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March 24, 1999

Project Number 7752

978

Mr. James Shafer
Remedial Project Manager
Northern Division, Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop 82
Lester, Pennsylvania 19113

Reference: CLEAN Contract No. N62472-90-D-1298
Contract Task Order No. 0302

Subject: Submittal of Minutes, EAB Meeting No. 14 - March 18, 1999
Naval Station Newport, Newport Rhode Island

Dear Mr. Shafer:

Enclosed are three copies of the minutes to the Ecorisk Advisory Board (EAB) Meeting No. 12, which was held on March 24, 1999. These minutes were prepared to describe technical discussions and agreements made during that meeting.

Issues that were introduced on the agenda and hand-out are presented in italicized text. Resolutions and action items are presented as bold text.

If you have any questions about this material, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Stephen S. Parker'.

Stephen S. Parker
Project Manager

SSP/

attachment

- c: M. Griffin, NSN Newport - (w/encl - 4)
- D. Egan, TAG - (w/encl. - 1)
- K. Finkelstein, NOAA - (w/encl. - 1)
- K. Keckler, U.S. EPA - (w/encl. - 4)
- P. Kulpa, RIDEM - (w/encl. - 4)
- J. Stump Gannett Fleming - (w/encl - 2)
- NSN Restoration Advisory Board - (w/encl. - 4)
- J. Trepanowski/G. Glenn, B&RE (w/encl. - 1)
- File 7752-3.2 (w/o encl)

bc: G. Bullard (w/encl.)
D. McKenna (w/encl.)
G. Tracey (w/encl.)
File: 7752-8.0 (w/encl.)

ATTACHMENT A
MINUTES OF THE 14th ECORISK ADVISORY BOARD MEETING
NSN Newport Conference Center
March 19, 1999

Meeting Attendees:

Jim Shafer, U.S. Navy Northern Division RPM
David Barclift, U.S. Navy Northern Division
Melissa Griffin, NSN PWD (Environmental)
Stephen Parker, Tetra Tech NUS Inc.
Diane McKenna, Tetra Tech NUS Inc.
Greg Tracey, SAIC
Kymberlee Keckler, U.S. Environmental Protection Agency RPM
Mary Sanderson, U.S. Environmental Protection Agency
Cornell Rosiu, U.S. Environmental Protection Agency
Mike Maddigan, Gannet Fleming
Bart Hoskins, Lockheed Martin
Ken Finkelstein, NOAA
Paul Kulpa, Rhode Island Department of Environmental Management RPM
Chris Deacutis, Rhode Island Department of Environmental Management
Bob Richardson, Rhode Island Department of Environmental Management
Richard Gottlieb, Rhode Island Department of Environmental Management
Jane Wells, Facilitator

Meeting Convened at 9:30 AM

Jane Wells introduced herself as an independent facilitator for the meeting today. She had everyone identify themselves as described above. Introductory remarks were provided by Mary Sanderson, Jim Shafer and Richard Gottlieb.

Jane stated that she had attended the RPMs meeting on the previous day and the RAB in the previous evening, and stated that the RPMs determined that it was appropriate to have the technical experts for the respective offices meet and discuss the finer technical points of the Preliminary Remediation Goals (PRGs). She stated that the purpose of this meeting was to discuss and reach consensus on the issues at hand for the purposes of moving on with the Proposed Plan for McAllister Point Landfill and the Feasibility Study for Derecktor Shipyard. She asked for concurrence from the three primary parties.

Rich Gottlieb stated that his office would like to reach closure on the PRGs or agree to transfer information needed within a proper time frame in order to move forward with Derecktor and McAllister.

Jim Shafer stated that the Navy's interest is to do the right thing by performing the appropriate cleanups at both sites, and to move toward those goals as efficiently as possible.

Kymberlee Keckler stated that her office would like to agree to site-specific cleanup criteria that support cleanup at both sites.

Ken Finkelstein stated that he agreed with the EPA: his interest was to reach consensus on the technical approach for development of PRGs.

Jim Shafer interjected that all attendees know what the Navy has proposed for McAllister, and asked if everyone agrees with those alternatives.

Richard Gottlieb Stated that his office supports the general alternative of dredging the near shore and monitoring the off shore.

Kymerlee Keckler stated that the EPA is in agreement.

Bob Richardson had a question related to the impact of the large Navy vessels that have been brought to Derecktor. He questioned whether the data and evaluations to date are adequate and relevant due to the changed use of the site. What would vessels do in the future? What have they done to date? The site's current condition may be altered from the way it was evaluated in the ERA, and it may continue to be altered by future ship traffic.

Jim Shafer responded that the site's use will remain as a Navy port. Ships will move in and out on occasion.

Kymerlee Keckler stated that the ERA was site specific and that any remedy selected would have to address suspension.

Greg Tracey stated that a resuspension won't change the end result of the PRGs. The contaminant levels would be the same but the distribution of remaining contamination may be different.

Steve Parker stated that sediment transport will be addressed through the performance of a pre-design investigation.

Bob Richardson, Paul Kulpa, and Ken Finkelstein held a brief discussion about some of the data limitations for the Derecktor site. RIDEM stated that the PRGs should be recalculated based on new resuspension assumptions. RIDEM also stated that they were not comfortable that the most conservative condition was not evaluated (e.g. AVS in pore water was not measured in winter). Ken clarified that no pore water - based PRGs were developed for metals at that site.

The Facilitator stated that we were already getting off the agenda, and reintroduced the list of eight issues. She asked if everyone agreed that the items on the list needed resolution to move forward with the PRAP for McAllister and the FS for Derecktor. These items were read from the agenda:

1. *Human Health Risk: Need resolution on the ingestion rate for shellfish.*
2. *AWQC - Need resolution that use of federal AWQC are adequate for these projects, and that use of RIDEM AWQC would not change the PRG values substantially.*
3. *Recommended PRGs - Contaminant-specific issues with recommended PRGs, based on ERL values and other criteria (PAHs, Lead, PCBs). Need resolution on RPRGs.*
4. *Resuspension - Need resolution on how to address periodic resuspension of sediments.*
5. *Intermediate risk areas - Need resolution on whether PRGs should target these areas.*

6. *Human RPRGs - need resolution on whether these should be based on the combined risk for all contaminants of 1E-4.*
7. *Biota Exposure to contaminants - Need resolution on whether the pore water exposure measured is adequate for PRG development, or if exposure to sediment contaminants should be evaluated as well.*
8. *Any other PRG issues that RIDEM or EPA consider outstanding prior to considering PRGs resolved.*

All agreed that the eight items needed to be addressed.

Paul Kulpa stated that all items on his letter dated December 21, 1998 regarding the final PRG document for Derektor Shipyard required addressing. He agreed that these were the only outstanding issues with the PRGs, and all previous comment letters and issues had been resolved.

After some discussion, it was agreed that Item 6 on the agenda could be addressed first and quickly:

6. Summary: *In a previous response to comments, the Navy proposed recalculation of carcinogenic RPRGs based on the combined risk of all analytes not exceeding 1E-4. Baseline PRGs will remain unchanged at 1E-6 risk. RIDEM was to verify the States legal position on this matter (McAllister).*

Paul asked for clarification on the approach used for McAllister Point PRGs: it was clarified that PRGs for human health were calculated as follows: *Recommended* PRGs were based on an aggregate (sum) of risks equal or greater than 1E-4, and *Baseline* PRGs were based on risks from individual compounds providing risk in excess of 1E-6.

Paul stated that the RIDEM agreed with this approach.

The Facilitator clarified that Item 6 on the agenda had been resolved.

The Facilitator directed attention to Item 1 on the agenda, with agreement from all parties:

1. Summary: *The RIDEM has stated that they do not consider the Human Health Risk Assessment (for Derektor) finalized. They do not concur with the shellfish ingestion rate of 15.6 g/day. It is the Navy's position that higher ingestion rates for shellfish & lobster at this site are not justified. There was a similar comment for McAllister, although the RIDEM conceded that it didn't matter, as the areas in question were triggered for remedial action based on other risks.*

Paul Kulpa stated that the RIDEM position was that there had been a similar discussion for McAllister, and the state had agreed that in order to move forward with the process, they would accept the shellfish ingestion rates used in the Navy's Human Health Risk Assessment for that site only, and stated that they wanted a higher ingestion rate used for future studies. Namely, the RIDEM requested that for the subsistence fisherman, use 80 g/day for the three peak months of summer, and 15.6 g/day for the remainder of the year, and use 15.6 g/day for recreational fishermen.

Steve Parker summarized the Navy position that an ingestion rate of 15.6 g/day was used in the human health risk assessment for the subsistence fisherman, on the basis that the limitations presented by the site would not allow collection of more than this amount. The Navy did acknowledge the ingestion rate requested by the state as that which could be taken from an entire

food supply, but that the site cannot support that much fishing, and subsistence fishermen would go to more productive areas: intertidal flats and marshes such as those that are found at Allen Harbor.

Discussions followed that brought out the following points:

Actionable human health risk was determined for the site using the Navy's values, and as a result, a shellfish/lobster ban is proposed as a remedial alternative (Navy).

Higher rates were used at Allen Harbor (RIDEM)

80 g/day, even as a reasonable maximum rate would be hard to justify for this site (EPA)

Revision of affected documents would provide substantial setback (Navy)

Most conservative values should be used (RIDEM).

State may not accept an institutional control as a solution, and request dredging to address human health risk from ingestion of shellfish and lobster (RIDEM)

Use of RIDEM rates would increase the area requiring remedial action, which would probably be collection bans and use restrictions (Navy and EPA).

The Facilitator requested proposals for resolutions:

- Use RIDEM values. Outcome would be to set back progress (revise HHRA, PRGs, and FS), and conclude that there is a need for shellfish/lobstering ban over a larger area
- Leave documents as is and assume a shellfish/lobstering ban must cover all of Coddington Cove.
- Proceed with a remedial action using current PRGs, do a second risk assessment after the remedial action is complete using post remedial action data, and determine whether risk at that time warrants further action.
- Take another look at the PRGs using increased ingestion rates, and combined contaminants providing a risk of $1E-4$ as was agreed to under issue #6 (above).

The facilitator called a five minute break to allow for caucus. The meeting resumed approximately 5 minutes later.

RIDEM proposed to leave Human Health Risk Assessment as is, revise PRG document using the higher ingestion rates, and add this as an addendum to the HHRA.

Diane McKenna stated that the change would be negligible because of the resolution of the previous issue increasing the ingestion rate would increase the PRG, but basing the PRGs on sum of risks $1E-4$ instead of current individual risks of $1E-6$ would decrease the PRGs. Making both of these changes would approximately cancel each other out.

Paul Kulpa suggested that the Navy provide a letter describing the use of RIDEM ingestion rates and effect of recalculating the PRGs based on a $1E-4$ aggregate risk. The letter should clearly describe how the two alterations cancel out any change to the remediation areas, and conclude that the existing PRGs are adequately protective. If this is done, recalculation of the risk and PRGs would not be necessary.

The Navy agreed to provide such a letter within two weeks of this meeting, so that it could be reviewed by the RIDEM prior to the next meeting.

The Facilitator clarified the resolution and requested agreement from all parties, which was received.

The Facilitator directed attention to Issue #2 from the agenda, with agreement from the primary parties:

***2. Summary:** Ambient water quality criteria (AWQC) are (amongst other things) used to develop PRGs. RIDEM requested that the AWQC that were promulgated by the State after the PRGs were developed should be used in the place of the federal AWQC. It is the Navy's observation that the RI criteria are very similar to the federal criteria, and revising the document with these numbers will not change the PRGs selected. Making the change will require a revision to the document, and recalculation of all the subsequent values and quotients, for no apparent result (McAllister and Derecktor).*

Greg Tracey stated that federal AWQC have been used to predict adverse effects, and not used on a regulatory basis. Using the RI WQC in place of the federal WQC and would not result in a substantial change to the calculated PRGs, because the criteria are so similar.

Bob Richardson stated that he agreed that the changes would not be major, but the state standards are still an ARAR, and we have to agree to this.

Brief discussion ensued regarding whether ARARs are frozen for the site at the ROD stage. Kymberlee Keckler stated that the ARARs are identified in the ROD, and carried on in name, but if values change, the five-year review process would document these changes and revised actions would be carried accordingly.

There was also brief discussion about whether the AWQC are applicable, or relevant and appropriate for sediment and/or pore water, and it was agreed that this discussion should be tabled until a later date.

Greg Tracey recommended that the Navy provide a letter stating that the use of Rhode Island AWQC versus the federal AWQC would have a negligible effect on the calculated PRGs, and therefore no change to the PRG document would be necessary. But the ROD would acknowledge the regulatory authority of the Rhode Island AWQC as they apply to different media.

The Facilitator clarified that the Navy would provide such a letter, and all parties agreed to the approach stated above.

The facilitator directed attention to issue #7 as being similar to the pore water and AWQC discussion already held, and agreement was made to discuss this:

***7. Summary:** RIDEM believes that biota exposure to bulk contaminants in sediment should be evaluated separately from biota exposure to dissolved contaminants in pore water. The Navy has stated that the contaminants in pore water pose a threat that is more pertinent to plausible risk at the site (McAllister and Derecktor).*

Greg Tracey explained that exposure to biota is from both sediment and pore water. If all things are considered (e.g. TOC and EQP), you can use pore water to predict effects from sediment. This is because exposure from sediment and pore water are essentially the same.

The method used is in accordance with EPA guidance documents on prediction of exposure to biota.

Cornell Rosiu clarified that pore water can be used to predict combined pore water/sediment effects on biota as long as it is assumed that there is chemical equilibrium in the pore water matrix.

Paul Kulpa asked if exposure is the same to organisms that live within the sediment as it is to those which live above the sediment.

Greg Tracey stated that the sum of the exposures from sediment and pore water would be the same for both types of organisms.

Paul Kulpa stated that the approach is not accepted as they have not received the documents that support the approach even though they have requested them.

Cornell Rosiu stated the name of the guidance document: *Technical Basis for Deriving Sediment Quality Criteria for Nonionic Organic Contaminants for the Protection of Benthic Organisms by Using Equilibrium Partitioning* (EPA-822-R-93-011). and committed to getting a copy of this document to Paul within the week.

{Authors postscript: This material was provided to RIDEM on March 24 1999, and a second document was also sent: *Technical Basis for Establishing Sediment Quality Criteria for Nonionic Organic Chemicals Using Equilibrium Partitioning* (Di Toro, et al., 1991).}

The Facilitator asked Paul Kulpa if the issue would be considered resolved if the RIDEM received, reviewed and found the document adequate to justify the rationale described by Greg Tracey.

Jim Shafer interjected that they would need a reasonable time frame for review and to get a reply from RIDEM.

Paul Kulpa stated that this issue would be considered resolved if they found the rationale adequately supported by the guidance document, and that his office would need two weeks to review it.

Ken Finkelstein stated that this is a very contentious issue - it is based heavily on the principals of equilibrium partitioning, and many scientists do not agree. He indicated that Bob Richardson had every right to think otherwise.

Mary Sanderson asked Bob Richardson if he agreed with the equilibrium partitioning principals and how they apply to this issue.

Bob Richardson stated that the pore water quality is the crux of the issue - he would always prefer to have hard data on pore water co-located with sediment data, rather than try to predict pore water contaminant concentrations through equilibrium partitioning.

Mary Sanderson and Kymberlee Keckler both stated that the FFA states that RIDEM agreed to follow the EPA guidance documents.

Bob Richardson agreed that the argument may be moot if RIDEM has agreed to follow EPA guidance overall.

Bob Richardson also stated that AWQC are applicable to pore water, and the PRG process may not be valid for all stations because some factors are station-specific. Maybe that is why PRGs don't match ERA at Derecktor - Some areas may need to be evaluated differently than other areas.

Greg Tracey stated that water or sediment alone are not adequate, you have to look at both through chemistry and toxicity testing as was done for these sites.

The discussion that followed was not focused, and reached topics such as whether organisms are at risk from both water and sediment, whether AWQC are applicable to pore water, groundwater, or even sediment, and whether AWQC exceedances (indicating a toxic effect may be occurring) should be negated by one or two toxicity tests using two specific target organisms. It was also clarified that this had been discussed before, and the Navy was under the impression that this was being evaluated on a legal level at the State based on the agreements of the previous meeting.

Paul Kulpa asked: Would it make a difference for McAllister if AWQCs were used as an ARAR for pore water?

Greg Tracey stated that this had been evaluated for Derecktor, but not for McAllister, and that it could not be done here at this meeting.

Ken Finkelstein and Cornell Rosiu both stated it is a much more complex issue than a simple comparison to AWQC - there are more location-specific factors in pore water that would cause lesser or no toxicity than would be evident by a comparison of the two numbers, and this is why the toxicity tests sometimes show no effects, although the values are exceeded.

Jim Shafer asked that this issue aside, can the RIDEM Support the remedy for McAllister that is described in the proposed plan.

Paul Kulpa stated that it may change the PRG numbers in the near shore, thus changing the size of those areas to be dredged.

Bart Hoskins stated that the group needs resolution on whether to support the whole approach or not at all since we are using a weight of evidence approach. We need to decide whether we can set aside the ARAR issue for these sites.

Paul Kulpa reiterated that they have always had a problem of the use of the toxicity tests to negate the AWQC.

Greg Tracey stated that the weight of evidence corrects for ruling out the other contaminants that may be of concern. The process used to select the PRGs leads to selection of PRGs that contribute most of the risk.

Kymerlee Keckler stated that if the AWQC were adopted as the RIDEM suggests, the result will be a need to clean large portions of the bay.

Paul stated he was trying to see why PRGs don't address intermediate areas. Intermediate risk areas should be evaluated at least, if not completely remediated. They agree with the outcome for McAllister, but not completely for Derecktor.

Greg Tracey responded that this is what the PRG Process does.

Bart Hoskins suggested that the State may be asking for the weights of evidence to be reassigned. Suggested that the state look at each weight of evidence at each polygon on the exceedances map (provided by Tetra Tech NUS, Inc.) and see if there is some correlation that they can identify that the Navy is missing.

Paul Kulpa also stated that they were not clear on why the recommended PRG for PCBs is much higher than the NOAA ERM standards.

Ken Finkelstein stated that the ERL/ERM values were not developed to be cleanup criteria. These values are concentrations at which effects were noted.

Mary Sanderson clarified that the RIDEM has indicated agreement on the remedy, but not the plan that derived it. She asked what can we move forward with now, as we need agreement on the proposed plan for McAllister at least.

Paul Kulpa stated that he had a series of comments that should be addressed by a phone call between Bob Richardson, Chris Deacutis and Greg Tracey. (Note that Chris Deacutis had left at this point.)

There was a unified response requesting that these issues be addressed today.

The Facilitator called a five minute break so the issues could be reviewed.

When the meeting reconvened, the Facilitator stated that there is almost an agreement on the remedy for McAllister, and this could be made based on agreement to the issues that RIDEM had:

Paul Kulpa stated that there is a disjoint between ERM and PRG values. Response correspondence states that it is due to the presence of other contaminants in ERM calculations. PCBs are not as toxic as predicted by ERMs and toxicity does not support the value. It also states that the PRG is site-specific no observed effects concentration. This was in reference to comment no. 13 from the SAIC Response to RIDEM comments on Draft Final PRGs at McAllister Point, dated December 17, 1998.

Greg Tracey explained that the recommended PRG for PCBs was higher than the ERM, but was comparable to other benchmarks used across the country.

Kymberlee Keckler asked Paul Kulpa if the Recommended PRG of 3.6 mg/kg for PCBs is acceptable to the state for McAllister. Only one location exceeds both the baseline and recommended PCB PRG.

Paul Kulpa stated that the state did concur with this PRG.

Next issue addressed was comment no. 10 from the SAIC Response to RIDEM comments on Draft Final PRGs at McAllister Point, dated December 17, 1998.

Greg Tracey stated that this issue focused on how to set baseline vs. recommended PRGs, and were other HQ values looked at to develop recommended PRGs. Greg stated that they looked for the best fit between high, intermediate, and low risk areas to target cleanup in high risk areas. HQ = 3 was the best fit.

Paul Kulpa agreed that this was acceptable.

The next issue targeted was in regards to adopting a PRG for lead. A baseline PRG was determined for lead, but it was only driven by the avian predator, and the assumption was that the avian predator would have to derive all its food from the one area for there to be an actual risk. This is considered an unrealistic and overly conservative assumption, therefore a recommended PRG was not derived for lead.

Paul Kulpa agreed that a lead PRG was not needed for the avian predator.

RIDEM agreed that there were no more issues concerning the PRGs for McAllister, and all parties agreed to adopt the recommended PRGs for that site, and there were no more issues on the proposed plan for that site.

Richard Gottlieb stated that he would provide comments to the McAllister Proposed Plan considering the agreements made at this meeting.

The facilitator reviewed the action items that were agreed upon for this meeting:

1. **Tetra Tech NUS, Inc. and the Navy will provide a letter describing the balance of increasing the ingestion rate of shellfish and using an aggregate risk to develop human health PRGs.**
2. **Tetra Tech NUS, Inc. and the Navy will provide a letter describing that the use of Rhode Island AWQC versus use of federal AWQC is inconsequential to the derived PRGs for McAllister, and acknowledging that the Rhode Island criteria are valid for the comparison.**
3. **USEPA will provide a guidance document to the RIDEM describing the derivation of exposure to biota using equilibrium partitioning.**
4. **RIDEM will review the USEPA guidance document and submit an opinion on the use of it within two weeks of receipt.**
5. **RIDEM will prepare and submit a response to comments to the Draft Proposed Plan for McAllister Point Landfill, based on the agreements made at this meeting.**
6. **Tetra Tech NUS, Inc. will prepare and distribute a list of outstanding issues for Derecktor Shipyard that can be used to direct discussions at the next EAB meeting.**

The Facilitator set up the next EAB meeting for Wednesday, April 21, 1999 at 10:00 AM at the same location. This time was agreed to by all parties.

There was an announcement that there would be an RPMs conference call held on March 25, 1999.

The Meeting Adjourned at 2:05 PM.

ATTACHMENT B
ATTENDANCE LIST

CALCULATION WORKSHEET

Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT		JOB NUMBER	
SUBJECT			
BASED ON		DRAWING NUMBER	
BY	CHECKED BY	APPROVED BY	DATE

Sign In sheet

Ecosisk Advisory Board Meeting

March 18, 1999

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