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NAS PENSACOLA
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September 2, 1994

Allison Humphris
U.S. EPA
345 Courtland Street, NE
Atlanta, GA 30365

RE: Responses to United States Environmental Protection Agency (USEPA) and Florida Department of Environmental Protection (FDEP) Technical Review and Comments, Technical Memorandum for Category V Sites 9, 29 and 34; Pensacola Naval Air Station, Pensacola, FL; Contract #N62467-89-D-0318, CTO-0070.

Dear Ms. Humphris:

On behalf of the Navy, EnSafe/Allen & Hoshall is pleased to submit responses to USEPA's and FDEP's technical review comments for the Technical Memorandum for Category V Sites (Sites 9, 29 and 34).

Should you have any questions or comments regarding these comment responses, please feel free to call me.

Sincerely,

EnSafe/Allen & Hoshall

Brian Caldwell

Brian E. Caldwell
Task Order Manager

Enclosure

cc: Bill Hill
Bill Gates
David Clowes
EnSafe/Allen & Hoshall file
EnSafe/Allen & Hoshall file - Pensacola

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
TECHNICAL REVIEW COMMENT RESPONSES
TECHNICAL MEMORANDUM
CATEGORY V SITES 9, 29, 34
NAS PENSACOLA

GENERAL COMMENTS:

Comment:

1. Throughout this document, Safe Drinking Water Act (SDWA) Maximum Contaminant Levels (MCLs) should be used as the basis for comparison with groundwater data. USEPA's Numeric Action Levels (NAL) for contaminated Drinking Water are not appropriate ARARs for the groundwater at these sites and should not be used for this purpose.

RESPONSE

USEPA's comment is acknowledged and will be incorporated into the remedial investigation (RI) report.

Comment:

2. The groundwater background sampling data is suspect due to the high (above SDWA MCL) concentrations of many inorganic chemicals (beryllium, cadmium, chromium, lead, manganese, mercury, nickel). Unless adequate documentation supporting the representativeness of this data (e.g. collected from a contaminant-free area using adequate sampling techniques) can be provided, additional samples must be collected and analyzed in order to establish NASP-specific background concentrations for groundwater. Until this issue is satisfactorily resolved, the conclusions regarding the lack of a metals problem for groundwater at these sites is also suspect.

RESPONSE:

Additional background groundwater samples have been collected using quiescent sampling techniques to verify/establish NAS Pensacola-specific inorganic concentrations. This information will be presented in the RI reports for comparison with site groundwater quality.

Comment:

3. Since Site 10 is referenced in several places throughout the document (e.g. Figure 1, page 2), please clarify the relationship between Site 10 and Sites 9, 29 and 34 in the document text.

RESPONSE:

Site 10 is the suspected previous location of surface water body known as Commodore's Pond where underwater timber storage reportedly occurred (the pond was fill in the late 1920's during the construction of Chevalier Field). Site 10 is located adjacent to Chevalier Field, approximately 500 feet northwest of Site 9. This information will be added to the RI report.

Comment:

4. Use of the term "Contaminants of Concern" in this document is not appropriate. This term, or preferably "Chemic& of Concern" (COC), should be resewed for chemicals which exceed a lob risk level or HI of 0.1 in baseline risk assessment scenarios which exceed 10^{-4} risk level or HQ of 1. Please revise the text accordingly.

RESPONSE:

USEPA's comment is acknowledged and will be incorporated into the RI report.

Comment:

5. The subsections entitled Summary of Analytical Data (pages 14, 25, 38) should not refer to the values presented for comparison as ARARs. The correct term for this set of values is Preliminary Remediation Goals (PRGs). Also, the USEPA's NAL for Contaminated Drinking Water should be removed from this list and replaced with the SDWA MCLs.

RESPONSE:

USEPA's comment is acknowledged and will be incorporated into the RI report.

Comment:

6. All tables should be located immediately after the page which cites the table. In order to improve the readability and clarity of table contents: (i) the format for a given table should be consistent for the entire table (e.g. Table 2), and (ii) the text size must be large enough to allow distinction of text types (e.g. bold) and symbols.

RESPONSE

USEPA's comment is acknowledged and will be incorporated into the RI report.

Comment:

7. Inorganic data must be presented in a table similar to organic data for all sites included in this report.

RESPONSE

Because the Technical Memorandum was a secondary document intended only to summarize the Phase I results, it's format was intentionally abbreviated and general. However, the full analytical data set was presented in the appendix and the text contained a discussion of relevant inorganic detections. The RI reports will contain summary analytical tables for inorganic data.

Comment:

8. Why do Tables 2, 4, and 7 include comparisons with RBCs and CGs but not with background?

RESPONSE

Analytical results were compared to background levels in the text only. Future groundwater summary analytical results tables will be designed to indicate drinking water standard MCLs and background concentration exceedences, soil tables will indicate USEPA RBC, FDEP CG, and background concentration exceedences.

Comment:

9. All references to the "applicable RBCs" should clearly indicate which of the Region 111 RBCs are "applicable" (i.e., residential or industrial).

RESPONSE

The "Summary of Analytical Data" section for each site states that USEPA Region 111 RBCs for residential soil were used.

Comment:

10. If groundwater contamination, or the potential for soil contaminants to leach to groundwater, is found to exist at these sites, site-specific soil action levels should be derived for each detected contaminant. The methodology used to derive these numbers should also be provided for review. The EPA Region III Risk-Based Concentrations may not be protective of groundwater, and FDEP Cleanup Goals may be overly conservative.

RESPONSE

Unsaturated transport calculations contained in Killian (1993) are being used to develop site-specific soil action levels protective of groundwater quality to promulgated standards or appropriate guidance levels. Methodologies for these calculations, and calculation results, will be presented in the RI reports.

Comment:

11. Difficulties in attaining satisfactory quantitation limits for samples were noted in several instances. Therefore, the following confirmatory sampling/analyses will be required to support final remedial decisions for these sites:

    A. The quantitation limits for volatiles for soil sample 09S0101 were elevated (1200 ug/kg). In order to support a final remedial decision for this site, soil samples should be recollected from this area and reanalyzed to confirm that volatile contamination does not exist in this area.

    B. The quantitation limits for volatiles in groundwater samples 34GR01 and 34GR02 were extremely high (100 ppb), and the detection limits for semi-volatiles were elevated (40ppb). In order to support a final remedial decision for groundwater at this site, groundwater from location 34GR01 and downgradient of location 34GR02 should be resampled and reanalyzed, possibly using permanent wells.

    C. The quantitation limits for volatiles in the groundwater sample 34GGM53 were elevated (33 ppb). In order to support a final remedial decision for this site, groundwater from this permanent well should be resampled and reanalyzed. It is also very possible that once confirmatory data for shallow groundwater is obtained for this site, additional intermediate wells will be needed to delineate the vertical extent of groundwater contamination. Every effort should be made to anticipate and plan for this need, so that it can be completed in the upcoming field event, and prevent the need for an additional field mobilization.

    D. The quantitation limits for volatiles for soil Sample 34S01 were! elevated (1200 ug/kg). Also, elevated levels of semi-volatiles were detected in the "09" sampling interval. In order to support a final remedial decision for this site, the additional soil samples proposed on page 40 should be analyzed not only for lead, but also for volatiles and semi-volatiles.

RESPONSE

Quantitation limits are elevated only in samples that contain significant organic compound concentration(s) as allowed by CLP protocol. However, this does not indicate that a target compound contaminant is present. In some instances, the elevated compound concentration is a target compound. In these instances, the target compound is identified and quantified. In other instances, the elevated compound is not on the target list (i.e., a TIC) and is not identified, giving the impression that sample detection limits are unnecessarily elevated. However, this is not the case.

When a significant organic compound concentration is present in a given sample, holding time and commercial laboratory scheduling considerations makes it impractical and economically

infeasible under CLP protocol to identify every compound potentially present below the highest detected organic concentration. The reason for this infeasibility is that there are potentially numerous compounds present in the sample, and the sample would have to be re-run numerous times to attempt to identify each and every target compound potentially present at lower concentrations while disregarding the original elevated organic concentration. Furthermore, due to coelution of compounds with similar chemical structure, quantitation of each and every organic compound potentially present would be either extremely difficult for the same reasons, or impossible due to analytical limitations. Regardless, the presence of a significant organic compound concentration in a given sample requires dilution (thus elevating detection limits) to: 1) determine the detected compound's actual concentration within an appropriate calibration range, or 2) dilute out an unknown compound's (TIC) "masking" or "interference" effect in an attempt to detect other target compounds that may be present at lower concentrations. A further complication is that organic compound interference often carries over from one analyte group to another (e.g., semivolatiles to volatiles to pesticides) resulting in elevated detection levels for more than one analyte group in a single sample.

CLP laboratory protocol does not attempt to "mask" the presence of compounds at concentrations lower than method detection levels (MDLs). Because analytical instrument detection levels (IDLs) are generally lower than (elevated or unelevated) MDLs, compounds are often positively detected below MDLs. When detected, these concentrations are reported as (estimated) "J" flagged values. Consequently, when a compound is detected below the MDL (which is calibrated to either the CLP MDL or, in the case of dilution, the highest organic peak on the analysis spectrum) its concentration is estimated and shown on lab reports. This methodology is used by USEPA for all Superfund work, and possesses a level of analytical certainty greater than SW 846 methods.

This information is offered not to dwell on analytical shortcomings, but to briefly explain that limitations to CLP protocol exist. CLP laboratories certified by the USEPA to perform CLP protocol analysis are required to operate within the guidelines of this program, therefore samples can only be diluted when necessary or appropriate. Due to analytical shortcomings, the re-collection and re-analyzing of elevated detection limit samples will at best be costly and time consuming, potentially generating information of no significant value. Screening data for samples with elevated detection limits is available to document the reason for the dilution of any given sample. However, screening data only illustrates the presence of an elevated organic compound concentration, and does not identify or quantify the elevated (or any other) compound. Therefore, it is recommended that elevated quantitation limit samples be re-analyzed only when sufficient evidence suggests undetected contamination is present. For example, when VOC quantitation limits are elevated for a given sample, concern is raised that relatively lower level VOC contamination may have gone undetected. However, if VOCs were not detected in any site sample and no firm evidence indicates VOC contamination exists at the site, sample re-analysis would be an inefficient use of time and financial resources that would likely reproduce similar results. Therefore, the need for sample re-analysis should be evaluated on a case-by case basis and only performed when warranted. There does not appear to be substantial evidence in support of re-collecting and re-analyzing samples referenced in comments 11-A

through 11-D. In the future, the Data Validation section of the RI report will be particularly sensitive to dilutions, and will provide the reasons for, and consequences of, the dilution.

Comment:

12. Given that elevated "J" values for pesticides were reported for the groundwater sample from intermediate well GM-61, both this intermediate well and the shallow nested well which will replace GM-56 should be resampled for pesticides. This information is needed to confirm the lack of a pesticide contamination problem for groundwater and support a final remedial decision for groundwater at the site.

RESPONSE

Pesticides were not positively detected in any Site 34 groundwater sample and are not known to be of concern at this site. These detection limits were elevated no more than 0.7 ppb (usually less) above non-adjusted limits and do not warrant a resampling effort to reconfirm the absence of previously non-detected compounds. See the response to comment 11.

Comment:

13. In general, in instances where additional sampling is needed to delineate identified contaminants, the clearly defined objective of the upcoming round of sampling should be to complete adequate delineation of the subject contamination during this field event and provide final confirmation of the results (i.e. use field analytical methods and strategize/implement plans for contingency sampling as needed) (see comment 11.C. above).

RESPONSE

USEPA's comment is acknowledged. This is the objective of the Navy during all Phase 11 sampling efforts. However, if complete delineation is not accomplished, the Tier I team should determine whether adequate delineation to support a Record of Decision (ROD) has been achieved on a site-by-site basis. It should be noted that further delineation *can* be performed, as is often necessary, during predesign activities for the remedial design/remedial action process.

Comment:

14. The dieldrin concentrations detected represent a legitimate contamination concern, and must be addressed through remediation where deemed appropriate based on the findings of the Baseline Risk Assessment. However, the source of the dieldrin contamination is most likely separate from the sources originally identified as Sites 9, 29 and 34. The detected concentrations are just as likely to be seen at any maintained location at NASP. In order to effectively delineate detected dieldrin contamination at the base, it may be necessary to devise a different investigative strategy. EPA recommends that inquiries be made to PWC concerning their past use of pesticides (e.g. what was used, under what guidance was it used, etc.).

RESPONSE:

As agreed during recent Tier I team meetings, on those sites (9 and 29) immediately affected by BRAC, and where the opportunity to "revisit" the site is limited, dieldrin significantly exceeding CGs/RBCs will be removed during BRAC construction activities. On other NASP sites, USEPA's comment is acknowledged and will be given consideration during RI report development. Any available pesticide application information for Sites 9 and 29 will be presented in the RI reports.

SPECIFIC COMMENTS:

Comment:

1. Page 4, Paragraph 2:
   PVC should not be steam cleaned.

RESPONSE

Agreed. This statement was incorrectly Written and will be corrected to state "PVC well material was pressure washed with cool water" which was the actual decontamination process for this material.

Comment:

2. **Pages 19-20, Table 2:**
   Bis(2-ethylhexyl)phthalate is included on page 8 of the Region III RBC table. Please made the appropriate corrections to Table 2.

RESPONSE

USEPA's comment is acknowledged and will be incorporated into the RI report.

Comment:

3. **Page 16, Paragraph 2:**
   According to Appendix B, the NAS Pensacola-specific background standard for lead is 157.60, not 78.8. Please clarify. The FSDWS for manganese is 50 ppb, not 500 ppb.

RESPONSE

Agreed. These corrections will be incorporated into the RI report.

Comment:

4. **Page 17, Paragraph 1:**
   Delete the first four lines of duplicative text.

RESPONSE:

This correction will be incorporated into the RI report.

Comment:

5. Page 18, Paragraph 2:
Lead concentrations in groundwater at this site exceeded the SDWA treatment technique action level. Lead was therefore inappropriately eliminated from consideration based on inappropriate use of the NAL value.

RESPONSE

The lead concentration detected in sample 09GR02 (27 ppb) only slightly exceeded the 15 ppb SDWA Standard. Furthermore, this was an isolated exceedence for this parameter indicating elevated lead is not present across the site. This groundwater lead concentration is within the range of concentrations currently detected at background locations. However, as additional background groundwater quality information becomes available, site groundwater quality will be further evaluated and addressed in the forthcoming RI report(s) as necessary.

Comment:

6. Page 23, Paragraph 2:
111TCE is not an appropriate abbreviation. The chemical 1,1,1-trichloroethane should be abbreviated 111TCA and the chemical trichloroethene should be abbreviated TCE. There is no such chemical as 1,1,1-trichloroethene.

RESPONSE

Agreed. This correction will be incorporated into the RI report.

Comment:

7. Page 40, Paragraph 3:
An inquiry should be made to PWC regarding the lead detected in soil samples and the semi-volatiles detected in groundwater samples. If a records search indicates that these chemicals are not constituents of the believed "source" materials used by PWC at this site, it is possible that they originated from remnant fuel spills/leaks, and as such should be dealt with under FDEP's UST program.

RESPONSE

This possibility has been considered. No concrete evidence of a fuel/petroleum spill has been obtained. However, this area of the field was historically unpaved until the late 1960's, when Building 3557 was constructed. Consequently, aircraft maintenance activities in the area provided ample opportunity for spills to occur. The Tier I team is considering the transfer of several sites to the UST program. However, given the time critical importance of Site 34, the Navy feels the IR Program should continue evaluation of the site. Site contamination will be addressed through warranted preconstruction removal actions.

Comment:

8. Appendix A:
   Data should be presented as reported from the laboratory. It is inappropriate to present data which the laboratory has reported as 39 ug/l as 39.0000 ug/l even with the added caveat "data not shown in significant digits." *Also,* it appears that the data has not been transposed consistently from Appendix A to the Tables within the document. For instance, a comparison of Table 2 and Appendix A indicates that some values presented in Table 2 for 09SO301 are from 09SO301 and some are from 09SO301DL. Procedures for preparing tables from the data should be clearly stated in the document. *Also,* the accuracy of all tables contained in the text should be verified.

RESPONSE:

The format for analytical tables appearing in report appendices is currently under consideration. The inadvertent data transposing error will be corrected. Summary table accuracy will be reviewed prior to RI report submittal.

Comment:

9. Appendix B:
   Justification for the elimination of 01GS69 in the average concentration should be presented.

RESPONSE:

The sample originally collected from shallow background well 01GS69, labeled 01GS69, was not considered in the determination of shallow groundwater background levels because the results were highly suspect (anomalously low ambient concentrations of commonly occurring inorganic parameters). Shortly after the first sample results were received, background wells were resampled, generating samples 01GS67R and 01GS69R. Resampling event results for sample 01GS69R were consistent with other shallow background well samples, confirming the suspicion of error associated with the original sample 01GS69.