater so the waste  
13          didn't meet contact with groundwater and  
14          that's one of the things --

15   AUDIENCE MEMBER:

16                       Cap it, now.

17   MR. FISHER:

18                       One of the things -- I guess, another  
19          thing about the cover, when you just look at  
20          that image, what you're not really seeing  
21          is -- say this is the landfill itself. The  
22          cover is going to go --

23   AUDIENCE MEMBER:

24                       Go over the top ground cover, any  
25          further rain from coming and I'm thinking

1 the rains that we got coming in, we're in  
2 rainy season, and the rain we get around  
3 here --

4 MR. FISHER:

5 That -- what the --

6 AUDIENCE MEMBER:

7 And what I'm looking at is ground flow  
8 as it comes in around that, say, around the  
9 base, around over here and flows down and  
10 get through the shallow wells to the aqua  
11 fire (phonetic) because also on my land is a  
12 40-foot well that my father dug. So I'm  
13 looking at -- water flows through here. I  
14 understand your cap, but I understand water  
15 flows down through there and that's what I'm  
16 really interested in.

17 And then at what point during the year  
18 is that ditch dry while we're talking about  
19 water levels? Is there a time during the  
20 year that you don't have water sitting in  
21 that ditch while we're talking about water  
22 flow?

23 MR. FISHER:

24 Not very often.

25 AUDIENCE MEMBER:

1                   And was that done during your study,  
2                   because I'd really like to see pictures of  
3                   that dry ditch.

4   MR. FISHER:

5                   It's very rarely dry.

6   AUDIENCE MEMBER:

7                   We know that there really is water  
8                   flowing around that ditch.

9   MR. FISHER:

10                  That's one of our concerns.

11   AUDIENCE MEMBER:

12                  Dig up the dirt and rocks.

13   MR. FISHER:

14                  Digging out the ditches in two  
15                  trenches, and the contaminants that are in  
16                  there in that sediment will come out and be  
17                  taken away. The other thing it does is when  
18                  we replace it with the rip rap and the  
19                  concrete that protects anymore --

20   AUDIENCE MEMBER:

21                  Coming into --

22   MR. FISHER:

23                  -- erosion from going into the --  
24                  exposing that -- the waste. And that's  
25                  probably one of the most important parts of

1           this is preventing erosion back into that  
2           landfill and exposing those contaminants and  
3           exposing that material.

4   AUDIENCE MEMBER:

5                   Will there be a screen coming from  
6           that cap into that ditch and stop that water  
7           from entering that ditch? Is there gonna be  
8           a filter system? I know you don't  
9           understand what I'm asking. Are we gonna  
10          put a filtration system coming from that  
11          sediment pile or that old dump site  
12          before -- when it comes out of there and  
13          goes into those ditches where we're gonna  
14          put the rubber liner and have to dig out the  
15          field dirt, okay, on the side, and after we  
16          put our rocks in there and we lined it all  
17          nice and pretty and we put our cap on it, is  
18          there a filtration system going into effect  
19          that is gonna disallow any rain water that  
20          comes in around it to allow it to seep  
21          through the ground through this waste and  
22          into that drainage system. That's what I'm  
23          asking because we don't --

24   COURT REPORTER:

25                   I'm sorry, I can't hear.

1 MS. ROUSE:

2 The transcriptionist is having trouble  
3 following.

4 MR. FISHER:

5 The question is about how would to  
6 prevent groundwater and surface water  
7 interaction. The thing that's going to  
8 prevent that is having that liner in that  
9 ditch there. You're not gonna get a lot of  
10 seepage from the ditch.

11 AUDIENCE MEMBER:

12 Not gonna get a lot of seepage.

13 MR. FISHER:

14 Correct. So we're gonna concrete that  
15 off. You're gonna get that seepage into the  
16 landfill.

17 AUDIENCE MEMBER:

18 Okay.

19 MR. FISHER:

20 Coming back out, you're not going to  
21 get a lot of that seepage because of that  
22 cap.

23 AUDIENCE MEMBER:

24 That's what I want to know. Is that  
25 cap gonna go in behind that ditch wall or

1           you're gonna put a barricade in there behind  
2           it.

3   MR. FISHER:

4           They're gonna dig that out and dig a  
5           second trench around the landfill so they  
6           can tuck that down in below and fill that --

7   AUDIENCE MEMBER:

8           And that's gonna be below ditch level.

9   MR. FISHER:

10           It will go in the deep ditch itself,  
11           yes, behind it. Not directly in the ditch  
12           but --

13   AUDIENCE MEMBER:

14           Yeah. Behind that ditch.

15   MR. FISHER:

16           Behind that concrete liner.

17   AUDIENCE MEMBER:

18           Okay. Get that detail somewhere in  
19           there with --

20   AUDIENCE MEMBER:

21           It really shouldn't because it looks  
22           that liner's gonna, you know, go into the  
23           ditch. You see how your blue line shows it  
24           going right into that ditch bank, and then  
25           you're showing your rocks right there in the

1 end and your liner is just coming straight  
2 out. And to me, that's not showing a  
3 filtration system. And it actually looks  
4 like you're gonna tuck your liner into the  
5 ditch bank and you're gonna still let any  
6 rain water and the heavy rains -- you guys  
7 understand the rains we get around here.  
8 And you're about to cap it and you're gonna  
9 let any groundwater come straight in right  
10 underneath that out to your ditch that you  
11 just cleaned out and rubber-lined and that's  
12 gonna let sediment take the highway out.

13 MR. FISHER:

14 Yeah. That's where the -- in the  
15 design drawings that they're working on,  
16 they have that detail showing how we tuck  
17 that and bring that cap -- that low  
18 permeability or that invertible layer down  
19 and tuck it. See, here's your ditch. It's  
20 gonna tuck in underneath it at the concrete  
21 and come up over the top and protect it.  
22 That clay could be eroded out if rain  
23 water --

24 AUDIENCE MEMBER:

25 That's what I was asking. What kind

1 of barricade is there between that dump and  
2 that ditch to try to support it?

3 MR. FISHER:

4 And that's why it gets so expensive  
5 because of that. And then if we just cover  
6 it with that soil, it wouldn't be that  
7 expensive. Because that ditch is so close  
8 to the site, it takes a lot reworking the  
9 soil to get that tucked in like that.

10 AUDIENCE MEMBER:

11 That's all I have.

12 MR. LOGAN:

13 Okay. That wraps it up. If there's  
14 any questions later, talk to him or me about  
15 it, okay?

16 This closes the Site 5 proposed plan  
17 presentation.

18 MS. ROUSE:

19 This part of the meeting is over and  
20 now we're just gonna have an informal  
21 discussion, and I will take some minutes.

22 (END OF PROCEEDINGS.)

23

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C E R T I F I C A T E

STATE OF MISSISSIPPI)  
COUNTY OF HARRISON)

I do hereby certify that the above and foregoing transcript of proceedings in the matter aforementioned was taken down by me in machine shorthand, and the questions and answers thereto were reduced to writing under my personal supervision, and that the foregoing represents a true and correct transcript of the proceedings given by said witness upon said hearing.

I further certify that I am neither of counsel nor of kin to the parties to the action, nor am I in anywise interested in the result of said cause.

s/ Alisa Marie Dorilma  
ALISA MARIE DORILMA, CSR  
MISSISSIPPI CSR-1792  
NOTARY PUBLIC

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## REPORTER'S PAGE

I, Alisa M. Dorilma, in and for the State of Alabama, the officer, before whom this sworn testimony was taken, do hereby state on the record:

That due to interaction in the spontaneous discourse of this proceeding, dashes (--) have been used to indicate pauses, changes in thought, and/or talk overs; that same is the proper method for a court reporter's transcription of proceeding; that the dashes (--) do not indicate that words or phrases have been left out of this transcript; and that any words and/or names which could not be verified through reference material have been denoted with the phrase "(phonetic)."

s/ Alisa M. Dorilma

Alisa M. Dorilma, CSR-1792