



# EnSafe / Allen & Hoshall

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NAS PENSACOLA

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April 25, 1997

U.S. Environmental Protection Agency  
Attn: Ms. Gena Townsend  
Atlanta Federal Center  
100 Alabama Street **SW**  
Atlanta, GA 30303-3104

Re: Final Preliminary Site Characterization Report  
Site 36, NAS Pensacola  
Contract # N62467-89-D-0318/063

Dear Ms. Townsend:

On behalf of the Navy, EnSafe/Allen & Hoshall is pleased to submit one copy of the response to comments and the Final Preliminary Site Characterization Report for Site 36 at the Naval Air Station Pensacola in Pensacola, Florida.

If you should have any questions or need any additional information regarding the document, please do not hesitate to call me.

Sincerely,

EnSafe/Allen & Hoshall

Allison L. Dennen  
*Task Order Manager*

Enclosure

cc: Bill Hill, Code 1851 SOUTHNAVFACENGCOM without enclosure  
Kim Reavis, Code 0233KR SOUTHNAVFACENGCOM without enclosure  
Ron Joyner, NAS Pensacola — 2 copies  
Denise Klimas, NOAA — 1 copy  
EnSafe/Allen & Hoshall CTO 063 file without enclosure  
EnSafe/Allen & Hoshall file — 1 copy  
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Administrative Record **with** enclosure

U.S. Environmental Protection Agency, Region IV  
Site 36, IWTP Sewer Line Preliminary Site Characterization Report  
Response to Comments

## GENERAL COMMENTS

### Comment 1:

Section 2.3, Page 2-25, Paragraph 3, Sentence 6, states that for UST Site 12, the groundwater contamination was attributable to the AVGAS line, and no further action was recommended for Site 12 groundwater. However, it is premature to make a no action recommendation on the groundwater based on the removal of the AVGAS line. With the removal of the AVGAS line, the suspected source has been removed, yet the contaminants in the groundwater are still present. Therefore, the no further action decision made in this section is inappropriate.

### Response:

The section has been revised to reflect the State of Florida's request for additional contaminated soil removal at the site. Upon completion of the removal action, the no further action decision will be approved by the State of Florida. The decision is appropriate in this section, given this is a recommendation for a petroleum site not an IR site, because the area is being investigated under the auspices of the Florida Petroleum Program. The state has decision-making authority for petroleum sites.

### Comment 2:

Section 7, Pages 7-1 through 7-18, indicates that the USEPA and/or State of Florida's standards are used as PRGs. However, in tables presenting the PRGs versus detected concentrations, no reference to individual PRGs is given. Therefore, it is unknown which standard (EPA or Florida) is used. The text should indicate the reference for each PRG so that the PRG value can be verified.

### Response:

A footnote has been added to the tables to reference the source of the PRGs.

### Comment 3:

Section 10.0, Page 10-4, Paragraph 1, Sentence 3, states that groundwater contamination is not directly attributable to Site 36 soil contamination because contaminants detected in groundwater are not detected in site soil. However, naphthalene was detected on the east side of excavation 15. Also, lead exceeded its PRG in the surface soil (see Table 7-1) and also exceeded its PRG at a few locations in groundwater. The text should be revised accordingly.

Response:

The sentence has been revised to state that groundwater contamination is not directly attributable to Site 36 soil contamination because contaminants detected in groundwater monitoring wells were not detected in the soil samples collected from the borings directly associated with the monitoring wells.

## 2.0 SPECIFIC COMMENTS

Comment 1:

Section 2.1, Page 2-1, Paragraph 1, Sentence 5

The text states that the area near Building 3380 has been added to the Site 36 investigation. However, Building 3380 is not shown on the site map (see Figure 2-2). Even in Figure 2-3, which shows buildings connected to the sewer line, Building 3380 is not identified. Also, Pump Station 3 and Buildings 54 and 18 are not identified. The site map and/or related figures should identify Building 3380 and other areas referenced in the text.

Response:

Building 3380 has been added to Figures 2-1, 2-2, and 2-3. Building 3380 is not connected to the sewer line. It was added to Site 36 because of its proximity. Pump Stations 1 and 3 were previously identified on Figure 2-2 and have been added to Figure 2-3 in this report. The description of Site 36 has been revised to state that the site “extends from west of Building 3557 and includes the southwest arm to Pump Station 3 and the southeast arm north of Building 45.” The figures have been revised to include the areas referenced in the text.

Comment 2:

Section 2.1, Page 2-1, Paragraph 2, Sentence 7.

The text states that manhole A-1 along the gravity lines is fiberglass. However, Figure 2-2 fails to identify manhole A-1. The manhole should be identified on the figure.

Response:

Manhole A-1 is in the part of the sewer line included in Site 30. The text has been deleted.

Comment 3:

Section 2.1, Page 2-3, Figure 2-2.

Figures 2-2 and 2-3 are maps that depict the site and buildings near the Site. However, some of the investigated areas are not identified. Some areas mentioned in the text are not shown, and some areas shown on the figure are not mentioned in the text. The figures should be combined to clearly depict all the investigated areas.

**Response:**

**Figures 2-2 and 2-3 have been revised.**

Comment 4:

Section 2.3, Page 2-4, Paragraph 0, Sentence 4.

The text lists borings where soil sampling did not occur including boring 36GI01. These borings are identified on Figure 2-6. However, boring 36GI01 is not depicted on the figure and should be identified like the rest of the borings.

**Response:**

**The legend has been revised to indicate which monitoring wells are permanent on Figure 2-6.**

Comment 5:

Section 2.2, Page 2-6, Table 2-1.

The table identifies buildings that are connected to the IWTP sewer line. However, Building 2662 which is connected to the sewer line is not shown on Figure 2-3. The building should be identified on Figure 2-3.

**Response:**

**Figure 2-3 has been revised to identify Building 2662.**

Comment 6:

Section 2, Page 2-6, Table 2-1.

Table 2-1 presents chemicals used in buildings connected to the IWTP sewer line. For Building **782**, the text indicates that all chemicals are contained in Building 782. However, no specific information about chemicals is given. Also, for Building **3460**, the text describes the chemicals used as a “small degreaser”; however, it is unclear whether the degreaser is a small piece of equipment or a amount of solvent used for the degreasing process. The text should be revised to provide specific information.

Response:

Building **782** ~~was~~ incorrectly identified in Table **2-1**. The building **is** the Electrical Power Plant/Steam Heating Plant, which generates steam heat. The chemicals used in the building are sodium hydroxide and hydrochloric acid. The chemicals used at Building **3460** are PD-680 and 1,1,1-trichloroethene. The status of Building **604** has been updated on Table 2-1. The building will remain active until May **1997**. The text has been revised accordingly.

Comment 7:

Section **2.3**, Page **2-7**, Paragraph **2**, Sentence **4**.

The text states that Site **9** was not recommended for further study. However, the text does not state the rationale for that decision. The text should be revised accordingly.

Response:

The text has been revised to state the rationale.

Comment 8:

Section 2.3, Page 2-10, Paragraph 1, Sentence 3.

The text states that one section of the IWTP sewer line **runs** approximately 700 feet along Radford Boulevard from Pump Station 3 to Fisher Avenue and makes a reference to Figure 2-2. However, these roads are not identified on the figure. Radford Boulevard and Fisher Avenue should be depicted on the figure.

**Response:**

**Radford Boulevard and Fisher Avenue are identified on Figure 2-2.**

Comment 9:

Section 2.3, Page 2-10, Paragraph 2, Sentence 1.

The text alludes to the boundary of Site 36 as the area between Pump Station 3 and Fisher Avenue. However, the boundary is incorrect. The text should be revised accordingly.

**Response:**

**The text has been revised.**

Comment 10:

Section 2.3, Page 2-12, Paragraph 1, Sentence 2.

The text indicates that subsurface soil samples are compared to USEPA and FDEP screening values. However, the text does not present the number of subsurface soil samples and their results. Instead, only surface soil samples were discussed. The text should explain why the subsurface soil studies are not presented.

**Response:**

**Subsurface soil ~~was~~ presented in the above referenced text. Depths of the soil samples have been added to the text.**

Comment 11:

Section 2, Page 2-17, Table 2-4.

Table 2-4 presents results of IWTP sewer line characterization. However, the text **does** not indicate the type of sample presented in **this** table. According to the text (page 1-14), the type of samples are sediments from manholes. The text should indicate the type of sample accordingly.

**Response:**

**The table title has been revised to identify the type of samples.**

**Comment 12:**

Section 2.3, Page 2-18, Paragraph 1, Sentence 1.

The text refers to "manhole **6-B**". However, the label for this manhole is inconsistent with references to manholes is written incorrectly. For consistency in labeling sampling locations, this manhole should be labeled as Manhole **A-6-B** (see Table 2-4).

**Response:**

**The text has been revised for consistency to identify the manhole as Manhole A-6-B.**

**Comment 13:**

Section 2.3, Page 2-18, Paragraph 1, Sentence 5.

The text states: "Other inorganics detected which do not PRGs include cyanide, aluminum, barium, calcium, magnesium, manganese and selenium." However, this statement is incomplete. The text should be clarified and revised accordingly.

**Response:**

**The text has been revised to state "... which do not have PRGs."**

**Comment 14:**

Section 2.3, Page 2-36, Figure 2-9.

The groundwater samples from the 18 monitoring wells with exceedances of MCLs are shown on Figure 2-9. Although sample locations **12G003** and **12G017** had concentrations of lead exceeding the MCLs, their concentrations are not shown on the figures. The concentrations of lead in sample locations **12G003** and **12G017** should be reflected on Figure 2-9.

Response:

The figure has been revised.

Comment 15:

Section 5.0, Page 5-1, Paragraph 3.

The text addresses Phases I and II investigations. However, the text does not indicate when Phase II investigation was conducted (Phase I was conducted during May 1994 and January 1996). The text should indicate when Phase II was conducted.

Response:

Phase II was conducted on selected monitoring wells in December **1994**, September **1996**, and December **1996**. The text has been revised.

Comment 16:

Section 5.2, Page 5-4, Paragraph 2, Sentence 1.

The text states that in the Building 3380 area, 12 soil borings were advanced on a grid across the area. However, the sampling pattern is random and there are more than 12 soil borings (see Figure 5-2). The text should be revised accordingly.

Response:

The text is correct in that **12** soil borings were advanced in the Building **3380** area before the removal action. After the removal action, **six** of the original **12** soil borings remained to assess current site conditions and **17** soil borings were advanced at the Building **3380** excavation extent. Therefore, information from **23** soil borings ~~was~~ used to describe the current site soil condition for the Building 3380 area.

Comment 17:

Section **5.2**, Page 5-5, Figures 5-1.

Figure 5-1 shows soil sampling locations. The legend of the figure shows the same symbol for soil boring/temporary monitoring wells. However, there is another symbol used in the legend for soil boring. The legend should be revised for clarity.

In addition, the figure should be revised to give the name of the sampling location site.

**Response:**

The legend is correct. The symbol for soil boring/temporary monitoring wells is used for soil borings that were completed **as** temporary monitoring **wells**. The other symbol is for soil borings that were abandoned after sampling. Soil boring identification numbers have been added to the figure.

Comment 18:

Section 5.2, Page 5-10, Paragraph 1, Sentences **2** through **4**.

The text states that after the removal actions, 36 soil borings and 80 soil samples remained excluding the verification samples. The soil sample identification numbers are outlined in Table 5-3. However, the table omits some sampling locations and sample identification numbers. The table should be revised accordingly.

Response:

Data collected from soil borings **36S01, 36S03, 36806, 36S07, 36S11, and 36S12** are presented in Section **2** **as** they represent preremoval site conditions. All borings that are representative of postremoval site conditions, excluding confirmation sampling locations for the excavations, are presented in Table **5-3**. Confirmation samples for the Chevalier Field area excavations are summarized in Table **5-4**.

Comment 19:

Section **5.2**, Page 5-10, Paragraph 3, Sentence 3.

The text states that an open valve on the bilge water line was observed near sampling locations 338S10, 338S11, 338S12 and 338S13. However, these locations are not identified on a figure. There should be a figure added to the document to identify these locations.

Response:

The bilge water line **and** soil borings **338S10, 338S11, 338S12, and 338813** have been added to Figure **5-2**.

**Comment 20:**

Section 5.2, Page 5-14, Table 5-4.

Figure 5-2 shows soil boring locations for Building 3380. On the figures some sampling location numbers are designated as 1, 2, 3 etc. However, this sampling or boring location number is not consistent with what is used in Table 5-4. For example, boring location 1 on Figure 5-2 is reflected as 3383001 in Table 5-4. The sampling numbers should be made consistent.

**Response:**

**The figure has been revised.**

**Comment 21:**

Section 5.2, Page 5-15, Table 5-5.

The table identifies samples and the rationale of Site 36 removal actions. However, some of the sample identification numbers do not match the identification numbers shown on Figure 5-2. The inconsistency of sample identification numbers should be corrected.

**Response:**

**The figure has been revised for consistency of sample identification numbers.**

**Comment 22:**

Section 5.3, Page 5-17, Paragraph 3, Sentence 1.

This text states that 39 of the 66 soil borings completed on Site 36 were converted to temporary monitoring wells (Figure 5-1). However, there is a discrepancy regarding the number of wells on Figure 5-1. The discrepancy should be resolved accordingly.

**Response:**

**A new figure, Figure 5-3, has been added to show all of the monitoring wells. Forty-five temporary monitoring wells were installed at Site 36 including 36GR21A and 36GR21B and 36GR58, which was installed to replace temporary monitoring well 36GR42.**

Comment 23:

Section 5.3, Page 5-18, Paragraph 1, Sentence 1.

The text states that the soil boring completed on Site 36 was converted into a permanent monitoring well (Figure 5-1). However, the legend for Figure 5-1 does not have a symbol for permanent monitoring wells. A symbol should be added to the legend for permanent monitoring wells.

Response:

The text has been revised to reference Figure 5-3. The permanent monitoring well symbol is provided in that legend.

Comment 24:

Section 5.3, Page 5-18, Paragraph 1, Sentence 11.

The text states that Table 5-5 lists construction details for the Site 36 permanent monitoring well. However, the table does not list construction details for the Site 36 permanent monitoring well. The discrepancy between the table and the text should be resolved.

Response:

The text has **been** corrected and a footnote **has** been added to the table for clarification.

Comment 25:

Section 5.3, Page 5-19, Paragraph 4, Sentence 1.

The text reads: "Temporary wells were purged with a peristaltic pump and dedicated, decontaminated, 0.25-inch outside diameter Teflon tubing at a slow, controlled, pumping rate (varying from 0.04 to 0.25 gallons per minute)". However, the text is confusing. The text should be clarified and revised accordingly.

Response:

The text **has** been revised to state: "Groundwater was purged from the temporary monitoring wells at a slow, controlled rate with a peristaltic pump and Teflon tubing. The pumping rate varied from 0.04 to 0.25 gallons per minute."

**Comment 26:**

Section 7.1.2, Page 7-2, Paragraph 5, Sentence 2.

The text states that benzo(a)pyrene exceeded its PRG in surface soil at 36S39 and 36S41. These sampling locations are on Figure 7-2. However, the aforementioned identification numbers do not correspond with the sampling location identification numbers on Figure 7-2. The text and table should be revised to be consistent.

This comment also applies to Figure 7-1 and paragraph 2.

**Response:**

**The figures have been revised.**

**Comment 27:**

Section 7.1.2, Page 7-2, Figure 7-1.

The figure shows the inorganics above PRGs and reference concentrations in soil. However, the excavations on the figures are not labeled. The excavations should be labeled for clarity.

**Response:**

**Agreed. The excavations are labeled on Figure 7-1.**

**Comment 28:**

Section 7.2.1, Page 7-5, Paragraph 2, Sentence 2 and 3.

The text mentions 22 samples that can be found on Figure 7-4. However, the number of samples is incorrect. The text should reference 21 samples instead of 22 samples.

**Response:**

**The text has been revised.**

Comment 29:

Section 7.2.2, Page 7-5, Paragraph 3.

The text addresses organics in surface and subsurface soil at Building 3380 area. However, the text only indicates exceeding surface soil PRGs but does not mention subsurface soil PRGs. It is unclear whether the subsurface soil was analyzed in the investigation. The text should provide the results of subsurface soil at Building 3380 area.

Response:

The text has been revised. Because of the 2 feet of fill material placed across the Building 3380 area, only subsurface soil PRGs apply. Cadmium was the only exceedance.

Comment 30:

Section 7.3.1, Page 7-12, Paragraph 2, Sentence 2.

The text states that manganese exceeded its PRG and reference concentration at 36 monitoring wells. However, the number of wells is incorrect. The text should reflect that manganese exceeded its PRG and reference concentrations at 35 monitoring wells.

Response:

Monitoring Well 36GR42 was resampled and the concentration is below the PRG and reference concentration. The correct number of wells is 34.

Comment 31:

Section 7.3.2, Page 7-14, Figure 7-7.

Figure 7-7 shows VOCs and SVOCs above PRGs in groundwater. However, the figure lacks a key showing the units of concentration for the different contaminants. A key should be included with the figure showing the units of concentration for the different contaminants.

Response:

A note has been added to the figure identifying the units of concentrations.

Comment 32:

Section 7.3.2, Page 7-15, Tables 7-5 and 7-6.

Tables 7-5 and 7-6 present the results of groundwater samples at wells 36GR54 and 36MW35. However, Figure 7-7 shows that a total of seven wells had VOCs and SVOCs exceeding PRGs. Therefore, a table should be created to present all the results from the seven wells including wells 36GR54 and 36MW35 in Tables 7-5 and 7-6. Tables 7-5 and 7-6 should be combined to create a new table presenting all the results.

Response:

A new table, Table **7-5**, shows all of the **VOC** and **SVOC** results from the nine monitoring wells has been created and replaces the previous Tables **7-5** and **7-6**. Two additional wells were installed and sampled for VOCs after the draft report was submitted.

Comment 33:

Section 7.3.2, Page 7-15, Table 7-6.

Table 7-6 shows PRG exceedances in 36MW35. However, this sampling location identification number is incorrect. The text should be changed from 36MW35 to 36GMW35.

Response:

The sampling identification number has been corrected.

Comment 34:

Section 9.2.1, Page 9-4, Paragraph 1, Sentence **4**.

The text states that additional aliquots were also subjected to the SPLP. However, in the list of acronyms on pages v through vii, SPLP is omitted. The list of acronyms should give the meaning of SPLP.

Response:

The definition of **SPLP**, synthetic precipitate leaching procedure, has been added to the List of Abbreviations.

**Comment 35:**

Section 9.2.1, Page 9-6, Table 9-1.

Table 9-1 shows a table with Site 9 **CLP** versus SPLP data comparisons. The SPLP and tap water columns data have “n” as a subscript. However, “n” is not included in the notes for the table. **An** explanation for “n” should be included in the notes.

**Response:**

**An explanation for “n” has been added to the notes of Table 9-1.**

**Comment 36:**

Section 10.0, Page 10-3, Paragraph 1, Sentence 5.

The text reads: “**This**, coupled with the low concentrations of contaminants, retardation, mechanical dispersion and chemical diffusion, to minimize the impact of constituents in groundwater to nearby surface water.” However, this statement is unclear. The text needs to be clarified and revised accordingly.

**Response:**

**The sentence has been revised.**