



# EnSafe / Allen & Hoshall

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January 5, 1996

U.S. Environmental Protection Agency  
ATTN: Mr. Jay Bassett  
345 Courtland Street, N.E.  
Atlanta, GA 30365

**RE:** Final Remedial Investigation Report Errata,  
Site 1, NAS Pensacola  
Contract #N62467-89-D-0318

Dear Mr. Bassett:

On behalf of the Navy, EnSafe/Allen & Hoshall is pleased to submit five copies of the Final Remedial Investigation Report Errata and the Response to Comments for Site 1 at the Naval Air Station in Pensacola, Florida.

The enclosed filing instructions should be followed carefully to ensure that your copies contain accurate and up-to-date information. If you should have any questions or need any additional information regarding the errata, please do not hesitate to call me.

Sincerely,

EnSafe/Allen & Hoshall

Henry H. Beiro  
Task Order Manager

Enclosure

cc: Rori Joyner, NAS Pensacola — 7 copies  
John Lindsey, NOAA — 1 copy  
John Mitchell, FDEP — 2 copies  
Bill Hill, SOUTHNAVFACENGCOM — 2 copies  
Tom Moody, FDEP — (w/o enclosure)  
Patricia Kingcade, FDEP — (w/o enclosure)  
EnSafe/Allen & Hoshall file — 2 copies  
EnSafe/Allen & Hoshall Pensacola — 1 copy

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
TECHNICAL ~~REVIEW~~ COMMENT RESPONSES  
DRAFT REMEDIAL INVESTIGATION REPORT  
OPERABLE UNIT 1 (SITE 1: ~~SANITARY~~ LANDFILL)  
NAVAL ~~AIR~~ STATION (NAS) PENSACOLA  
PENSACOLA, FLORIDA**

AUTHOR: David Clowes  
DATE: April 28, 1995

**COMMENT:**

1. If the major addition of the updated ~~Draft~~ RI ~~was~~ inclusion of the 1994 data, then why was a whole new document submitted instead of just errata sheets/RI Addendum? The cost/benefit of these types of decisions should be discussed in partnering meetings.

**RESPONSE:**

Agreed. ~~Errata~~ sheets will be provided for this edition of the Remedial Investigation Report for Site 1.

**COMMENT:**

**Section 8:**

2. Table 8-7: The detection levels for sediments ~~are~~ above the Sediment Screening Value (based on effects levels and CLP PQL) agreed ~~upon~~ at the February 1994 Tier I Partnering ~~Team~~ meeting in Atlanta.

**RESPONSE:**

Elevated detection limits for sediments were unavoidable for technical and practical reasons. **As** agreed during the May/June 1995 Tier 1 **Partnering** Meeting, further explanations of factors affecting detection limits has been included in Section 9.0 - Data Validation.

**COMMENT:**

3. Table 8-7: As denoted in this table, the levels of aluminum, arsenic, copper, iron, lead, and zinc in surface water *are* up to three orders of magnitude above Florida's Surface Water Quality Standards (**62-320**, F.A.C.). However, if this is a typographical error and concentrations **are** in ppb not ppm; then aluminum, copper, **iron** and lead **are still** above Florida Surface Water Quality **Standards**.

**RESPONSE:**

Table 8-7 has been reviewed and has been addressed appropriately. The typographical error has **been** corrected and the text has been revised accordingly. **See** pages **8-22** and **8-23**.

**COMMENT:**

4. Surface water and sediment samples should be **collected** in Bayou Grande downgradient of monitoring well 01GI46, to determine if the bayou is impacted by groundwater contamination. In order to complete the Feasibility Study, this sampling should not be postponed **till** the Site **40** investigation.

**RESPONSE:**

As agreed during the May/June 1995 Tier 1 Partnering Meeting, sediment samples will be collected in Bayou Grande downgradient of Site 1 during the Site 40 investigation to evaluate the potential impact that past landfill activities may have had on this surface water body.

**COMMENT:**

5. Figures illustrating the latest sampling results from **all** the monitoring wells should be provided. Presently, the 1993 and 1994 sampling events **are** in separate figures in separate sections of the document.

**RESPONSE:**

Not all wells **are** shown on Section 8.0 figures because only key well locations were resampled in 1994 using the quiescent sampling technique. **As** agreed during the May/June 1995 Tier 1 Partnering Meeting, when appropriate and beneficial, future documents will contain figures which consolidate the results of current and previous sampling events.

**COMMENT:**

6. Though the levels of VOCs slightly exceed **the** Florida *Primary, Secondary* and "free from". Water Quality **Standards** (Chapters **62-520** and **62-550, F.A.C**), additional monitoring wells **are** not needed at **this** time to complete the Remedial Investigation. However, depending on the remedial alternative selected during the Feasibility Study process, a more accurate delineation may be needed in the future.

**RESPONSE:**

Agreed.

**COMMENT:**

7. With high concentrations of aluminum, manganese and iron many times above the Florida groundwater criteria and background (reference) levels, figures illustrating isocontours should be provided.

**RESPONSE:**

The paucity of data between sampling points, representing significant distances, precludes valid contouring and may be misleading. **As** agreed during the May/June 1995 Tier 1 Partnering Meeting, when appropriate and beneficial, future documents will contain figures with contour lines of detected parameter concentrations.

**COMMENT:**

8. Table 8-8: The quantitation limits used for groundwater sample analysis **are** above Florida Primary, Secondary and "free from" Water **Quality Standards** (Chapters **62-520** and **62-550, F.A.C**). Contract Lab Protocol (CLP) should be adjusted so the quantitation limits **are** at or below State **standards**. However, to avoid reanalyzing every sample, samples do not need to be reanalyzed if the samples were not diluted **before** analysis, if estimated values can be provided, and if significant **soil** contamination is not present. In the **future**, the reasoning behind sample dilution should be explained to avoid confusion and facilitate document review. As agreed **in** the June **27-29, 1994** meeting, screening **data** (predilution) will be provided and assessment phases beyond screening will use quantitation limit analyses at or below State Water Quality **standards**. **This**

information has been repeatedly requested for many other sites since July 1994 and has not been provided.

**RESPONSE:**

Section 9.0 — Data Validation has been revised to discuss factors **affecting** achievable detection limits and samples which required detection limit elevation due to unavoidable analytical difficulties. Note that on **all** data reports "estimated" concentrations for constituents that are present below CRQLs **are** provided.

**COMMENT:**

9. The Florida Water Guidance Concentration for vanadium (**49** ug/l) should be included in all relevant tables.

**RESPONSE:**

Agreed. The FGGC for vanadium has been added to Table 8-8.

**Baseline Risk Assessment:**

**COMMENT:**

10. Page 10-5: As stated many times before for previous documents, with the inclusion of the inhalation pathway in the calculation of RGOs/Cleanup Levels, FDEP utilizes 1E-6 for carcinogenic Chemicals of Concern (COCs) and **1.0** hazard quotient for non-carcinogenic COCs as default criteria. Therefore, the cancer risks and hazard quotients of the Chemicals of Potential Concern (COPCs) above these levels should **be** renamed COCs, and the soil, sediment and groundwater pathways included in the Feasibility Study as areas of possible remediation.

**RESPONSE:**

The baseline **risk** assessment is **used** as a **risk** management tool. **As** stated in **RAGS**, **risk** management decisions are not to be included in a **BRA**, and the determination of acceptable **risk** (as specified in this comment) is a **risk** management decision. The range of RGOs presented in the RI was included **to** facilitate decisions by **risk** management, not to pre-determine remedial goals.

**Responses to FDEP Comments of 1st Draft RI:**

**COMMENT:**

11. Comment No. 2: The decision to consider the landfill **as** homogeneous; and thus, not to proceed with delineation of soil contamination "hot spots" should be decided based on a cost benefit analysis, which considers the cost benefit of capping the whole 80 acre landfill compared to delineating the "hot spots" and then placing caps over them or removing them. In summary, treating the landfill **as** homogeneous may decrease assessment costs, but may increase remediation costs above the assessment cost saving.

**RESPONSE:**

The term "homogeneous" has been deleted from the first **Draft RI Report** Comment responses **as** requested by **FDEP**. The Navy appreciates the attention to cost-benefit analysis. However, given the size of the landfill and the available **data**, "hot-spot" remediation is technically impracticable.

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
TECHNICAL REVIEW COMMENT RESPONSES  
DRAFT REMEDIAL INVESTIGATION REPORT  
OPERABLE UNIT 1 (SITE 1: SANITARY LANDFILL)  
NAVAL AIR STATION (NAS) PENSACOLA  
PENSACOLA, FLORIDA**

AUTHOR: Jane Fugler  
DATE: April 11, 1995

**COMMENT:**

1. Section 4 notes that the State's species-of-concern habitats were present, but says nothing of whether the species were observed. There is no discussion of plants. **Also, an** osprey nest was observe .5 miles east of Site 1, Site 1 could be within the feeding range of the osprey.

**RESPONSE**

As agreed during the May/June 1995 Tier 1 Partnering Meeting, Section 4.0 has been appropriately revised, see page 4-12.

**COMMENT:**

2. On page 5-9, paragraph 2 states the **soil** samples were collected 1-2 feet below the surface in a stream. 0-1 feet would be more appropriate and indicative of what humans **and** wildlife (such as benthic organisms) could be exposed to.

**RESPONSE:**

The stream **bed** (ditch) was *dry* at the time of sampling. Sample 01S56 was purposefully collected from 1 to 2 feet bls as planned in the Site 1 **SAP**, to collect "native **stream bed** soil" lying beneath an approximately 1 foot depth of apparent recent outwash deposit. The intended sampling objective outlined in the **SAP** was met.

**COMMENT:**

3. On page 5-25, it states the water was injected during the drilling of a monitoring well due to **running** sands and then a boring sample was collected. The quality of this sample would be suspect.

**RESPONSE:**

As discussed during the partnering meeting, potable water blanks were collected during drilling activities to document the quality of water used. **All** associated analytical results were qualified based on these and other QA/QC samples as discussed in Section 9.0 — Data Validation. Section 9.2.1 specifically addresses blank sample results and their use in the validation process.

**COMMENT:**

4. A cursory look at the lab data finds that the detection limits may not be acceptable. For example, the detection limit for benzene in the groundwater **analyses** ranged from 2-10 ppb, which exceeds the state's guidance concentration of 1 ppb.

**RESPONSE:**

Although **reported** CRDLs (for inorganics) and CRQL (for organics) in some instances exceed Florida guidance concentrations, actual **IDLs** generally allow parameter detection

to significantly lower levels. However, unavoidable problematic conditions inherent to standard analytical methods occasionally occur which **require** sample dilution and detection limit elevation. A discussion of these conditions and samples in which they occurred has been added to Section 9.0 to provide additional information on this topic.

**COMMENT:**

5. No laboratory **data** was included in Appendix **H** for the **1994** sediment and surface water samples.

**RESPONSE:**

The 1994 sediment and surface water data were included in Appendix **H** of the revised ~~Def~~ RI for Site 1. Sample designations begin with the identifiers "01M" and "01W" respectively.

**Human Health Risk Assessment**

**COMMENT:**

6. Since this document was written new **Risk Based Concentrations** have been issued by EPA (March 7, 1995) and new **Soil Cleanup Levels**, by FDEP (April 5, 1995). These values should be applied for any additional assessments that may be conducted.

**RESPONSE:**

This comment has been incorporated into the revised BRA.

**COMMENT:**

7. On page **10-34**, it states, that no available **risk** information is justification to eliminate a **CPSS**, EPA's **Risk** Assessment Guidance suggests grouping chemicals by class and applying known risk information of chemicals within the class for this situation.

**RESPONSE:**

Surrogate toxicological values were used where appropriate.

**COMMENT :**

8. Figure **4-4** shows several waterbodies within, adjacent and **near** Site **1**. These should **all** be included in the human health and ecological risk assessments.

**RESPONSE:**

A **preliminary** assessment of nearby waterbodies was included in the **BRA**. However, the wetlands investigation (Site **41**) will characterize these sites in detail, and the **BRA** for Site **41** should be the basis for management regarding Site **1** water bodies.

**COMMENT;**

9. In Table **10-14**, some of the 95% upper confidence limits (UCLs) were significantly lower than the **maximum** level of contaminants detected. It appears that these hits **are** hot spots and not outliers. It is recommended that since this **landfill** is **so** large and it is easy to distinguish portions by age, that the portions should be individually assessed. **This** is supported with the attached letter from Dr. Roberts. **This** reevaluation will probably change the future resident and onsite worker risks with **soils** from what is currently calculated.

**RESPONSE:**

Site 1 was assessed assuming ubiquitous exposure to the **area**. Although the landfill can be divided into **areas** by age, there **are** no such divisions for potentially exposed individuals. **An** agreement to this effect was made during a conference *call* between **FDEP**, USEPA, and Navy representatives. Additionally, based on visual observations during sample collection, surface soil at Site 1 consists of cover material intermingled with **fill** material.

**COMMENT:**

10. In Tables 10-2 and 10-18 some of the parameters **are** incorrect. The following should be used:

	<u>Onsite Worker</u>	<u>Resident Adult</u>	<u>Child</u>
Ingestion rate	50 mg/d	20 mg/d	—
Exposure duration	25 y	30 y	—
AT-N	9,125 d	10,950 d	—
Adherence factor	6 mg/cm <sup>2</sup>	—	.2 mg/cm <sup>2</sup>

**RESPONSE:**

Exposure factors were updated in accordance with USEPA Region IV guidance. **FDEP** scheduled a meeting in February 1994 to discuss the differences in risk assessment assumptions between **FDEP** and USEPA; however, to date, these differences have not been resolved.

**COMMENT:**

11. What water is used to irrigate the golf courses to the east? Is this **area** covered in a different site?

**RESPONSE:**

The water used to irrigate the golf course is from a larger lake to the east which does not receive drainage from Site 1. This **area** has not been considered in any site investigation to date.

Ecological Risk Assessment

**COMMENT:**

12. The risk assessment (RA) document should be a stand-alone document, since it is usually reviewed by someone other than the **Project** Manager. Therefore, the following information is expected in a RA, which was not included here:
- A. A list of the state's threatened and endangered (T&E) species expected to be found at this site;
  - B. A list of the aquatic and T&E species observed at this site;
  - C. A data **summary** table for **all** contaminants detected in each media and that contains the frequency of detection, range of detects, average concentration and background concentration (from site specific studies);
  - D. **A** brief sentence of which guidances were used for this RA and any deviations from those guidances;
  - E. The environmental setting;
  - F. Contaminant fate and transport mechanisms that may exist at the site;
  - G. Ecotoxicity associated with contaminants and likely categories of receptors that could be affected; and
  - H. The complete exposure pathways that may exist at the site from contaminant sources to receptors that could be affected.

**RESPONSE:**

As agreed during Tier 1 partnering meetings, the RA will continue to be included as part of the RI document. The referenced information can be found in other sections of the RI.

**COMMENT:**

13. The most recent draft from EPA September 26, 1994 "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments" discusses the steps needed for a RA.

**RESPONSE:**

Agreed. This guidance document will be used in future reports.