

32501.000  
03.01.00.0177

N00204.AR.001287

NAS PENSACOLA

5090.3a

**Date:** February 7, 1997

**From:** Bill Gates

**To:** Pensacola Tier I Partnering Team  
Karen Atchley                   Bechtel  
Henry Beiro/Brian Caldwell    EnSafe  
Allison Dennen                 EnSafe  
Bill Hill                        SOUTHDIV  
Ron Joyner                     NASP  
Bill Kellenberger               FDEP  
Denise Klimas                 NOAA  
Donna Kopenski                Galileo  
John Mitchell                 FDEP  
Eric Nuzie                     FDEP  
Gena Townsend                 EPA

**Subj:** FINAL ECO MINUTES

Subject minutes follow and should be attached to the January 29-30, 1997 Partnering Meeting minutes. The final minutes will be included in the AR.

**NAS PENSACOLA ECO MEETING SUMMARY**  
**February 7, 1997**

ACTION #	ACTION ITEMS FROM PREVIOUS MEETING	STATUS
<b>Site 40</b>		
9610-EA09	<p>David to contact Mike Lewis, EPA Gulf Breeze, to obtain his Site <b>40</b> sampling locations and analytical results.</p> <p><b>Result:</b> Contacted Mike Lewis (EPA-GB) about bayou data. He said he would prefer to give to Joan D. I <b>emailed</b> Joan on 12-9-96 to let her know this info. She replied by saying she or Gena would contact Mike.</p> <p>Team decided to abandon this effort to obtain Gulf Breeze data.</p>	Complete
9611-EA11	<p>David research EPA literature on assessment endpoints related to nursery habitats.</p> <p><b>Result:</b> No specific info was found relative to nursery habitats and related assessment endpoints. But, basically immature and juvenile fish and invert species will inhabit these nursery areas and thus be most susceptible to contamination effects. It appears that the present measurement endpoints selected (ie. amphipods, fish bioaccumulation, polychaeta tox) should provide relevant information on potential effects to nursery species. Extrapolation of effects observed to adult individuals may be made.</p>	Complete
9611-EA12	<p>David have EnSafe risk assessors contact EPA human health risk assessors to determine human health issues in Bayou Grande.</p> <p><b>Result:</b> Contacted Joan and Gena to find out who the HH person <b>is</b> for Region <b>4</b>. Mark Bowers, EnSafe, feels similar to the eco team that unless there appears to be relevant pathway, then why should HH be an issue. But with no one to discuss this with he can only offer his opinion. Joan is supposed to relay my concerns on HH to Gena and then maybe Elmer can be included in this discussion. But, at this point no effort to address HH will be undertaken in the next phase of work.</p> <p>Team decided not to pursue this action any further.</p>	Complete

Tabled	Crabs be used for human risk assessment with the understanding that a connection to the base may not be able to be established	Complete
961 1-EA13	<p>Denise check if juvenile Na can be used for chronic toxicity testing and identify studies where caged bivalves have been used to relate impacts to piscivorous birds.</p> <p><b>Result:</b> 1) Juvenile Neanthes are used for the chronic toxicity test where growth is an endpoint.</p> <p>2) For <b>NAS</b> Pensacola/Bayou Grande, killifish are probably a better species to use to estimate the exposure to birds. Although information from caged bivalves can be used, there are increased levels of uncertainty that are introduced into the assessment. These uncertainties can be avoided if actual prey species are available.</p>	Complete
961 1-EA14	<p>Denise confirm reliability of using Lp without a reference.</p> <p><b>Result:</b> The purpose of a field-collected reference sample is to assess the possible effects of parameters other than contaminants, such as grain size and TOC, on the test organism. Without the results of a toxicity test from a reference area, it must be assumed that any toxicity observed in the tests are related to the toxicity of the constituents in the sediments, not some other factor in the matrix. It is always recommended that a reference sediment sample with the same physical and chemical characteristics be targeted for collection so that other possible effects to the toxicity test can be addressed.</p> <p>Using a "surrogate" laboratory-formulated sediment with similar grain size and TOC is a possibility, but there are several issues to consider. For example, in a recent study, Suedel and Rodgers (1994) developed formulated reference sediments for freshwater and estuarine sediment testing. They found they were able to formulate sediments encompassing a wide range of characteristics such as grain size, organic matter, pH, solids, and cation exchange capacity. Some disadvantages that are apparent from using laboratory-formulated sediments are: 1) naturally-occurring organisms would be eliminated, so this potential factor affecting survival or growth of test organisms in field-collected samples would not be controlled for, 2) preparation of sediments is time-consuming, 3) formulated reference sediment should be conditioned before use, and 4) absence of naturally-occurring constituents such as</p>	Complete

particulates, dissolved substances, and nutrients which may be necessary or beneficial for survival or growth of test organisms. Suedel and Rodgers found that formulated sediment was suitable as habitat for *Hyalella azteca*, *Chironomus tentans*, *Daphnia magna*, *Ceriodaphnia dubia*, and *Pimephales promelas*. Tests were not conducted with *Leptocheirus* or *Neanthes* to determine if those organisms would survive in formulated sediment. Some advantages to using laboratory formulated sediment are: 1) they can be prepared as desired for particle size, organic matter, and other characteristics, 2) can be conveniently stored, 3) they would be free of contamination.

It is also possible to use one of the stations within the influence of the site with low concentrations of contaminants as a reference as long as it is certain that contamination would be low enough not to cause toxicity. Again, if toxicity is observed in the test, it must be considered to be from the media.

9611-EA15	David check with lab on controls as related to grain size. <b>Result:</b> Checked with the lab (TOXICON) that did Site 2 tox testing and they said yes we can adjust grain size to some extent if it is felt that the control should better reflect actual sediment. He said there <i>is</i> a limit to how many classes could be created, ie. > or < percent fines or other approach could be used.	Complete
-----------	---	----------

---

**Site 41**

---

9611-EA16	Chuck not to include subjective wording, e.g. desirable habitat, in RI. <b>Result:</b> Subjective wording will not be included in the RI.	Complete
9611-EA17	David contact FWS, FDEP, and NOAA St. Petersburg for inclusion of salt marsh top minnow and little blue heron as threatened and endangered species. <b>Result:</b> Contacted FL Natural Heritage Program to get latest status of these two species. Result: neither are considered federally endangered or threatened. They are both currently considered "N", which means 'not listed or currently considered for listing'. Thus these species carry no special status relevant to the <b>ERA</b> .	Complete

9611-EA18 EPA, FDEP, and NOAA provide written comments to the Site 41 Tech Memo of October 30, 1996. Response to comments will be included in the RI. **Complete**  
**Update:** Comments not required for Tech Memos. RI should reflect decisions made by Partnering Team.

9611-EA19 John and David check references for risk of metals to piscivorous birds and terrestrial fauna. **Complete**  
**Result:** David: Based on Eisler documents: Risks to piscivores (fish eating birds) from sediment metal contamination does not appear to be an issue we need to pursue. Only mercury and cadmium are generally considered to be biomagnifiers. Mercury concentrations were few and far between, and cadmium appears to exhibit biomagnification only at lower trophic levels. In general biotransfer of metals from sediments in saline environments, to upper level species is usually low. John: Same results as David.

9611-EA20 Denise check freezer time for fish. **Complete**  
**Result:** Holding times for trace elements and organic compounds (including lipids) in the freezer is one year. It would be acceptable to freeze the fish whole and then conduct these analyses from a quality control perspective. In general, this is not a preferred approach due to variables such as different season of year, size of fish, and sex of fish. Each of these variables could cause differences in bioaccumulation. If it is necessary to continue to collect fish over a period of time before analysis then careful field notes should be taken. The number of fish collected at each location, for each collection time should be noted, as well as the date that the fish were collected.

**Issue: Is the 20 day chronic Neanthes test doable (labs familiar with and can perform the protocol) and will EPA Region IV accept the results?**

Chuck:

EnSafe/Allen&Hoshall discussed the Leptocheirus and Neanthes tests with a toxicology laboratory to determine if these would be recommended methods. The original proposal was to use Leptocheirus for the acute test and Neanthes for the chronic test in groups A and C. The lab informed us that it is impossible to perform a chronic test for Neanthes in the 20 days that was proposed. Instead, the chronic Neanthes test would have to be for 60 days.

The laboratory suggested that we switch Leptocheirus and Neanthes tests around so that we do Neanthes for the 10 day acute test and Leptocheirus for a

28 day chronic test. This is apparently a common approach. E/A&H has made the change in the SAP addendum, but would like any comment on this before producing a copy for formal review.

Denise:

I received a facimile from Bill Gates with the information from Chuck concerning changing the bioassay test species. The lab that was contacted by EnSafe stated that it was not possible to perform a 20-day chronic Neanthes test. What was the reason? I have a protocol to perform this bioassay which I will bring to the meeting on December 18-19. The reference is: PSEP. 1991. recommended guidelines for conducting laboratory bioassays on Puget Sound sediments. Puget Sound Estuary Program. Prepared for U.S. EPA, Region 10. To my knowledge, there is not an agency approved protocol for a 10-day acute Neanthes bioassay. Is there one available?

NOAA does not recommend using Neanthes in a test where survival is the only endpoint. For Neanthes, growth is a much preferred endpoint.

I have a question regarding the proposed change to use a 28-day chronic Leptocheirus test. To my knowledge there is not an ASTM or other approved protocol to conduct this bioassay. Battelle Labs is currently developing the protocol for the 28-day test and has not released a copy for use outside their laboratories. Unless Battelle is the laboratory that is going to conduct the test, there may be questions that arise regarding the interpretation of results. When performing toxicity tests, it is important to use a well established protocol, and a laboratory that is experienced in conducting that particular test. The acute Leptocheirus and the chronic Neanthes test that were originally proposed were selected because they are both well recognized tests that have been performed and interpreted at many other sites around the country. I would still support using the acute Leptocheirus and the chronic Neanthes test for the site 40 and 41 assessment.

**Result:** Additional contract labs, EPA Gulf Breeze Lab, and ESED Athens were contacted by David and Joan. Conflicting information was received on the doability of the protocol. EPA will accept the results.

**Conclusion:** Testing will be performed as originally proposed.

**issue: Fish assessment endpoints**

Denise:

I have a question concerning the assessment endpoints under 961 1-ED20. The assessment endpoint number 3 for Group A is protection of fish viability. The assessment endpoint number 3 for Group B is health and reproduction impacts to fish. My notes have the endpoint for Group A & B as protection of fish viability. How are these endpoints different/the same?

**Proposal:** Delete fish assessment endpoint for Wetlands **5A** and 3 due to a lack of fishery habitat. Because the contamination in Wetland 3 should still be considered as potentially affecting Wetland **4**, water samples are proposed to be taken in Wetland **4**. If the constituents are similar to those found in Wetland 3, then fish will be added to the endpoint list for Wetland 3 and appropriate bioassays will be conducted.

**Result:** Proposal was accepted.

**Partnering Meeting Action Items:**

- |           |   |           |
|-----------|---|-----------|
| 9612-EA21 | Henry will provide eco lab Draft Statement of Work for the additional work at Sites 40 and 41.                                    | Complete  |
|           | <b>Result:</b> Draft SOW mailed with January Partnering Meeting minutes.  |           |
| 9612-EA22 | Denise will contact Chuck to confirm acute and chronic test information as identified above and provide feedback to the eco team. | Complete  |
| 9612-EA23 | Eco team conference call scheduled for January 10, 10:00 eastern.   | Cancelled |