



ecology and environment, inc.

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December 3, 1992

Ms. Allison Drev
U.S. Environmental Protection Agency
Region IV
Waste Management Division
RCRA and Federal Facilities Branch
345 Courtland Street, N.E.
Atlanta, GA 30365

RE: Responses to **Comments** on the **100%** Draft Interim Data Reports and Revised Investigation Work Plans for Site Groups **F, G, J, K, H** and **N**, Contamination **Assessment/Remedial** Activities Investigations, Naval Air Station (NAS) Pensacola, Florida.

Dear Allison:

Ecology and Environment, Inc., (E 6 E) is pleased to submit to the U.S. Environmental Protection Agency, Region IV (EPA) one copy of responses to comments on the 100% draft interim data reports and revised investigation work plans for site groups F, G, J, K, H and N for the above-referenced project. The comments were received from the EPA, the Florida Department of Environmental Regulation and the Florida Department of Natural Resources. Ms. Linda Martin of Southern Division, U.S. Navy has reviewed and approved these comment responses.

If there are any questions or comments concerning these comment responses or other matters pertaining to the project, please feel free to contact me at (904) 435-8925.

Sincerely,

ECOLOGY AND ENVIRONMENT, INC.

John D. Barksdale, P.C.
Program Manager

JDB/sw/26:13

Attachments

cc: L. Martin; SouthNavFacEngCom--Charleston
J. Wilcox; E & E--Buffalo/Central File UH8000
G. Gallagher; E & E--Tallahassee
C. Tronolone; E & E--Buffalo

Attachment A

RESPONSES TO COMMENTS FROM THE
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION IV (BPA)
DRAFT REVISED WORK PLANS FOR SITE GROUPS F, G, J, K, M & N
NAVAL A/R STATION (NAS) PENSACOLA
PENSACOLA, FLORIDA

GENERAL COMMENTS

Comment 1:

The figures presented are of very poor quality. Shading or hatching, rather than letter codes, should be used to indicate pavement and other types of ground covering. All site features which are pertinent to the interpretation and evaluation of analytical, and other, results should be presented in the figures, including past and proposed sampling points, surface drainage (including direction of flow), groundwater flow direction, the industrial sewer, buried fuel lines, the locations and supposed boundaries of all sites and supply wells within the area of the figure, etc.. These deficiencies must be corrected before the next submittal.

Response:

The Navy disagrees with this comment. Each work plan contains at least five figures which present the pertinent features, including past and proposed sampling points, for each site.

Comment 2

The analytical results revealed some major flaws in the implementation of the Phase I investigation at these sites. The lack of any apparent attempt to correct these flaws suggests that the contractor made little use of the expensive rapid turnaround times (2-3 days) used in these investigations. These flaws, outlined below, will have a significant adverse impact upon the length and course of future investigations at NAS Pensacola. In the future, when quick turnaround times are used, the data must be used to provide feedback to laboratory and field personnel to quickly correct obvious and major QA/QC problems with the continuing investigation.

Response:

The analytical results do not necessarily reveal major flaws in the implementation of the Phase I investigation or major QA/QC problems.

Comment 2a:

Examination of the groundwater data clearly indicates a trend of unacceptably high metals concentrations in groundwater samples collected from temporary monitoring wells. This trend is clearly not evident in samples collected from previously installed permanent monitoring wells. The conclusion drawn by the Navy that sediments entrained in the samples artificially elevated the concentrations in the temporary wells is, undoubtedly correct. What is unacceptable is that apparently no effort was made to correct this problem at its source in the field, despite the

fact that the results of metals analyses were available within 2-3 days, due to the use of rapid turnaround times. Apparently all temporary vells were sampled with bailers. If an attempt was made to utilize a different sampling technique to minimize entrained sediments such as a low capacity pump, the text does not mention this. Thus, the Navy has continued to collect data for the past two years which is of little or no use in selecting future sampling locations.

Response:

While metals concentrations are higher in groundwater samples collected from the temporary monitoring vells, the reviewers' conclusion that the data is of little use is incorrect. Additional purging of the temporary monitoring vells was performed prior to sampling in an attempt to minimize turbidity in the sample. The Navy agrees that a low capacity pump, which was not used, would also minimize entrained sediments. Given the data quality objectives for Phase I, the analytical screening data produced useful data, identifying the principle areas and chemicals of concern at each site.

Comment 2b:

Examination of the field QA blanks indicates that the Batch 1 and Batch 2 Phase I investigations were conducted with little regard for field QA/QC. Field blanks, equipment rinse blanks, and preservative blanks were heavily contaminated with inorganic analytes, volatile organics, and extractable organics at both Batch 1 and Batch 2 sites. It is very apparent that either organic free water was not used in the field as specified in the GQAPP, or that it was handled inappropriately by field personnel.

Response:

Examination of the field QA blanks indicates only that very low concentrations of inorganic analytes were reported from readings lower than the contract required detection limit but greater than or equal to the instrument detection limit and that most of the low concentrations of volatile organic compounds (VOCs) and extractable organics were also present in the laboratory method blanks.

Comment 3

The ultimate goal of these investigations is rapid, effective site cleanup. As stated on page 9-2 of the GQAPP, Phase I results "will not be used to eliminate areas from further investigation". Thus, under the current process, a minimum of two years of investigation and reporting is required for all sites. This represents an inefficient use of time and resources. More specifically, the "focusing" objective of Phase I is conceptually sound, but the contractor's implementation of this phase, using DQOs Level I and SI, is not. Phase I does not permit the identification of "No Further Action" sites, which would allow the Navy to focus future resources on remaining higher priority sites. There is also a substantial overlap of Phase II sampling locations with the Phase I screening locations, suggesting that Phase I has not achieved its intended "focusing" objective. As such, little progress towards site deletion or description has been made during Phase I.

Response:

The Phase I (DQO Levels I & II) Screening data and sampling is less expensive, with reduced OA and reduced number of analytical suites; however, it allows maximum amount of coverage and increases the probability of identifying sites where no further action may be required. This concept is good on low priority sites where confirmation of no further action can be accomplished during the Phase II investigation with highly biased, high DQO level (IV) samples. This concept would also work well on sites with a single focused source area. Substantial overlap of Phase I and Phase II sampling has occurred on the higher priority sites which require confirmation with a large number of full analytical suite samples and also those sites where sporadic "hits" have occurred in the Phase I results and there is no clear source area. In these cases, the proposed Phase II investigation combines the objectives of confirming the Phase I results and full delineation of the source/extent of contamination. The Navy is very puzzled by EPA's comment on this issue. Following the EPA's comments on the Batch 1 and 4 work plans (see comment 1 for Groups A through E and Groups H, I, P and Q) which requested that the RI be completed during Phase II, the Navy intensified the scope of work proposed for Phase II. This comment is suggestive of using the originally proposed approach for Phase II which was a focused confirmation phase.

Comment 3 continued:

EPA recommends that the following investigative approach be used in continuing the investigation for Batch 2, and all other, sites at NAS Pensacola. This approach should expedite completion of the RI/FS and facilitate progress towards site cleanup.

- a. For Screening Sites, the next round of field work should consist of an initial/site assessment aimed at determining whether significant contaminants at levels of concern have, or have not, been released into the environment. This work should be done with an absolute minimum of highly biased soil and groundwater samples, utilizing analytical procedures which will provide high quality data (DQO Level III or IV). If existing suitable permanent wells are available, these should be sampled. If permanent wells are not available, groundwater samples should be obtained using one of the temporary sampling methodologies outlined in Appendix A. Permanent wells should only be installed in those portions of the site where contaminants other than metals were detected at levels exceeding MCLs during Phase I. The function of these wells would be to confirm, characterize and monitor the detected contamination.

The results of this next round of field work should be presented to the parties for evaluation and final determination as to whether a full-scale RI/FS will be required for the site. The emphasis must thus be on performing work and collecting samples which are of sufficient caliber to determine whether or not the site requires further action.

Response:

The Navy believes there is a significant potential of "missing" the site with a minimum number of highly biased samples during the screening phase. This is based on the results of the investigations performed to date at NAS Pensacola sites, where the contaminants and areas of concern

detected at many sites are substantially different from what was expected prior to the investigation.

Comment 3b:

For RI/FS Sites, EPA is in agreement with the Navy on the objectives of the upcoming field event, i.e. to (i) "[identify] the full spectrum of potential on-site contaminants as well as the maximum levels of occurrence" and to (ii) delineate and confirm the extent of contamination. In order to assure accomplishment of these goals, EPA recommends the following investigative approach.

First, perform the site assessment described in "a." using rapid analytical turnaround times to achieve a preliminary list of the contaminants and concentrations (goal (i)). Use this information to devise a list of screening parameters tailored to individual PSC characteristics. Submit the proposed list and justification to EPA and FDER for review/approval prior to proceeding with the investigation.

Use the focused analyte list to perform a subsequent screening delineation sampling round, the purpose of which is to delineate the full lateral and vertical extent of soil and groundwater contamination as quickly and cheaply as possible. This can be effectively done using hand augers and/or one or more of the sampling methodologies described in Appendix A. Quick turnaround data for the limited analytes determined in the site assessment should be used extensively and fed directly back into the ongoing field study to guide sampling and field QA/QC until the extent of contamination is sufficiently known. A small percentage of the samples collected in this manner (e.g. 10-20%) should be analyzed using DQO Level IV methodologies to assure the continued accuracy of the screening analytical results.

The final investigative step will be to perform confirmation sampling in order to verify the screening results and collect data which is of adequate quality and quantity to support final risk and remedial action decisions. This should entail sampling from permanent sampling stations with analysis of the resultant samples using CLP (DQO Level IV, TCWTAL) protocol. Thus, as soon as data sufficient to achieve the "delineation" goal has been obtained, the Navy should prepare a graphic and tabular presentation of the analytical results (as well as providing it in electronic format) and a graphic presentation of the proposed confirmatory sampling points. Following presentation of these results and recommendations to the parties and a brief evaluation period, confirmation sampling should proceed immediately to complete the investigation.

Finally, it should be noted that the sole purpose of using screening methodologies and a limited analyte list for purposes of extent delineation is to expedite this potentially lengthy portion of the investigation. In instances where the extent of contamination appears small, and/or may be readily delineated, it may be more time- and cost-effective to combine the delineation and confirmation steps. In this case, permanent wells should be installed and all samples analyzed using CLP (DQO Level IV, TCL/TAL) methodologies. However, for sites or areas where no contamination,

or only the questionable metals contamination, was detected during Phase I, EPA recommends that one of temporary sampling methodologies described in Appendix A be used to collect samples for CLP (DQO Level IV, TCL/TAL) analyses. This practice should prove time- and cost-effective for those sites which are unlikely to require further monitoring or action. The preceding decisions must be made on a site-specific basis.

Response:

The Navy does not understand the EPA's comment given that most of the sites have already undergone a site assessment and a screening investigation during the Phase I investigation. Confirmation sampling and delineation are already proposed for the Phase II investigation, as stated in the work plan. The Navy believes that, while temporary sampling methodologies are time-and-cost-effective for those sites requiring no further action, the majority of the sites (20 out of 22) which have had a Phase I investigation will require further investigation. It is not clear if the cost of installing more temporary wells, subsequently followed by permanent wells for confirmation would be more cost-effective than installing permanent wells only in Phase II.

Comment 3 continued:

The current work plans must be expanded to include a description of the strategies to be employed in implementing each of the above steps. Finally, screening sites, or sites that are strongly suspected of not being significantly contaminated should be examined together, under a separate schedule, so that they do not impede the progress on higher priority sites.

Response:

An expansion of the current work plans is not practical at this time. The Navy agrees that screening sites may be examined under a separate schedule as agreed upon by the RPMs as per the Federal Facilities Agreement Site Management Plan (FFASHP).

Comment 4:

The work plans should contain a discussion of data quality objectives (DQOs). DQOs are qualitative and quantitative statements, established prior to data collection, which specify the quality of the data required to support decisions during remedial response activities. Please refer to the U.S. EPA guidance document: "Data Quality Objectives for Remedial Response Activities" (EPA 540/G-87/003) for further information.

Response:

A discussion of data quality objectives (DQOs) is contained in the Ecology and Environment, Inc's (E & E's) Generic Quality Assurance Project Plan (GQAPP) and Site Management Plan (SHP). Phase I screening level data (DQO Level I & II) will be used to focus the Phase II (DQO Level III & IV) sampling. The text in Section 14 has been revised to indicate the DQO's for each phase of the investigation.

Comment 5:

For Batch 2 sites with known/suspected groundwater contamination, the revised work plans must include plans for delineating the vertical, as well as horizontal, extent of groundwater contamination. The limited available data indicate that a relatively high downward hydraulic gradient exists between the two units of the Sand and Gravel Aquifer for numerous sites. If either Phase I results or the site assessment samples collected in the early stages of the upcoming field work reveal the presence of shallow groundwater contamination, then one or more of the temporary groundwater sampling methods described in Appendix A should be used to delineate the vertical extent of contamination during this next round of field work. Particular emphasis should also be placed on adequate Characterization of the presence, thickness, lateral extent and hydraulic characteristics of the reported "low permeability zone" for sites where groundwater contamination exists.

Response:

The text in Section 14 has been revised to include the Batch 1 (Groups A-E) work plan changes which addressed these EPA concerns. However, no wells are planned with screens in the low permeability zone of the surficial aquifer.

Comment 6:

In general, selected soil samples collected from beneath the surficial water table during the initial/site assessment and the final confirmation sampling should be analyzed for full scan analytical parameters, not just metals, since numerous sites have known or suspected Contamination with solvents and waste oils. Contaminated soils beneath the groundwater will act as continuing sources of contaminants to the groundwater.

Response:

The Navy believes that additional soil sampling below the water table is justified where high concentrations of metals in the groundwater samples may reflect actual metals contamination in the soils, or where there is clear evidence of disposal activities resulting in groundwater contamination particularly in the case of chlorinated hydrocarbons or other "sinkers". In the absence of any significant groundwater contamination, soil sampling below the water table and full analytical suite parameters are unjustified.

Comment 7:

In each Interim Data Report the contaminant concentrations in soils were compared to the RCRA Proposed Corrective Action Levels (PCALs) for soil contamination. It should be noted that these action levels apply only at RCRA sites and were designed as part of the Risk Assessment to protect humans that may be directly exposed to surface soils. These values cannot be used at Superfund sites as a guideline for the contaminant concentration levels in soils that will protect groundwater. Soil Action Levels that will be protective of groundwater must also be determined on a site and chemical specific basis.

Response:

RCRA PCALs for soil contamination are presented to give a perspective of action levels for contaminants only for the purposes of comparison. This was done in response to the EPA's October 16, 1991 comment 19 for Site 12 - Scrap Bins.

Comment 8:

Each Work Plan should include a potentiometric surface map of the surficial aquifer for the site area.

Response:

A potentiometric surface map of the surficial aquifer is included in the Interim Data Reports (IDRs) for each site, and a statement to that effect has been added to each workplan.

Comment 9:

At some sites it is proposed that specific capacity testing will be conducted during the development of the newly installed wells. Specific capacity tests performed during well development will not provide accurate test results, since the specific capacity will increase as the well is being developed. The values obtained during development may thus be lower than the actual specific capacity. In order to assure accurate results, the well must be developed, and the water level allowed to recover, before performing these tests.

Response:

The specific capacity testing will be conducted following well development, after the water level in the well has stabilized. The text in Section 14 has been changed to clarify this last point.

Comment 10:

The Phase I RI data indicate that groundwater contamination exceeding MCLs or ARARs exists at numerous sites in Groups P, G, J, R, M and N. The Sand and Gravel Aquifer (S&GA) is classified as G-1, potable sole-source, according to the RI/FS Work Plan. The analogous EPA aquifer classification is designated as Class 1 "irreplaceable" groundwater. As such, groundwater remediation is likely to be required at NAS Pensacola.

Response:

This comment is noted.

Comment 10 continued:

The proposed hydraulic characterization of the S&GA using "slug" tests and short-term specific capacity tests is appropriate only to assist in the design of full-scale aquifer tests. Slug tests, particularly in high-permeability sands, only evaluate the hydraulic conductivity of a small cylinder of the aquifer immediately adjacent to the well bore. The data generated by a specific capacity test in an unconfined aquifer will yield data only on the pumping rate that the tested well will sustain with a specific level of drawdown. This data is useful for the design of a full-scale aquifer test, but will not characterize the hydraulic properties of the aquifer.

Response :

The data generated by the specific capacity tests will be used for the design of a full-scale aquifer test when it is determined that groundwater modeling will be required for remedial design at a site.

Comment 10 continued:

A full-scale aquifer test should be conducted on a background well location at each group location where groundwater extraction and treatment is likely. If the main producing zone of the S&GA can be shown to be unaffected by waste disposal for the Operable Unit, the aquifer test should be conducted on a well that fully screens the surficial unit. If the main producing zone has been affected, the aquifer pumping test program should be conducted in this, as well as the surficial, zone of the S&GA. The aquifer test should be designed by an experienced hydrogeologist to evaluate the hydraulic properties of the aquifer and underlying aquitard, the leakage between the units of the S&GA, and the radial influence of pumping and any boundary effects.

Response:

This comment is noted.

Comment 11:

Computer modeling of groundwater systems can be a valuable, powerful tool when correctly applied to site studies by an experienced hydrogeologist. In light of the hydrogeologic description provided in the RI/FS Work Plan, the proposed groundwater modeling, utilizing one or more of the listed two-dimensional flow models, does not seem appropriate. A flow model which allows vertical discretization of hydraulic properties, as well as horizontal and vertical boundary effects, would be more appropriate for evaluating groundwater and advective contaminant movement at these sites.

Response:

If the evaluation of Phase II chemical and aquifer test data, indicated that contamination in the surficial zone is migrating into deeper zones of the Sand and Gravel Aquifer and that this contamination will require remedial action, the Navy may, at that time, make the decision to employ a three-dimensional transport model.

Comment 11 continued:

With regards to computer modeling at sites where radionuclide contamination exists, EPA recommends use of one of the following two models for determining the risks, doses, etc. as a result of the transport mechanism: RESRAD (from DOE-Argonne National Lab) and GENII (from DOE-Pacific Northwest Lab).

Response:

This comment is noted.

Comment 11 continued:

The appropriate work plan text (i.e. Section 16) should be revised to state that models other than the proposed 2-dimensional RANDOMWALK will be considered and utilized as appropriate. A list of potential models, as well as the factors which will likely determine which model(s) will ultimately be used, should be provided in this section.

Response:

The appropriate work plan text has been revised to include other models, as appropriate, including three-dimensional models such as MODFLOW and PLASH.

Comment 12:

The comparison of groundwater samples to standards should include federal maximum contaminant levels (MCLs) and treatment technique action levels as well as the proposed MCLs when they are lower than the Florida standards or where there is no Florida standard. For example, the federal proposed MCL for nickel is 100 ug/L, the HCL for Cadmium is 5 ug/L, the treatment technique action level for lead is 15 ug/L, and the proposed HCL for methylene chloride is 5 ug/L.

Response:

Groundwater samples will be compared to the lowest proposed and/or existing standards, as appropriate.

Comment 13:

The proposed soil sample intervals (0-0.5, 0.5-2.5, and 2.5-5 feet) are not consistent with risk assessment data needs. For risk assessment purposes, EPA Region IV defines surface soil as 0 to 1 foot below land surface.

Response :

The draft Phase II work plans for Groups F, G, J, K, M, & N, were submitted for review prior to the June 16 and 17, 1992 Remedial Project Managers (RPM) meeting, where the Navy agreed with the EPA to change the surface soil sampling interval to 0 to 1 foot BLS. The appropriate section of the work plans has been revised.

Comment 14:

The results of the habitat/biota survey should be provided for each site. These results were not included in the Interim Data Reports for Sites 9, 29 and 34. If the site primarily consists of buildings and pavement, this should be stated in the survey summary. The habitat/biota map for each site should indicate the types of habitats present in each unpaved/vegetated area. This information is needed to evaluate the proposed Phase II locations for purposes of ecological risk assessment.

Response:

Sections 2 (Site Description) and 5.2 (Site-Specific Biological Resources) of the Group F work plan and also Section 3.2 (Site Reconnaissance) of the respective Interim Data Reports for Sites 9, 29, and 34 state that the surface of these sites primarily consists of pavement and therefore, are completely altered. The appropriate section of the Interim Data Report has been modified to clarify this.

Comment 15:

While it is acceptable to defer any biological sampling until after the contaminants of concern have been sufficiently characterized, the need for such sampling should be identified, and the sampling performed, as

early in the process as possible (i.e. probably during the latter portion of the screening/delineation. Biota sampling-aust be performed as part of the PSC-specific investigation when it is needed to assess the-ecological risks- that exist within, or immediately adjacent to, PSC boundaries (e.g. burrowing organisms). This information will be needed to complete the Baseline Risk Assessment for the individual PSC, not for OUs 15-17. Its collection should therefore not be delayed to the investigation of these latter Operable Units.

Response;

Detailed site-specific biological sampling, should it be required, will be conducted at a site following the evaluation of DQO level III and IV (Phase 11) data. If it is appropriate, based on the Phase II data evaluation, biological sampling will be performed on-and-off-site to characterize biota which may be exposed to contamination from the site, A detailed site-specific biological sampling plan will be presented to the EPA/FDER and Technical Review Committee (TRC) for review prior to conducting the sampling.

Comment 16:

Interim reporting? when necessary? should be done in an expeditious manner which emphasizes rapid, succinct communication of only the essential information. Description of field, and any other, methodologies should be limited to a reference to the approved work plans unless modifications occurred during the implementation. The results should be communicated/ presented through the use tables and figures to the maximum extent possible. Text should primarily be limited to interpretation and evaluation of the results and description of the remaining data gaps. A verbal presentation by the contractor, followed by the reviewer's evaluation of the data in electronic format, may also expedite and improve the reviewers understanding of the investigative results.

Response:

This topic was discussed at length during the RPM meeting on June 16 and 17, 1992 at NAS Pensacola. The Navy agrees with these comments.

Comment 17:

The discussion of PS tasks and reporting is very brief and needs significant expansion. The RI/FS guidance document should be consulted for particular requirements. Previous comments on RI/FS Work Plans for other Operable Units/Groups at NAS Pensacola must be addressed. These comments include the following:

- a. description and details of the specific tasks to be performed as part of the PS must be included in the present RI/FS Work Plan.
- b. The text should be clarified to show that the FS scoping activities will be performed concurrently with the RI.

- c. Specify what is meant by the term "applicable". Specify how the determination will be made as to whether a given technology is "applicable". The contractor's engineering judgement is not an appropriate selection criteria. Please refer to chapter 4 of the guidance for further clarification of the screening and remedial technologies.
- d. General response actions must be developed prior to the identification of potential treatment technologies. This process must be more clearly identified and described. Please refer to the RI/FS guidance.
- e. Specify how the screening and assessment of potential technologies differ. Please review and expand this section in accordance with pertinent portions of the RI/FS guidance document (e.g. Sections 4.1.2.1, 4.2.4, Fig. 4-4). The selection criteria listed here are incomplete and incorrect.
- f. The Risk Assessment does not play a role in the technology or process option selection processes. Some of the evaluation criteria used in the Detailed Analysis of Alternatives are risk-based (e.g. will the remedial action provide for overall protectiveness of human health and the environment). However, the Risk Assessment is not formally tied in to the process until after the RI/FS is completed (see Section 6.3 of the RI/FS guidance).
- g. Please refer to the RI/FS guidance for a complete listing and description of those steps in the FS process which follow the identification of potential technologies and revise/expand this section accordingly. Also, please note that treatability studies are typically needed whenever treatment has been identified as an alternative. If treatability studies will be conducted, then the necessary information and plans, as per the RI/FS guidance (Chapter 5) must also be included.
- h. The final task of the PS is to present a comparative analysis of alternatives against the evaluation criteria (see Section 6.22 of the RI/FS guidance). It is not the task of the contractor to select the Remedial Action for a site. Please refer to Section 6.3 of the RI/FS guidance document for further description of the selection process.
- i. Greater detail on the organization and content of the FS report is needed. Please refer to appropriate sections of the RI/FS guidance document (e.g. Table 6-5).

Response:

As was done for the Batch 1 work plans, Section 19 of these work plans has been revised to state that all Feasibility Study tasks will be conducted in accordance with EPA's current document, Guidance for Conducting Remedial Investigation and Feasibility Studies Under CERCLA (EPA 1988 b).

Comment 18:

In general, EPA recommends the submittal of three separate technical memos prior to submittal of the Draft Baseline Risk Assessment (BRA), in order to assure the adequacy and completeness of the latter document. These technical memos are as follows:

- a. Preliminary remediation goals
- b. **Hazardous** substances present at the site, including those selected as site contaminants of concern (COCs)
- c. Exposure scenarios and descriptions of the exposure assumptions for each scenario
- d. Environmental Evaluation

For further description of the contents of each memo, please refer to Appendix B which contains excerpts from a statement of work which is provided to EPA contractors tasked to prepare risk assessments for private sites.

Response:

This comment is noted.

Comment 19:

The Navy proposes to perform the upcoming field work under the guidance of the previously-approved GQAPP. This is acceptable to BPA provided the GQAPP is revised to meet the minimum specifications of the Region IV, Environmental Services, Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual (ECBSOPQAM), February 1991. This is necessary because the Phase I field work performed under the guidance of the GQAPP was of poor quality. In addition, EPA recommends closer oversight of the Navy contractor field activities by U.S.EPA at NAS Pensacola to ensure full compliance with the approved work plans.

Response:

The Navy disagrees with the EPA's opinion of the completed Phase I fieldwork. The upcoming fieldwork will be performed by the CLEAN If contractor using a GQAPP which has been/will be submitted to the EPA for approval. This GQAPP and all fieldwork will meet the requirements of the EPA's February 1991 ECBSOPQAM. The EPA is welcomed to send a representative to observe the field investigations at NAS Pensacola, provided that the BPA coordinate these visits with the Navy.

Comment 20:

The following comments, all of which have been made for numerous preceding work plans, pertain to the Baseline Risk Assessment section (Section 18) of each work plan:

- A. The selection of indicator chemicals is not appropriate for site characterization and risk assessment purposes. Section 5.8 of Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual (Part A) (RAGS-I) details the selection of chemicals of potential concern.

Response :

PAHs were not detected in Phase I soil boring B003. A soil boring is proposed; however, at Phase II location 2 to confirm the presence or absence of PAHs which were detected in Phase I soil boring B002.

Comment 2B :

In the course of Phase II boring installation and soil sample collection, if field observations or sample screening techniques suggest the presence of significant contamination in the vicinity of borings B002 or B003, then additional soil samples must be collected during this same field event in order to adequately delineate the extent of the contamination.

Response:

Phase II samples are not proposed at the Phase I B003 location. In the course of the Phase II investigation for all sites at NAS Pensacola, the results of field data and/or observations generated during the Phase II investigation will be utilized to adjust and/or redirect the Phase II efforts in order to maximize the amount of information obtained regarding the extent of possible contamination at the site. Section 14.2 of the work plan text has been revised to state this.

Comment 2c:

Since only metals were detected in the samples from temporary wells, and the metals concentrations in samples collected from permanent wells were below MCLs, groundwater samples should be collected first using one of the alternate methods described in Appendix A. Existing permanent wells should also be resampled. If these samples contain concentrations below MCLs, then additional permanent monitoring wells will not be needed for the site.

Response:

Please see the response to EPA's general comment 1 for Site 9. The Group F work plan also states that all existing permanent wells in the vicinity of Sites 9, 10, 23, 29, and 34 will be resampled during the Phase II investigation.

10/10/00

GROUP P: SITE 10 (COMMODORE'S POND)

GENERAL COMMENT:

Comment 1:

Examination of the Phase I data for this site indicates that this area **may be** contaminated. However, neither the source of the contamination, nor any other firm conclusions, can be **drawn from the Phase I data** due to the numerous QA/QC difficulties which were encountered. Available historical information indicates that this area was not used as a disposal site, while the Phase I analytical data indicates that contamination is present. If the area is contaminated, the source **may be** either the industrial sewer or possibly contaminated soils used to backfill the pond.

Response:

The Navy believes that the EPA reviewer is incorrect in his/her judgement that "neither the source of the contamination, nor any other firm conclusion, can be drawn from the Phase I data due to the numerous QA/QC difficulties which were encountered." In fact, no QA/QC difficulties are apparent in the data. Several potential areas are identified in the report as impacting Site 10, as is stated in the conclusions. Given the history of Site 10, the presence of high levels of any contaminants, particularly the phenols, suggests a nearby offsite source is impacting the site. This is stated in the IDR. The Industrial Sewer line is suspect; however, phenols were not detected in any samples collected along the sewer line in this area (see Figure 3-13, page 3-34, Site 10 IDR) and it is only these results which prevent any firm conclusions of the sewer line being a source of phenols to Site 10.

Comment 1 continued:

This site should be assessed with the working assumption that remedial action **may be** required.

Response:

The **work** plan has been amended to state this.

SPECIFIC COMMENTS:

Comment 1; Page 14-17, Paragraph 8

Lead concentrations of 6 to 34 times the drinking water action level are too high to be considered "endemic or ambient".

Response:

Lead concentrations in groundwater samples collected from temporary monitoring wells located on Sites 9, 10, 23, 29, and 34 (Group P) and Site 36 (Group N) in the Southwest portion of Chevalier field are presented in the Site 10 IDR (Figure 3-12, Page 3-32). This figure indicates that the occurrence of lead is apparently **widespread** over this area with potential multiple sources, thus the terms "endemic or ambient" are accurate.

B. The final step in the exposure assessment is to develop quantitative estimates of exposure. A qualitative estimate is not acceptable in the vast majority of contaminant pathway scenarios.

C. The reference to IRIS should be moved to Section 18.3. IRIS should be utilized as the primary source of toxicity information.

Response:

The appropriate paragraphs in Section 18 of the work plans have been modified to include these changes.

Comment 21:

For each work plan, the reference to Standard methods for the Examination of Water and Wastewater on page 8 of Appendix B needs to be updated to the 17th edition, 1989.

Response:

There is no reference to the specific edition of this document on page 8 of Appendix B. However, the 5 day BOD has been modified to the new method number SM 5210 B on page 8 of Appendix B for each work plan as per the updated reference in E 6 E's August 1992 GQAPP (see Table 9-5).

GROUP P: SITE 9 (NAVY YARD DISPOSAL AREA)

GENERAL COMMENT:

Comment 1:

Examination of the Phase I data, including borehole lithologies, OVA/Hnu response and analytical results indicates that either little contamination exists in this area or that all samples were collected outside the boundary of the site. No trash or fill material was noted in the descriptions of cuttings, indicating that these were not located in the disposal area. A borehole to examine the industrial sewer (site 36) constructed in the approximate center of Site 9 likewise encountered no fill material or contaminants. The only contaminant encountered on the site was lead in groundwater collected from temporary monitoring wells.

Response:

Examination of the data also indicates that the site is completely altered due to the removal of the Chevalier field concrete apron and the various trenching activities and road construction. It is possible that some of the fill material has been removed as a result of these activities.

Comment 1 continued:

This site should be assessed with the working assumption that no remedial action will be required. There is no indication that any permanent monitoring wells are required at this site.

Response:

Since no remedial action may be required and only two new wells are proposed for the Phase II investigation of Site 9, these locations will be sampled using temporary wells.

SPECIFIC COMMENTS:

Comment 1; Page 14-17:

There is some indication of low level radioactivity in certain areas of the site. A biased soil sample must be collected from the precise area of the highest readings of radioactivity and analyzed for alpha, beta, and gamma parameters.

Response:

The EPA reviewer needs to familiarize himself/herself with the results presented in the Site 9 IDR. A biased soil sample will be obtained from the proposed Phase II location 3 soil boring which is located exactly in the area of the highest readings of radioactivity. The proposed Phase II location 1 soil boring is also located in an area having higher than background radiation readings.

Comment 2A; Pages 14-20, 14-25 and 14-52:

An additional soil sample must be collected in the vicinity of soil boring B003 to confirm and characterize the nature of the elevated PAH concentrations.

Comment 2A; Pages 14-20, 14-26, 14-52, and 14-54 through 14-57:
As stated on page 14-20, one of the goals of the Phase I sampling is to evaluate and delineate the extent of soil contamination. Soil samples should be collected from beneath the water table as needed to accomplish this goal. Specifically, probable locations for the collection of such additional soil samples include Phase II boring locations 5, 12, 23 and 28. Highly elevated phenol concentrations were detected at each of these locations during Phase I.

Response:

Please see the response to EPA's specific comment 2B for Site 9. An additional soil sample below the water table will be added for sampling locations 12, 23, and 28; however, the EPA has not provided adequate justification for a soil sample to be collected at proposed Phase II location 5, a down gradient shallow monitoring well.

Comment 2B:

The majority of the contaminants detected in ground-water samples at Site 10 were metals. The most notable exception was the sample collected from TW002, where 10,000 ppb of trichlorophenol was detected. High concentrations of phenols were also detected in borings B002 and B005. In order to delineate the lateral and vertical extent of this groundwater and soil contamination, one of the alternate methodologies described in Appendix A should be used.

Response:

The Navy believes, based on the Phase I sampling results which indicate that remedial action may be required, the proposed Phase II sampling with permanent wells is justified.

Comment 2c:

Permanent monitoring wells should be installed at proposed locations 12 and 23 in order to monitor the phenols plume detected in the soils and/or groundwater (i.e. borings B002 and B005).

Response:

The Navy would like to point out to the EPA that permanent monitoring wells and soil borings are already proposed for the Phase II sampling at these locations as stated in the work plan.

Comment 2D:

Due to the high concentrations of phenols detected in monitoring well TW002, an intermediate groundwater sample using one of the screening techniques described in Appendix A must be collected adjacent to proposed well 12.

Response:

Proposed Phase II sampling location 6 is approximately 150 feet down gradient of location 12 and will provide the information desired. The BPA has not provided adequate justification for an intermediate well adjacent to location 12.

Comment 2B:

As discussed on page 3-2 of the Interim Data Report, culvert 751 discharges surface water runoff into a stormwater drain system which, in turn, outfalls into a paved drainage ditch located on site 23. A surface water/sediment sample must be collected at the latter outfall area.

Response:

Surface water and sediment sampling has been proposed in this area in conjunction with the Phase II investigation of Site 30 (Buildings 649 and 755) in the Group E work plan. In addition, the outfall will be located and an additional surface water/sediment sample will be collected at this location.

Comment 2P:

As stated on page 3-5 of the Interim Data Report for Site 10, "Water in the paved drainage ditch...exhibited an oily sheen at the time of the survey, and several seep-like discharges from the paved banks were identified." A surface water/sediment sample must be collected at the discharge point of this ditch, shown in figure 14-9, and from each of the observed seeps.

Response:

Surface and sediment sampling has been proposed in this area in conjunction with the Phase II investigation of Site 30 (Buildings 649 and 755) in the Group E work plan (see Figure 14-4, page 14-15).

Comment 2G:

As stated on page 3-30 of the Interim Data Report, "The persistence of TRPHs in all the intervals sampled at boring BOOS (in the west-central area of the site) and the very high phenol concentrations detected above the water table indicate another potential source impacting Site 10, possibly from an area west of the site." Additional soil samples aimed at confirming, characterizing and delineating this source, as needed, must be proposed for collection during Phase II.

Response:

Please see the response to EPA's specific comment 2B for Site 9. The EPA has not provided adequate justification for additional sampling in this area. As stated in the work plan, proposed Phase II locations 19 through 25 will confirm, characterize, and delineate a potential source in this area.

Comment 3A; Page 14-26, Figure 14-9:

The rationale presented for the clusters of soil borings and/or monitoring wells shown in this figure is inadequate. The proposed sampling seems to be excessive. This comment is applicable to several other sites and work plans and must be addressed for these as well.

Response:

As per earlier EPA comments (see comment 1 for Groups A through E and Groups E, I, P and Q), all work to complete the RI/FS during Phase II has been made and the Phase II investigation methodology combines the confirmation of the Phase I sampling results and the source/extent delineation originally planned for Phase III.

Comment 3B:

What was the purpose/function of the two concrete pads located in the northeast corner of the site. Do the aerial photographs indicate when the pads were first installed?

Response:

The former purpose/function of these concrete pads is not known; **however**, their appearance is similar to small concrete "footers" to support a small structure. The aerial photographs do not indicate when the pads were installed since there is some overgrowth at this location,

GROUP P: SITE 23 (CHEVALIER FIELD PIPE LEAK AREA)

Site 23 has been transferred from the Navy's Installation Restoration Program to the Underground Storage Tank (UST) Program. EPA's Site 23 comments have been forwarded to the Navy's UST group for response.

GROUP P: SITE 29 (SOIL SOUTH OF BUILDING 3460)

GENERAL COMMENTS:

Comment 1:

EPA recommends this site be combined with site 36 and eliminated as a separate entity. The recommendations for site 36 should address the issues for this site. Following evaluation of the condition of the sewer line in this area, if additional investigation is needed to delineate the extent of contamination, the following specific comments must be considered.

Response:

The Navy agrees with this comment.

SPECIFIC COMMENTS:

Comment 1A; Pages 14-28, 14-53 and 14-54:

Additional soil samples should be collected from beneath the water table surface at each of the proposed "shallow" monitor well locations and analyzed for Analytical Suite A to characterize soil contamination with depth.

Response :

The EPA has not provided adequate justification for additional soil samples at each monitoring well location; however, additional samples will be added at Phase II locations 2, 4, and 6, which are potential source areas.

Comment 1B:

Surface water/sediment samples must be collected from the stormwater drains shown in Figure 14-11. Also, indicate where the surface water entering these drains discharges to. Does it eventually reach the paved ditch which leads to the creek and Bayou Grande?

Response:

Surface water from the extensive concrete pavement around Building 3460 is directed into the drains and eventually to the paved ditch and Bayou Grande. The EPA's rationale/justification for the requested samples as they relate to the source of Site 29 contamination is not apparent.

Comment 1C:

A permanent well should be installed at proposed location 52 to monitor for the methylene chloride contamination which was detected in the sample from TW008. Remaining wells should be installed using one of the temporary methods described in Appendix A, since only metals contamination was detected in the remaining Phase I groundwater samples.

Response:

The Navy agrees that the remaining wells should be installed using one of the temporary methods. The appropriate sections of the workplan have been amended to state this. A permanent monitoring well is already proposed for Phase II location 52.

GROUP F: SITE 34 (SOLVENT NORTH OF BUILDING 3557)

GENERAL COMMENT:

Comment 1:

The historical data states that chlorinated solvent was spilled in this area. The available Phase I data indicates that this area is contaminated, but not with the spilled material. Rather, the contamination may be attributable to the industrial sewer. This site should be assessed with the goal of determining whether or not a source of contamination separate from the industrial sewer is present. If such a source cannot be identified, this site should be combined with site 36 and eliminated as a separate entity.

Response:

The Navy does not feel that it is appropriate to combine sites 34 and 36 at this time.

Comment 1 continued:

The existing wells should be resampled as part of the assessment.

Response:

This is already stated in the work plan. Again, the EPA reviewer has commented on items which are addressed in the current workplans.

SPECIFIC COMMENTS:

Comment 1A; Pages 14-29, 14-53 and 14-54:

Additional soil samples should be collected from beneath the water table surface at each of the proposed "shallow" monitor well locations and analyzed for Analytical Suite A to characterize soil contamination with depth.

Response:

A soil sample, to be collected below the water table, has been added to the work plan for proposed Phase II location 7.

Comment 1b:

A permanent well should be installed at proposed location 7 because of concentrations of **PAHs** (190 ppb) and phenols (960 ppb) detected in ground-water samples from **TW0011**. The remaining proposed locations can be screened as described in previous comments to confirm the absence, or delineate the extent, of groundwater contamination.

Response:

The Navy believes that all proposed Phase II well locations should be permanent monitoring wells to allow a hydrologic assessment of the area around building 3557. Pumping of groundwater from a central sump pit located beneath building 3557 apparently influences shallow groundwater flow and the hydraulic gradient in this area (See Site 34 IDR, p 3-6).

CROUP G: SITE 25 (RADIUM SPILL AREA)

GENERAL COMMENTS:

Comment 1:

The following Interim Remedial Measures (IRMs) are recommended for this site:

A. Fences and warning signs should be posted in all portions of the site where values exceeding two times background were detected during the radiation survey.

B. Soils in this area should be immediately assessed for radioactivity, and remediated to the radiation standards set for surface and subsurface soils, if these are exceeded.

Response:

The Navy does not believe that fences and warning signs are appropriate based on the Phase I results. The area west of Building 780 had radiation readings exceeding two times background; however, Ra-226 was not detected in any of the samples obtained from two Phase I soil borings (B004 and B016) located there. An IRM in this area does not appear to be justified.

Comment 1 continued:

C. The soils around the transformer should be examined and remediated to the standards for PCB contaminated soils set by TSCA.

Response:

The Navy agrees with this comment.

Comment 2

Following completion of the above IRMs, Site 25 should undergo a screening investigation, if sufficient data to determine contaminants of concern and their levels of concern can be determined. In general, the VOC groundwater contaminant plume in this area should be delineated prior to installing more permanent monitoring wells.

Response:

VOCs were not detected in any groundwater sample collected at Site 25.

SPECIFIC COMMENTS:

Comment 1; Page 14-1, Paragraph 1:

"Learn[ing] more about the history of this site" will be critical to determining how far the investigation should go to achieve full characterization of the radium contamination. EPA agrees that some of the elevated gamma levels may be from the natural radionuclides in the asphalt and concrete. However, there appears to be enough current and historical evidence to suggest the presence of contamination beneath these areas. In order to fully characterize the radium contamination and determine its migration potential, it may be necessary to remove the overlaying concrete or asphalt (see p.3-4 of Interim Report). The problem lies in determining whether disturbing the surface will cause more contamination and/or migration of the radium. This problem must be addressed in the upcoming investigation.

Response :

Comment noted; however, EPA seems to be referring to Site 27 and not to Site 25.

Comment 2; Page 14-15:

Proving that there is no offsite migration or contamination should also be an objective of the upcoming investigation.

Response:

This comment is noted. An objective of the Phase II investigation is to delineate the overall extent of any contamination.

Comment 3A; Pages 14-20, 14-24 through 14-25, and 14-30 through 14-33:

A. Additional soil samples should be collected from beneath the water table surface at each of the proposed soil boring locations east of building 780 to characterize soil contamination with depth.

Response :

An additional soil sample has been added for proposed Phase II locations 8, 20, and 21, which are in the most probable source area. The EPA has not provided adequate justification for additional soil samples in each of the other proposed soil borings in this area.

Comment 3B:

Permanent monitoring wells should be installed at locations of known radioactive contamination and hot spot areas, including proposed locations 21 and 27. Also, a permanent background well should be installed at proposed location 2. The remaining proposed well locations should be screened using one of the techniques described in Appendix A to determine the extent of contamination prior to installing additional permanent wells at the site.

Response:

The Navy believes that, based on the Phase I investigation results, all the proposed Phase II wells should be permanent wells as stated in the workplan.

Comment 3C:

In order to determine the vertical extent of contamination proximate to the reported spill area, a ground-water sample should be collected adjacent to well 21 in the basal portion of the surficial aquifer.

Response :

An intermediate depth well has been added to this area and proposed to be sampled for a full analytical suite.

Comment 4; Page 16-1:

The proposed assessment for modeling current and future groundwater flow, fate, and transport should include more than just flow models. For radionuclides migration and soil cleanup guidelines, EPA suggests DOE's RESRAD computer model. This code was developed out of Argonne National Lab for FUSRAP sites (Ra, U, and daughters), but is now being applied at a variety of sites, including: Cs-137 leak at a radiation sterilizer, Georgia; NORM site, Kentucky; several DOE sites; etc.. With enough site-specific parameters a good estimate of soil cleanup guidelines can be achieved. A contact for the code is Charley Yu at 708/972-5589.

Response:

This comment is noted. The workplan will be amended to include this information.

Comment 5:

Ra-226 contamination in groundwater exceeding 5 pCi/L is said to be "widespread" (Interim Data Report, page 4-1). This is not apparent from the levels reported so far. Phase II must focus on the spread of Ra in groundwater to ensure that the offsite public has not been exposed, and to ensure against future exposure.

Response:

It also must be pointed out that Ra-226 was detected in every groundwater sample collected during the Phase I investigation of Site 25. An objective of the Phase II investigation is to delineate the overall extent of the contamination to ensure **that** the offsite public has not been exposed.

17-4000

GROUP G: SITE 27 (RADIUM DIAL SHOP AREA)

GENERAL COMMENTS:

Comment 1:

The following Interim Remedial Measures (IRMs) are recommended for this site:

A. Fences and warning signs should be posted in all portions of the site where values exceeding two times background were detected during the radiation survey.

B. The soils in this area should be immediately analyzed for radioactivity, and remediated to the radiation standards set for surface and subsurface soils where these are exceeded.

Response:

Soil sampling is proposed during the Phase II investigation in the area of Phase I borings B015 and B016. An IRM should be considered based on the results of this sampling in this area. However, a fence has already been installed around the transformer near boring B016.

Comment 1 continued:

C. It seems very likely that the abandoned sewer line (now plugged) may exceed the cleanup standards for radioactive materials. The line should be located, evaluated, and removed if necessary.

Response:

The Navy agrees that this sewer line should be evaluated.

Comment 2

Following removal of the radioactive contaminants, this site should undergo a screening investigation, if sufficient data to determine contaminants of concern and their levels of concern can be determined. In general, the VOC groundwater contaminant plume in this area should be delineated prior to installing more permanent monitoring wells. Some shallow groundwater samples showed elevated Ra levels. The next round of field work should adequately delineate the extent of this latter contamination and its migration history and potential as well.

Response:

Site 27 has already undergone a screening investigation. The objectives of the Phase II investigation, as stated in the work plan, are to fully characterize the nature/magnitude and delineate the overall extent of on-site soil and groundwater contamination.

SPECIFIC COMMENTS:

Comment 1; Page 14-8:

The statement is made that a sediment sample will be collected from the sewer outfall, yet Section 3.2 (page 3-3, paragraph 4) states that the sewer line "terminates in the sewage treatment plant". Clarify whether there is an open sewer outfall associated with the sewer line.

Response:

Page 14-8 describes sediment sampling which was conducted during the Phase I investigation. The sewer line outfall referred to on page 14-8 refers to the lift station located east of Building 741.

Comment 2A; Pages 14-21, 14-31 and 14-32:

Additional soil samples should be collected ~~from~~ beneath the water table surface at each of the proposed soil boring locations to characterize soil contamination with depth.

Response:

An additional soil sample is added for Phase II locations 5, 6, 7, 10, 11, 12 and 19, in the probable source areas. The EPA has not provided adequate justification for additional soil samples in borings outside these areas.

Comment 2B:

Due to the elevated radium-226 concentrations detected at boring B016 and the potential for PCB contamination, soil samples should be collected adjacent to the transformer concrete slabs on the south side of the former building 709. A soil sample should also be collected adjacent to the concrete slab near manhole N-5 unless the use of this slab can be determined and verified as an unlikely source of contamination.

Response:

The transformer located in this area is not necessarily suspected as a source of the detected contamination; however, a former equipment building (see page 14-18) and activities associated with the building may have contributed to contamination detected in Phase I borings B015 and B016. The concrete drive near manhole N-5 provided access to former building 709 and is an unlikely source of contamination.

Comment 2c:

Permanent wells should be installed in areas of known contamination, including locations proximate to Phase I temporary wells TW015 and TW017, where significant levels of radium-226 were detected. During installation of these wells, ground-water samples should be screened by an alternative method (temporary well, hydropunch, etc.) to determine the extent of the contaminant plume.

Response :

A permanent well is already proposed in the location of Phase I temporary well TW015 in the work plan. A boring and monitoring well will also be added to the workplan at the location of TW017.

Comment 3:

The following comments pertain to the radiation survey conducted for Site 27, as described in Sections 2.4 and 3.4 of the Interim Data Report. These comments are applicable to Site 25 as well.

Comment 3A:

The instruments used for the radiation surveys (as described in Section 2-4 of the Interim Data Report) are not adequate for the low microR levels, e.g. in the general areas. EPA recommends using a Pressurized Ion Chamber (PIC) and a Ludlum microR-meter. When calibrated for the

Ra-226 gamma energies they are much more accurate in providing real radiation exposure rates. The reported levels of approximately 25,000 dpm for background and 653,000 for the highest level translate to approximately 11,000 pCi and 294,000 pCi, respectively.

Response :
This comment is noted.

Comment 3B:

The 1.0 uR/hr readings for the Bicron are too low to be accurate. There is no area with background levels this low. 5 to 10 uR/hr are typical background levels for Florida (away from phosphate areas). The PIC can be very accurate for 1 m and general area readings.

Response:
A review of the field log book indicates no apparent problems with the data and that a background reading of 1.0 uR/hr was obtained using a Bicron Micro analyst.

Comment 3c:

It is assumed that the dpm and uR/hr readings provided are relative radiation readings and not true readings. Regardless of the instrument used, it must be calibrated against Ra-226, and the radiation units given must be explained against actual radiation units and background levels.

Response :

The radiation survey was performed by a health physicist, who calibrated the instruments to a known source.

GROUP J: SITE 3 (CRASH CREW TRAINING AREA)

GENERAL COMMENTS:

Comment 1:

This site should be assessed with the goal of determining whether or not materials other than pure petroleum products were burned in these areas. If feasible, Site 3 should be exempted from CERCLA/RCRA requirements under the petroleum exclusion clause. This would enable this area, and the associated groundwater contamination detected during Phase I, to undergo immediate remediation.

Response:

This comment is noted. The workplan has been amended to state that if only petroleum products are present the site will be exempted from CERCLA/RCRA under the petroleum exclusion clause.

Comment 2:

The fire training areas should be moved to an uncontaminated portion of the site and reconstructed on a containment pad or pit to prevent future releases of materials.

Response:

An IRM plan has been written for six of the eight burn areas and will be forwarded to the EPA and FDER. The remaining two areas are the active training areas and will be written and IRMs implemented on the last two burn areas by July 1995.

SPECIFIC COMMENTS:

Comment 1; Page 5-9, Section 5.2:

The wetland areas at Site 3, as noted in Figure 3-1 of the Interim Data Report, should be mentioned in this section.

Response:

Section 5.2 of the work plan has been modified accordingly.

Comment 2; Page 6-2, Section 6.2:

The same wetland areas and the stormwater drainage system should be mentioned in this section.

Response:

Section 6.2 of the work plan has been modified accordingly.

Comment 3; Page 14-8, Section 14.2:

If possible, the area of persistently stressed vegetation associated with Site 19 (page 2-4, Section 2.2) should be addressed in conjunction with future activities under the Navy's Underground Storage Tank Program.

Response:

This comment is noted.

Comment 4; Pages 14-17 and 14-30, Figure 14-4 and Section 14.2.3.1:

The portion of the stormwater drainage system viewed during the recent Ecological Scoping Tour was an open ditch with standing water; no catch

basins with grates were viewed. Would surface water and sediment samples from the catch basins be more representative of contaminant migration than samples from the ditch itself, especially given the presence of wetland vegetation in the ditch?

Response:

Surface water and sediment samples from the catch basins, which are proposed in the Phase II investigation, are more representative because they will evaluate the offsite migration pathway.

Comment 5A; Pages 14-17 through 14-19 and 14-30 through 14-33:

Additional soil samples must be collected from beneath the water table surface at each of the proposed "shallow" monitor well locations and analyzed for "Suite A" parameters to characterize soil contamination with depth.

Response:

The Navy believes that the proposed Phase II sampling is adequate to characterize the probable source of soil contamination. The EPA has not provided adequate justification for additional soil sampling.

Comment 5B:

Permanent monitoring wells should be installed in areas of known organic contamination, i.e., proposed well locations 79 and 81. A permanent background well should also be installed, either at location 72 or location 74. The remaining proposed monitoring well locations should first be screened using one of the temporary methods mentioned described in Appendix A. Once the contaminant plume is delineated, permanent monitoring wells should be installed at the appropriate locations.

Response:

Permanent monitoring wells are proposed for all proposed Phase II well locations. The objectives of the Phase II sampling are to delineate the contaminant plume.

GROUP K: SITE 7 (FIREFIGHTING SCHOOL)

GENERAL COMMENTS:

Comment 1:

Available information indicates that this site is not significantly contaminated. The site should be assessed with the goal of determining **whether** it can be exempted from CERCLA/RCRA requirements under the petroleum exclusion clause. If the site assessment finds no significant contamination, the site should be dropped from further consideration.

Response:

This comment is noted. The workplan has been amended to state this.

SPECIFIC COMMENTS:

Comment 1A; Pages 14-21, and 14-34 through 14-36:

Additional soil samples should be collected from below the water table surface at each of the proposed "shallow" monitor well locations and analyzed for "Suite A" parameters to characterize soil contamination with depth.

Response:

The Navy believes that additional soil samples are not justified because the Phase I results indicates that the site is not significantly contaminated.

Comment 1B:

Ground-water samples collected from **TW007** contained significant levels of benzo(a)pyrene (190 ppb). Therefore, a permanent monitoring well (proposed well 4) should be installed here to monitor the concentration levels. A background well should also be installed at the site. The additional proposed locations for collecting ground-water samples should be screened using one or more of the alternative techniques described in Appendix A. Samples should be collected at sufficient locations to delineate the extent of the contaminant plume. Following evaluation of these results, permanent wells should be installed, where appropriate, to monitor the plume.

Response:

The groundwater sample collected from **TW007** indicates that only **PAHs** are present, reported as benzo (a) pyrene (see Site 7 IDR, Table 3-4, page 3-22). The EPA has not provided adequate justification for an additional well at that location since the available information indicates that this site is not significantly contaminated (see EPA general comment 1 for Site 7 above). However, an additional well will be installed approximately 50 feet south of well location 2 as a more downgradient monitoring point. The proposed well location 5 is in an upgradient position and can serve as a background location.

GROUP K: SITE 21 (SLUDGE AT FUEL TANKS AREA)

Site 21 has been transferred from the Navy's Installation Restoration Program to the Underground Storage Tank (UST) Program. EPA's Site 21 comments have been forwarded to the Navy's UST group for response.

GROUP M: SITE 31 (SOIL NORTH OF BUILDING 648)

GENERAL COMMENTS:

Comment 1:

Table 3-1 of the subject document indicates substantial groundwater contamination with chlorinated solvents may be associated with this site (wells GM-55 and GM-58). The origin of the contaminants in wells GM-55 and GM-58 must be determined in the next round of field work. If Site 31 cannot be confirmed as the source of the contaminant plume and no on-site soil Contamination of significance is detected, this site should be dropped from further consideration.

Response:

This comment is noted. The work plan has been amended to state this.

SPECIFIC COMMENTS:

Comment 1; Page 14-9, Paragraph 1:

This site is designated as an RI/FS site in Appendix A of the Federal Facilities Agreement. The statement that "A full-scale RI/FS will not be warranted at Site 31" must therefore be deleted. The RI may indicate that no remedial action is necessary. However, an RI Report, including a Baseline Risk Assessment, must be completed for this site.

Response:

The text in Section 14.2 has been modified to state this.

Comment 2; Page 14-11, Section 14.2.1:

The structural integrity of the waste oil tank and associated piping should be evaluated by pressure testing during the "Contaminant Source Survey". Elevated levels of polynuclear aromatic hydrocarbons and total recoverable petroleum hydrocarbons have been detected at the site, and the waste oil tank is a probable source of these types of contaminants.

Response:

The text in Section 14.2.1 has been modified to state this.

GROW N SITE 36 (IWTP SEWER AREA)

GENERAL COMMENTS:

Comment 1:

The industrial waste sewer site cannot be characterized as a conventional site. The underlying assumption of the RI/FS process is that there is no continuing release of contaminants to the environment. It is EPA's strong recommendation that no further monitoring of this site be performed until the Navy adopts and implements an engineering plan that addresses these issues. The Navy should therefore make a proposal to U.S.EPA to provide positive confirmation of the current condition of the sewer. This proposal should also include recommendations to repair or replace this sewer line in order to stop the ongoing release of any contaminants. The following proposals should be considered by the Navy:

- (i) Complete excavation and replacement of the sewer line: especially those sections that are not force main. The replacement sewer line should either be unjointed and compatible with the waste materials it will carry, or double walled, etc. It must be constructed in such a manner that leaks can be easily detected and located. If the existing parts of the line that are force main are retained, tests must be performed to USEPA's satisfaction to show that these are not leaking. A schedule of periodic testing must be submitted for review. The Navy should also institute a waste minimization program.
- (ii) Complete excavation and abandonment of the sewer line: institute a waste minimization program and haul hazardous waste off site for treatment.
- (iii) Complete excavation and abandonment of the sewer line: institute a waste minimization and haul the waste material to the on site industrial wastewater treatment plant.

It will be noted that all of the suggestions outlined above entail complete excavation of either the entire sewer line or at least those sections that are not force main. EPA believes that this is the only approach which will ensure that all leaks are successfully located and marked for future monitoring/remediation. However, EPA is willing to examine alternate proposals that may be put forward by the Navy. The most contaminated soils should be removed during the excavation and examination of the existing sewer line as an IRM.

Response:

The Navy strongly disagrees with the recommendations put forth by the EPA in this comment. The Site 36 Phase I data simply do not support the unequivocal presence of active, continuing leaks at the sampling locations and many other potential nearby sources also exist (see Site 36 IDR, p. 4-1). A complete excavation of the sewer line is an extreme measure and the EPA has not provided adequate justification for this especially since the potential for other sources to be impacting the

Phase I data are so great. Potential sources of contamination would also include the nearby UST sites which were presented during the Installation Restoration Conference, June 17, 1992, at NAS Pensacola.

In addition, the results of a telespection of the industrial sewer performed in 1987 also did not indicate that any substantial leaks are present in the system. As a result of this and the inconclusive nature of the Phase I results regarding the potential sources of contamination, the Navy does not believe that removal of the sewer line is warranted. However, the Navy plans to perform exfiltration testing on the sewer line in the near future. The Navy believes that taking an active measure to identify the source of contamination along the sewer line, using the sampling rationale presented in the work plan, is the most reasonable approach to take at this time.

The NADEP Pensacola has prepared and is finalizing a hazardous waste minimization plan (NADEPINST 5090, NADEP Pensacola Hazardous Waste Minimization Plan, August 1992). The installation will follow this plan and take an active role in instituting a waste minimization program,

Comment 2

Given the large amount of data collected for Site 36 during Phase I, the following comments regarding presentation of the data are provided:

Comment 2 (i):

Contaminant isopleths outlining the extent of contamination must be prepared using data no older than August of 1990. The isopleths should be drawn for both the shallow and intermediate well depths and should reflect various cleanup goals or options. Areas of the site where this cannot be done due to lack of data would be candidates for further sampling. In other words, the locations of sampling sites, proposed wells, etc. should not be finalized until the data gaps pertaining to the extent of contamination have been positively identified. Once the isopleths have been generated and the data gaps identified, the Navy should consider collecting these samples using one of the temporary groundwater sampling methodologies described in Appendix A. If any additional permanent wells are needed, these may be installed immediately following collection of the data via one of the temporary sampling methodologies.

Response:

As stated in the EPA's general comment 1 for Site 36, "this is not a conventional site." Given the nature of the data distribution, which is too random and indicates either multiple sources and/or isolated points of leakage, isoplething the data would serve no real purpose other than to mislead the reviewer. In addition, text was added to the work plan stating that temporary sampling methodologies may be employed, as appropriate.

Comment 2 (ii):

Groundwater contour maps should be prepared showing water level elevations during operation of the groundwater recovery system

Response:

The operation of the groundwater recovery system would only affect the groundwater elevations along a small portion of the industrial sewer line near the termination to the IWTP; therefore, there is no purpose for preparing these maps for the Site 36 investigation.

SPECIFIC COMMENTS:

Comment 1; Page 2-3, Figure 2-2:

The building numbers must be legible, since specific buildings are mentioned in the text. If the building numbers on this figure cannot be enlarged, a copy of Plate 1 (Plan Map) from the Interim Data Report must be included in the Work Plan.

Response:

A copy of Plate 1 (Plan Map) from the Interim Data Report has been added to the work plan.

Comment 2; Page 3-1, Paragraph 3:

This section mentions a fish kill resulting from an industrial waste spill. The location of the pump that failed and the surface water body and specific location where the fish kill occurred must be provided in the work plan text.

Response:

The text in Section 3 has been amended to include this information.

Comment 3; Pages 3-1 to 3-2:

Plate 1 (Plan Map) from the Interim Data Report shows the industrial waste line near Building 3460 as a gravity line rather than a force line. It also shows inputs from other buildings in addition to Buildings 71 and 72, indicating other possible sources of the waste. The work plan text should be clarified accordingly.

Response:

The industrial sewer line near Building 3460 is a gravity line. The text in Section 3 has been amended to state this.

Comment 4; Pages 14-13 and 14-15, Figure 14-2 and Table 14-3:

The rationale presented for sampling protocols C through H is inadequate to justify the extensive sampling proposed. Unless adequate justification can be provided, the number of proposed samples should be reduced.

Response:

The rationale presented for the sampling protocols and the number of samples is justified in order to identify the source of the contamination as either coming from the sewer line or another nearby source.

Comment 5A; Pages 14-53 through 14-54:

If permanent wells are installed, the surface casing **must** have a large enough inner diameter (ID) to allow for a 2-inch annular space. For the proposed 4-inch wells, an 8-inch ID surface casing is far too **small**. The surface casing must be large enough to accommodate the 8-inch ID auger that **will** be used to install the well.

Response:

This comment is technically incorrect. For a 4-inch well, **an** 8-inch surface casing **will** allow for a 2-inch annular space. The surface casing is large enough to accomodate the installation of the 4-inch well with a **mud** rotary bit.

Comment 5B:

EPA **recommends** that any wells installed in this area be constructed of stainless steel.

Response:

The EPA has approved a blanket vaiver for all wells to be constructed of two-inch diameter PVC.

Comment 5C:

All wells must be installed and developed in accordance with the U. S. EPA, Region IV, Environmental Services, Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual (ECBSOPQAM), February 1991.

Response :

This comment is noted.

Attachment B

RESPONSES TO COMMENTS FROM THE
FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (FDER)
DRAFT REVISED WORK PLANS, FOR SITE GROUPS F, G, J, K, M AND N
NAVAL AIR STATION (NAS) PENSACOLA
PENSACOLA, I D A

GENERAL COMMENTS

comment 1:

Previous responses have indicated that Phase II background samples will be taken around the inactive well fields. Is this still the case for all these sites:

Response :

In conjunction with the operable Unit (OU) 1 Phase II investigation, background soil and groundwater samples are proposed to be collected in the immediate vicinity of the three inactive UAS Pensacola Supply wells. This sampling is described in detail in the revised Phase II section of the work plan for Group A (OU 1).

Comment 2

It is expected that at the contaminant levels found at various sites during the screening phase, a longer -48 to 72 hours- aquifer pump test will be required during Phase II to determine or design aquifer remedial action plans. With the extent of the work proposed in Phase II and by the conclusion of said phase, the majority of the horizontal and vertical extent of contamination in both media should have been defined. Remedial Action Plans or Feasibility Studies that will take care of the most contaminated areas should be designed and implemented while still pursuing any remaining plume delineation during Phase III.

Response:

It has been the Navy's experience at NAS Pensacola that eight hours is a sufficient and reasonable period of time to conduct a pumping test for remedial design purposes. In the shallow and intermediate zones of the Sand-And-Gravel aquifer, drawdowns within a reasonable distance from a pumping well (i.e. 200 feet) stabilize in a very short period of time (i.e. within tens of minutes). Because of the unconfined conditions, (storage is effectively equal to the specific yield) the most dramatic changes in drawdown occur at the outer edges of the cone of influence, and these drawdowns stabilize quickly as the aquifer depletes and the cone of influence migrates outward from the pumping well. Therefore, if drawdowns in a pumping well and in observation wells within a reasonable distance (i.e. 200 feet) stabilize within the proposed 8 hours, it would seem to serve only an academic purpose to conduct the tests for an additional 40 to 64 hours. If contamination is detected in the deep zone, and remedial design is required, the length of a pumping test should be determined based on a site-specific basis, with the potential requirements and hydrogeology in mind. Given the confined conditions in

this zone, the proposed eight hours should be regarded as the expected minimum; individual pumping tests may be shortened or lengthened depending on the observed aquifer response.

The remainder of this comment is noted.

PEASB I - SITE 9 - NAVAL YARD DISPOSAL AREA - GROUP F

Comment 1:

The work presented in Phase I Interim Data Report is acceptable for its purposes.

PHASE II - SITE 9 - NAVY YARD DISPOSAL AREA - GROUP F

Comment 1:

The work proposed is acceptable for its purposes.

PHASE I - SITE 10 - COMMODORE'S POND - GROUP F

Comment 1; page 3-7:

Please indicate where the background reading was obtained for this site or is a background sampling program underway around the inactive well field?

Response:

The background radiation reading for this site was obtained in a grassy area immediately east of Building 1754. The text in section 2.5 has been modified to include this. Background sampling in the vicinity of the three inactive NAS Pensacola supply wells involves only soil and groundwater. This background sampling is described in the revised Phase II section of the work plan for Group A (OU 1).

Comment 2; page 3-33:

The consultant and the Navy state that Site 23 is affecting Site 10. Due to the proximity of both sites and some aerial overlap, it is suggested that they be considered a single site for assessment and/or remediation purposes.

Response:

In accordance with the current Site Management Plan, and in accordance with the PFA, these sites are regarded as separate potential sources of contamination (PSCs). Therefore, the investigation of each of them will be conducted and reported separately. However, the potential impacts of adjacent sites will always be evaluated as part of an individual site investigation; this is particularly true of sites such as these which are in such close proximity of each other.

PHASE II - SITE 10 - COMMODORE'S POND - GROUP F:

Comment 1:

The work proposed is satisfactory for its purposes.

PHASE I - SITB 23 - GROUP F:

Site 23 has been transferred from the Navy's Installation Restoration Program to the Underground Storage Tank (UST) Program. FDER's Site 23 comments have been forwarded to the Navy's UST group for response.

PHASE I - SITE 29 - SOIL SOUTH OF BUILDING 3460 - GROUP F:

Comment 1:

The work presented is satisfactory for its purposes.

PHASE II - SITB 29 - SOIL SOUTH OF BUILDING 3460 - GROUP F:

Comment 1; page 14-28:

A soil boring located east of SB-6 should be installed to define the lateral extent of pyrenes found during Phase 1.

Response:

One soil boring will be added approximately 30 feet east of the Phase I B006 location.

PHASE I - SITB 24 - SOLVENT NORTH OF BLDG. 3557 - GROUP F:

Comment 1:

The work presented is acceptable for its purposes.

PHASE II - SITB 34 - SOLVENT NORTH OF BUILDING 3557 - GROUP F:

Comment 1:

Please include with the work proposed a leak test of tanks and lines.

Response:

The Navy has implemented strict inventory control of these tanks. This system has not indicated any loss of contents, and therefore there is no rationale to include a pressure test of the tanks or associated service lines.

Comment 2; page 14-29:

Additional soil borings are warranted in the unpaved area north of the tank, between B010 and B008 to confirm the absence of contamination.

Response:

One soil boring will be added in the unpaved area north of the tanks. A soil boring and shallow monitoring well (location 5) is already proposed in the area between Phase I locations B008 and B010.

PHASE I - SITB 27 - RADIUM DIAL SHOP SEWER - GROUP G:

Comment 1; page 3-15:

Table 3-3 presents data for Radium 226 in soil with a detection limit of 0.5 pCi/g. However, some of the data presented on the same table indicates levels that are below instrument detection limits. Please explain.

Response:

This is a pre-established detection limit set prior to sample analysis, The actual detection limit may be lower depending on sample volume, background radiation levels, and instrument efficiency.

PEASB II - SITB 27 - RADIUM DIAL SEOP SEWER - GROUP G:

Comment 1; page 14-1:

Eov does the consultant or the Navy propose to learn more about the NEESA-RASO survey, and if that information is or was available why wasn't it presented during Phase I?

Response:

All currently available information concerning the NEESA survey is presented in the Site History Section of the work plan. A specific request has been made to NAS Pensacola to provide the actual field data collected during the survey. This data will be evaluated as part of the proposed Phase II Contaminant Source Survey.

PEASB I - SITE 25 - RADIUM SPILL SITE - GROUP G:

Comment 1:

This comment goes back to the issue of detection limits, for instance, total PCBs in soil. The consultant's laboratory has used detection limits that are simply too high. At this site and others, the detection limits presented are in the order of 5000 ug/kg. Typically, in most laboratories using GC/ECD, EPA method 8080, the Method Detection Limits are 10 to 20 ug/kg for a sample of 30 g. GC/ECD is a fairly common technique among better labs. Even if the laboratory is using the GC/MS technique, the detection limits are higher but definitely lower than the 5000 ug/kg presented here. Why were such high detection limits used?

Response:

These screening detection limits were referenced in the Phase I work plans, and were listed in the Generic Quality Assurance Project Plan approved for this project. These screening analyses were never intended to provide legally defensible data, but to identify areas of gross contamination and to focus the second investigate phase. All Phase II work will involve CLP-protocol analyses using the lowest detection limits attainable.

Comment 2; page 3-28:

Please show the exact location and aerial extent of the radium spill. The arrows are too general.

Response:

The "exact" location of the radium spill is unknown. NEESA reported that it occurred on the concrete-paved area immediately east of Building 780.

PHASE II - SITB 25 - RADIUM SPILL SITE - GROUP G:

Comment 1:

Based on comment number 1 for Phase I, an additional soil boring is warranted at the former location of B009.

Response:

One soil boring will be added at this location.

Comment 2

Additional soil borings and a shallow monitoring well around B016 are warranted to define the lateral extent of TRPBs in soil and to verify their presence/absence in groundwater.

Response:

Five soil borings and one shallow monitoring well will be added at this location.

Comment 3; page 14-20, Figure 14-4:

With the exception of well number 13 which should be located at 60 feet from well number 14, it is recommended that all wells be installed where they are pictured as opposed to locating some wells 50, 60, even 90 feet from their indicated locations. These distances seem excessive if the Navy is to confirm the absence of radium in groundwater.

Response:

The well locations will be adjusted accordingly.

PHASE I - SITB 3 - CRASH CREW TRAINING AREA - GROUP J:

Comment 1; page 1-1:

Why doesn't the boundary of the site include the southernmost stressed area?

Response:

The southernmost stressed area was discovered using historical aerial photograph analysis during an interim data evaluation of the Phase I preliminary surveys. There was no obvious physical evidence of its existence in the field. However, the data evaluation occurred prior to drilling activities. Consequently, a soil boring was completed in the middle of the area, and a soil sample was analyzed for screening parameters. All parameters were non-detectable.

Comment 2:

Concurrent with the above comment, why weren't surface emissions, magnetic and soil headspace surveys, etc. included around the "stressed area"?

Response:

See response to Comment 1.

Comment 3; page 2-13.

It is indicated that Geraghty 6 Hiller wells number 20 and 22 have sustained severe damage. Please expand.

GROUP J: SECTION 14.2.3.1 (SURFACE WATER AND SEDIMENT SAMPLING)

Comment :

A SW/SD sample is being performed 500 feet downstream from the southern outfall of the southern storm drain at Site 3. We would also like a SW/SD sample taken 500 feet downstream from the northern outfall of the northern storm drain.

Response:

The stormwater drainage maps of this area indicate that the northern outfall is located at the convergence of several other drainage systems therefore, a sample collected downstream from this location would not necessarily be directly attributable to Site 3. In order to meet the objectives of the Site 3 investigation, sampling should be performed directly at the outfall.

Section 18.4 (Risk Characterization)

Comment:

What is the Integrated Risk Information System (IRIS)? It is not mentioned nor defined in the document.

Response:

IRIS is an EPA data base of parameters used to perform risk assessments.

Comment :

Also, determining risk from a baseline risk assessment for human health is appropriate. However, in determining other environmental risks, an ecological risk assessment must be performed based upon USEPA guidelines.

Response:

The Navy agrees with this comment. Ecological risk assessments may be performed, based on the results of the Phase II sampling, for each site and will also be performed in conjunction with the investigation of operating units (OUs) 15 - 17.

GROUP K

GROUP M

No specific comments.

GROUP N

Comment:

Due to the potential for ambient sources of contamination and the wide areal range of various contaminations, an assumption is made that the pollution is not caused by pipe leakage. This assumption is not adequate without actual testing of the pipeline. There could be leakage through cracked pipes or joints. This system has been in place for several years without any thorough analysis of its **credibility**. As there are various sites along this industrial sewer line which have exorbitantly high contaminant results, these locations would be likely areas for examining the pipe for leaks.

Response :

The Phase I data do not support the unequivocal presence of active, continuing leaks along the sewer line. This is not to say that leaks haven't occurred in the past or are still occurring. In addition, many other potential nearby sources may exist along the sewer line. The goal of Phase II sampling rationale, as presented in the work plan, is to determine the source of contamination detected along the sewer line. The Navy believes that testing of the sewer line is impractical at this time; however, an evaluation of some portions of the line may be made after the Phase I data has been evaluated.

Comment:

Besides lead, cadmium, and chromium, two other metals (copper and zinc) resulted in high contaminant levels in soil and surficial groundwater. The levels for copper and zinc were below the Florida Drinking Water Standards. However, they, along with lead, cadmium, and chromium, were well above the Florida Surface Water Standards (FSWS) for aquatic and marine life.

Response:

If groundwater contaminants are detected in close proximity to surface water bodies, where groundwater may enter and mix into the surface water body, the FSWS will be considered as a potential cleanup standard.

GENERAL COMMENTS

Comment 1:

The NAS Pensacola shallow groundwater leaches into the surface water streams, wetlands, bay and bayou in the area around the air station. Contaminated surficial groundwater which migrates into surface water bodies should meet FSWS for marine or fresh water.

Response:

Please see the above response for the FDNR comment for Group N.

Comment 2

The storm drainage system has the likelihood of containing ambient contaminants other than what exists at the adjacent potential Source of Contamination (PSC) site. Many areas of the base, which are not identified as a PSC, are likely sources for various pollutants, and have stormwater runoff into the storm drainage system. This system may be a PSC alone. Since some areas of these drainage ditches have elevated levels of contamination some distance from known PSCs, the Navy may want to consider making the storm drain system an operable unit.

Response:

This comment is noted.

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Response:

The Navy performed a telespection of the industrial sewer in 1987. No substantial leaks were found in the system as a result of this inspection. The Navy also plans to perform exfiltration tests on the system in the near future. On the basis of the test results obtained thus far, as well as the inconclusive nature of the Phase I results with respect to the actual sources of contamination, the Navy believes that performing the additional assessment is the most reasonable approach at this time. In addition, the NADEP Pensacola has prepared and is finalizing a hazardous waste minimization plan (NADBPINST 5090, NADEP Pensacola Hazardous Waste Minimization Plan, August 1992). The installation will follow this plan and take an active role in instituting a waste minimization program. Also, please see the response to BPAs general comment 1 for Site 36.

Attachment C

**RESPONSES TO COMMENTS FROM THE
FLORIDA DEPARTMENT OF NATURAL RESOURCES (FDNR)
DRAFT REVISED WORK PLANS, FOR SITE GROUPS F, G, J, K, M AND N
NAVAL AIR STATION (NAS) PENSACOLA
PENSACOLA, FLORIDA**

GROUP F: SECTION 14.2 (PHASE II - CHARACTERIZATION/EXTENT DELINEATION)

comment:

On page 14-21, sediment sampling is included for only the stormwater drainage ditch at Site 34. Eovever, a major drainage ditch flows though the middle of Site 23 for which no sampling is planned. A surface water/sediment (SW/SD) sample is being taken for background purposes in the ditch adjacent to Site 30. As another storm drainage ditch traverses the length of Site 23, ve would like SW/SD samples performed and analyzed for all parameters in the drainage ditch at this site.

This ditch is a main source for surface runoff and surficial groundwater transmission. Surficial groundwater contamination has been discovered in this area from remedial investigation activities for Group N (Site 36).

Response :

Surface vater and sediment sampling has been proposed in this area in conjunction with the Phase II investigation of Site 30 (Buildings 649 and 755) in the Group E work plan. Please see the responses to the EPA's specific comments 2E and 2F for Site 10.

GROUP G: SECTION 3.1 (SITE 25 - RADIUM SPILL AREA)

Comment:

We find the last paragraph of page 3-1 confusing. It states:

"A fenced storage area adjacent to Building 780 has been used for drum storage since the 1970's (NEESA 1983). It is not known hov many drums are currently being stored in this area or the procedures being used for the disposal of radioactive waste."

This is written in the present tense. Is radioactive waste still being generated? stored in drums on site, and disposed of? We thought this activity had been discontinued. Also, if this is a current operation, why are the disposal procedures unknown?

Response:

Current information regarding Building 780 and the drums located there are in Sections 1 and 3.2 of the IDR for Site 25. Section 3.1 of the work plan has been amended with the current information.

Response :

These vells sustained severe damage from the movers that maintain the area vest of the runway. The steel protective surface casings have been severely bent, and will not permit passage of a bailer into the well for sampling purposes.

Comment 4; page 3-32:

Explain the presence of Zinc in the blanks,

Response:

The zinc in the blanks is attributable to dirty laboratory glassware. Ordinarily, detection of potential laboratory contamination requires the execution of a secondary confirmation analysis. Eovever, all screening analyses vere run only one time.

PHASE II - SITB 3 CRASH CREW TRAINING AREA - GROUP J:

Comment 1; page 14-15:

The proposed Interim Remedial Measure should be implemented as soon as possible to remove this continuous source of contamination. Provide a schedule of actions to be taken to accomplish this step.

Response:

An IRM plan has been written for six of the eight burn areas and will be forwarded to the EPA and FDER for reviev. The remaining tvo areas are the active training areas and will be addressed after a nev crash crew training facility is built. IRM plans will be written and IRMs implemented on the last tvo burn areas by July 1995.

Comment 2

Additional soil borings and shallov groundwater monitoring vells should be installed around the southernmost stressed area to confirm the presence or absence of contamination, moreover, the boundary of the site should be expanded to include this feature.

Response:

Please see the response to FDERs comment 1 for Site 3, Phase I.

PHASE I - SITE 7 - FIRE FIGHTING SCHOOL - GROUP K:

Comment 1:

The vork presented is satisfactory for its purposes.

PHASE II - SITE 7 - FIRE FIGHTING SCHOOL - GROUP K:

Comment 1; page 14-21:

The installation of a shallov monitoring well about 25 feet downgradient of TW008 is recommended. Monitoring vells 2 and 3 are lateral to the general groundwater flow.

Response:

A shallov monitoring well will be added; however, it is proposed 50 feet southvest of Phase I location TW008.

PHASE I - SITE 21 - SLUDGE A FUEL TANKS - GROUP K:

Site 21 has been transferred from the Navy's Installation Restoration Program to the Underground Storage Tank (UST) Program. FDER's Site 21 comments have been forwarded to the Navy's UST group for response.

PHASE I - SITE 36 - INDUSTRIAL WASTE SEWER - GROUP N:

Comment 1:

Is the sewer only used for industrial wastes or is it a combined sewer, that is, designed for both industrial sewage and storm water?

Response:

The Site 36 sewer line is used for industrial wastes only.

Comment 2:

Has any leakage test ever been conducted at this sewer or portions of it? If so, what was the leakage rate?

Response:

A leakage test has not been conducted on the industrial sewer line.

Comment 3:

Please show on a top view map the location of flow control devices i.e. weirs, spillway siphons, gates, valves and joints of the sewer line. Said devices/joints may have not been maintained or installed properly, thus, contributing to the contamination of some of the adjacent sites to the Sewer Line.

Response:

The Navy will provide the complete set of "as-built" specifications for the sewer line, which show all of the features requested by the reviewer.

PHASE II - SITE 36 - INDUSTRIAL WASTE SEWER - GROUP N:

Comment 1:

The proposed sampling program seems excessive: a different approach should be undertaken at this site to account for the hit or miss results presented in Phase I. At this time, it seems that the sewer is exfiltrating contaminated wastes through poor joints or cracked pipes. It is suggested here that before Phase II is started, the Navy conduct a thorough investigation of the disposal practices of the various industrial processes that dispose of their products into this sewer. In addition to the above step, it would be wise to correlate highly contaminated spots with a leak test to determine if the sewer is truly exfiltrating contaminated sewage, thus, affecting adjacent sites. At this point in time, chasing contaminant plumes serves no purpose if a comprehensive waste management and disposal plan is not in place and if the sewer continues to leak.