

MINUTES OF DECEMBER 2, 1992 TRC AND PUBLIC MEETING

TO: NSB-NLON TRC Members

FROM: Barry Giroux and Paul Burgess
Atlantic Environmental Services, Inc.

DATE: January 26, 1993

RE: Technical Review Committee and Public Meeting - December 2, 1992
Installation Restoration Study
Naval Submarine Base - New London
Groton, Connecticut
N62472-88-C1294
Atlantic Project No.: 1256-10-90

ATTENDEES:

The following people attended the meeting.

Dr. Clifford Striba	(Uncas Health District)
Thomas Wagner	(Town of Waterford)
Barry Giroux	(Atlantic)
Paul Burgess	(Atlantic)
Erik Ness	(Atlantic)
Dr. Charles Menzie	(Menzie-Cura & Associates)
Paul Jameson	(CTDEP)
Dr. Norman Richards	(City of Groton)
Mark Leipert	(Northern Division Naval Facilities Eng. Command)
William Mansfield	(Subase NLON)
Charles Maguire	(CINCLANTFLT (N4423A)
Robert Jones	(Subase NLON)
LCDR Ruth Noonan	(Submarine Group Two)
Deborah Stockdale	(Northern Division Naval Facilities Eng. Command)
Robert Fromer	(LEAF)
William Haase	(Town of Ledyard)
Commander E.O. Barfield	(Subase NLON)
Andrew Miniuks	(USEPA Region I)
Deborah Jones	(Town of Groton)
Ronald Ochsner	(Ledyard resident)
Dr. Eugene A. Cioffi	(Groton resident)
Jim Sebastian	(USEPA)

Commander Barfield opened the meeting and welcomed all attendees.

Paul Burgess, Atlantic Principal in Charge, provided an overview of the Installation Restoration program, a detailed presentation regarding the status of all of the sites being

investigated at the Subbase and a summary of proposed activities in the Phase II RI Work Plan. Following Paul Burgess, Dr. Charles Menzie presented an overview of the human health and ecological risk assessments to be performed during the Phase II RI at the Subbase. The areas of focus regarding the risk assessment presentation included Area A (Wetland, Landfill, Downstream/OBDA), Goss Cove, and the Thames River. A presentation regarding the status of the Boron and Background Soils Work Plan was provided by Barry Giroux. The primary focus of the presentation was regarding the proposed sampling to determine the concentration of inorganics in "background" soils and the erroneous boron readings reported by NET Cambridge on samples collected from offsite residential wells and from the Subbase. Interference due to sulfur was identified as having caused the incorrect boron readings from NETs' ICP (Inductively Coupled Plasma Spectrometer). Ed Lawler (NET Cambridge Division) was present and described the problem with the instrumentation. This new information indicates that boron is not present at elevated levels, however, the Navy intends to collect four additional rounds of groundwater from the offsite residential wells before a decision is made regarding the implementation of the Boron Work Plan.

During and following Atlantic's presentation, the following comments were made by TRC members. Responses provided at the meeting are included.

Comment: William Haase asked if TRC members could ask specific questions that are not related to the work plan itself.

Response: CDR Barfield explained, that it was the intent of the meeting to allow any questions relevant to the IR program to be asked and discussed.

Comment: William Haase asked why there was so much time between meetings of the TRC?

Response: CDR Barfield explained that TRC meetings are presently held at milestones, more frequent meetings would be considered.

Response: Deborah Stockdale stated that the Navy could arrange to conduct the TRC meetings more frequently.

Comment: A TRC member suggested that they meet on a quarterly or more frequent basis.

Response: Deborah Stockdale stated that this would not pose a problem.

Comment: Norman Richards stated that he would like to get information referenced in Atlantic's reports such as EPA guidance documents to allow a complete evaluation of the reports, and he further stated that the reports themselves should be sent in a more timely manner to allow a complete review before TRC meetings are held.

Response: Deborah Stockdale indicated that the Navy can get the information to the TRC members in a more timely manner in the future.

Comment: Norman Richards asked what had happened to the TRC charter.

Comment: Various TRC members questioned what is the TRC role, and what is expected from

the TRC.

Response: Jim Sebastian explained that the comments given by the TRC committee represent their opinions and are not legally binding, only the EPA and the State DEP can impose legally binding comments. All TRC comments will be evaluated by both EPA and the Navy prior to reaching a decision. The TRC opinions are important in that they can provide strong technical impact and can help to channel the direction of the project with strong public support.

Comment: Paul Jameson questioned if cores of the concrete pad located in Area A would be collected and analyzed.

Response: Paul Burgess explained that Atlantic was not planning on doing this.

Comment: Paul Jameson suggested that it may be necessary for the Navy to do this for disposal purposes.

Comment: Dr. Cioffi asked if there would be any analyses for dioxin in samples from the concrete pad.

Comment: Andrew Miniuks asked Paul Burgess if combustion had ever taken place on the concrete pad.

Response: Paul Burgess indicated that to his knowledge no combustion had ever taken place on the pad and that it is not proposed to analyze any samples from the concrete pad for dioxins; however, soil samples collected from borings near the pad will be analyzed for dioxin.

Comment: Norman Richards asked if there is a ground water monitoring well downgradient of the golf course.

Response: Paul Burgess explained that during the Pier 33/Berth 16 project, wells would be installed downgradient of the golf course. Presently there are none.

Comment: William Haase questioned whether dioxin analyses were performed on samples collected from the DRMO.

Response: Paul Burgess explained that in the past dioxin analysis was not performed, but future analyses of soils collected from DRMO will include dioxin.

Comment: Mr. Cioffi asked whether, in areas where PAHs were detected, were Nitro PAHs analyzed for.

Response: Charles Menzie explained that Nitro PAHs were not analyzed. Normally carcinogenic PAHs are the compounds driving the risk and therefore the remediation standards.

Comment: During the discussion of the Lower Subbase, Norman Richards commented that product recovery was implemented in this area at one time.

Response: Paul Burgess concurred and further explained that this was performed for a period of time to remove product from the ground water.

Comment: Charles Menzie was asked to explain incremental risk.

Response: Menzie explained that for carcinogens, risks are estimated as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to the potential carcinogen at the site. The incremental probability of developing cancer is assessed for a typical human receptor that may be exposed to site contaminants in their daily activities. Risk assessment does not relate site contaminants to epidemiological data for the area.

Comment: Robert Fromer explained that health risks and ecological risks indicate the possibility of responses occurring to the average person and do not take into account those persons who are more sensitive receptors.

Response: Charles Menzie agreed with Mr. Fromer on this point, however, he stated that there are a number of safety factors used in calculating toxicity values.

Comment: Andrew Miniuks raised the question as to whether the ingestion of ground water was being evaluated in the risk assessment.

Response: Charles Menzie responded that ingestion of ground water will be evaluated during the Phase II RI risk assessment.

Comment: A concern was raised as to whether occupants of the base who maintain vegetable gardens are at risk.

Response: Charles Menzie explained that this scenario was not being considered for this report and that no such gardens are known to exist.

Comment: Another concern was raised about people fishing from the pier on the Lower Subase.

Response: Charles Menzie explained that the Risk Assessment was not going to focus on fish in the river, but it would focus on the river itself, using caged oysters to indicate if contaminants are being transported to the river from the Base. This would help to indicate if the river quality was being negatively affected by the Subase.

Comment: William Haase stated that there are shellfish beds on the river.

Response: Charles Menzie indicated that any information of this nature is welcome, as shellfish studies are presently planned for the risk assessment.

Comment: The question was raised as to whether or not the State of Connecticut Department of Health Services was consulted for guidance regarding the risk assessment being performed.

Response: Charles Menzie responded that he had not contacted them and that this will be considered.

Comment: Robert Fromer argued for more testing to include the entire food chain. He indicated that he believes that the tests that are proposed are "not sufficiently comprehensive and broad based enough to derive meaningful conclusions".

Comment: With the mention of raccoons and muskrats living in the area, the question was raised as to why they are not being considered for tissue analyses.

Response: Charles Menzie explained that Atlantic has already predicted that the Area A Downstream location poses a risk. The work that is being proposed will observe any identified effects from the predicted risk and will be used to establish remedial action objectives.

Comment: Robert Fromer continued to disagree stating that too many broad based assumptions are being made. Mr. Fromer again stated that the data will be meaningless if the study is not modified to include a broader range of flora and fauna from within the study area.

Response: Charles Menzie stated that it would be far too ambitious to make an evaluation in such a broad sense.

Response: Commander Barfield suggested that Mr. Fromer's suggestions would be considered.

Comment: The question was raised whether sampling of the river would be conducted during storm pulses, when contaminant concentrations are typically elevated due to storm runoff.

Response: Charles Menzie stated that there is no provision presently to sample specifically during storm surges in the Thames River; however, all sampling is presently proposed for August during low flow conditions.

Comment: Robert Fromer asked how long the oyster cage studies would last.

Response: Charles Menzie responded that the studies would last on the order of 30 to 45 days.

Comment: William Haase questioned if risk has been evaluated for shellfish such as lobster collected from the river.

Response: Charles Menzie stated that presently the study is focused primarily on bivalves.

Comment: Robert Fromer stated that Dr. Menzies' risk assessment focuses primarily on adult species and he questioned why the study doesn't focus on larvae and the other developmental stages of creatures.

Response: Dr. Menzie explained that the evaluation of larvae stages is a useful tool that has been used to evaluate the effects of large oil spills, but is not necessary for this project at this state of investigation as we are gathering general information on overall ecological quality.

Comment: Robert Fromer stated that he would like a team approach to the risk assessment to attain the best results with the money given.

Response: CMDR Barfield suggested that TRC members bring specific information regarding their concerns to the next meeting to discuss.

Comment: Robert Fromer stated that, if he was going to design the program, he would examine the entire food web, then determine how much money he had to examine the problem, and then exclude some organisms and keep others.

Response: Dr. Menzie stated that, if commercial fishing is occurring in the Thames River, then perhaps we should evaluate testing lobster, and if there is a concern for larger vertebrates in the downstream area, we could evaluate the need to test muskrats.

Comment: Robert Fromer explained the history regarding the water quality classification of the Thames River and definition of the various classifications that have been assigned to the river. In particular, he made the point that any cleanups should consider the future goals for the Thames River specified in the quality classification.

Comment: William Haase suggested that the background sampling proposed as part of the Boron Work Plan is too limited, and should include transects away from the Subase to establish a background value for boron in soils.

Response: Paul Jameson explained that, if sampling is to take place off the Base, it must take place where the soils are of the same type.

Comment: William Haase suggested that finding such sites would not pose a problem.

Response: Barry Giroux explained that Atlantic/Navy could not commit at that time, but the idea would be considered.

Response: CDR Barfield asked William Mansfield what he thought about sampling off-site.

Response: William Mansfield replied that it should not be a problem (sampling off-site).

Response: Andy Miniuks added that he had walked the site and seen the sampling locations, and he felt that they would adequately represent background conditions at the base. He also added that off-site background samples would offer both pros and cons.

Comment: William Haase suggested that it would be important to do both anyway.

Comment: Robert Fromer stated that there appears to have been no scientific basis as to why the points were chosen as background.

Comment: William Haase asked what is the upper 95% confidence level.

Response: Barry Giroux explained that the upper 95% confidence level is a statistically derived number that represents an upper limit for background concentrations. Concentrations above this upper limit can be assumed with a fairly high degree of confidence to not be representative of background conditions.

Comment: William Haase indicated that he is not in favor of the use of the established USGS inorganic background values for boron, or the use of the upper 95% confidence level value.

Comment: Paul Burgess explained that the risk assessment will take into account the metals and their possible health effects.

Response: Robert Fromer explained that the exact value assigned as the background for boron is not extremely important; what is important is if the values collected from other areas of the Base exceed the background by an order of magnitude or greater.

Comment: Robert Fromer suggested that the report should address the possible sources of boron on Base.

Response: Barry Giroux explained that the perceived problem with boron was due to laboratory error. NET Cambridge's ICP was confusing sulfur with boron. Based on the recent analytical testing, it does not appear that boron is present above levels of concern or published background levels in residential well water.

Comment: Mr. Cioffi questioned why NET did not realize that there could be sulfur interference in the particular wavelength that boron is identified within. Mr. Cioffi explained that this interference is well documented in the Perkin-Elmer ICP manual.

Response: Ed Lawler (NET/Cambridge) explained that the ICP that NET uses is French-made and came factory-programmed for the 23 CLP metals. Mr. Lawler went on to explain that the documentation that was supplied with their ICP or any published literature did not identify any sulfur interference problem. NET has been working with the manufacturer to correct this problem.

Comment: Norman Richards commented that we need to address the more basic questions such as where has boron been identified on Base, and where is it used on Base.

Response: Bill Mansfield explained that very little boron-containing materials are used on Base and that the Navy is presently evaluating present and historic boron use at the Base.

End of Atlantic presentation, Commander Barfield highlighted some of the main points brought up during the presentation. He suggested that the TRC should meet no less than quarterly. Commander Barfield then asks what the TRC would prefer for a meeting format.

Comment: Robert Fromer suggested that daytime meetings would be preferable to him. There appeared to be general agreement from other TRC members.

Comment: Paul Jameson also agreed that daytime meetings would be desirable, with a public meeting in the evening.

Comment: William Haase suggested that it would be helpful to have an agenda for the next TRC so that it could be commented on/modified prior to the meeting.

Comment: It was suggested that it would be helpful for the TRC members to have more information regarding ongoing at the Base regarding new sites and it was asked when the FFA would be signed.

Response: Deborah Stockdale indicated that the FFA may be signed by January.

Comment: Robert Fromer suggested that the laws governing the Navy's cleanup program be presented to TRC members.

Response: Jim Sebastian explained that the program is operating under the Superfund regulations and guidance and that the Navy has followed these requirements.

Comment: Robert Fromer suggested that the laws be presented in such a way that the residents of the area can understand them.

Response: Andy Miniuks asked how Mr. Fromer would suggest the information be presented, as the EPA has available to them a variety of options which include video tapes, fact sheets, case studies etc.

Comment: Robert Fromer suggested that any way to get the point across would be better than what we have now.

At this point the TRC meeting was adjourned for a 10-minute break, after which the floor was opened to the public for questions and comments.

Comment: Mr. Rowley, a resident of the area, questioned who had picked the sites that were being investigated, suggesting that Atlantic is not investigating the areas that he believes to be contaminated.

Response: Paul Burgess explained that the areas being investigated were researched by a previous engineering firm who conducted interviews with present and former employees of the base and reviewed all available historical data.

Comment: Mr. Bart Pearson, an area resident, suggested that there is a lot of information regarding the Thames River in the library at Project Oceanology.

Response: Charles Menzie indicated that the Project Oceanology information will be further evaluated.

Comment: An area resident who owns property at 150 and 152 Pinelock Drive was curious as to why his wells were not sampled and whether or not they could be tested in the future.

Response: William Mansfield explained that approximately 26 wells were sampled in areas around the Base for residents that volunteered and that additional wells could be sampled if homeowners were to volunteer.

Comment: An area resident asked why the well at St. David's Church was sampled, given the fact that the well is not onsite, but is actually a Pfizer well.

Response: William Mansfield explained that the well was sampled because someone requested that it be sampled. The Navy was not aware that the church water supply was not from onsite.

Comment: Mr. Koors asked if 510 ppb DDD in the offsite stream sediments were high enough to cause concern.

Response: Charles Menzie suggested that the value was on the border in terms of risk as there are no standards for sediments at this time.

Comment: Mr. Koors also added that there is an area on the west side of the Thames River across from Long Cove where dredge spoils were disposed on land. Additionally he was concerned with whether shellfish (i.e., blue crabs) would be sampled for the risk assessment. The area residents apparently use Long Cove for crabbing.

Response: Charles Menzie responded, indicating that shellfish information would be useful.

Comment: Susan Pezzullo suggested that she found it helpful to be able to attend the TRC meeting. She also expressed concern with the background soil sampling for boron being performed only on the Subase, and not at any off-site locations. Mrs. Pezzullo explained that getting the public information sooner would allow area residents to have enough time to thoroughly review the information before the meeting, which she felt would be helpful.

Comment: The homeowner from 150 and 152 Pinelock Drive asked if it would be feasible to have their well tested.

Response: William Mansfield suggested that perhaps three or four homes could be sampled on that road if homeowners were to volunteer.

Comment: Susan Pezzullo asked where the project was in terms of the IR schedule.

Response: Paul Burgess explained that, for the major sites, the supplemental step II remedial investigations are proposed. The feasibility study and any remediation would follow these investigations.

Comment: Susan Pezzullo asked when the report for the phase II work would be prepared.

Response: Deborah Stockdale suggested that it would take approximately 13 months to do the work and develop the report from the time the contract is signed and that field investigations are scheduled to start in August.

Comment: Susan Pezzullo explained that she would like to get a feel for how long the whole process was going to take.

Response: Andrew Miniuks explained that at this time it would be very difficult to give exact answers as to when specific deliverables would be prepared.

Comment: Susan Pezzullo pressed for a best guess as to when cleanup would begin.

Response: Andrew Miniuks explained that the EPA goal is to have the site very well characterized before any cleanup work would begin; however, there is the possibility of some interim remedial measures that could be taken concurrently with the phase II work.

Comment: Susan Pezzullo expressed concern with the construction projects at the Base that could be affecting ground water flow directions, as well as future site development that may have an impact on off site groundwater.

Response: Barry Giroux explained that monthly ground water elevations in Area A would be measured to ensure that ground water flow directions are not being affected by site development. The data will be presented in graphic form indicating flow directions.

Comment: Robert Fromer questioned whether IR thermography, or IR photography had ever been investigated for the Subase.

Response: Barry Giroux explained that he understood that technology to be useful as a screening tool, but probably not very useful at this stage of the investigation.

Comment: Susan Pezzullo asked whether any radioactivity was detected on Base.

Response: Paul Burgess explained that there were no elevated levels above background in the soils or sediment. However some alpha and beta levels were observed above background in ground water; a more detailed analyses will be performed during the Phase II investigation. These wells were subsequently tested by the Navy, which determined that the levels are due to naturally occurring sources.

At this time the meeting was adjourned.