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LETTER REGARDING REGULATORY REVIEW AND COMMENTS ON DRAFT RCRA
FACILITY INVESTIGATION FOR SANITARY SEWER SYSTEM NAS FORT WORTH TX
10/6/1998
TEXAS NATURAL RESOURCE CONSERVATION COMMISSION



**NAVAL AIR STATION
FORT WORTH JRB
CARSWELL FIELD
TEXAS**

**ADMINISTRATIVE RECORD
COVER SHEET**

AR File Number 439

Barry R. McBee, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
John M. Baker, *Commissioner*
Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

October 6, 1998

Mr. Rafael E. Vazquez
Regional BRAC Environmental Coordinator
AFBCA Regional Operating Location
3711 Outlaw Country Drive
Austin, TX 78719-2557

Re: Carswell Air Force Base (NAS Fort Worth)
TNRCC Solid Waste Registration No. 65004
Hazardous Waste Permit No. HW-50289
EPA ID No. TX0571924042
**Review of Draft RCRA Facility Investigation Report for
the Sanitary Sewer System SWMU No. 66 (Volumes 1 - 9)**

Request for Report Revisions

Dear Mr. Vasquez:

The Texas Natural Resource Conservation Commission (TNRCC) has completed our review of the *Draft RCRA Facility Investigation Report for the Sanitary Sewer System (Volumes 1 - 9)* dated September 1997 and received by the TNRCC on October 6, 1997. In addition to the review of the referenced RFI report, the TNRCC also evaluated comments received from EPA Region 6 dated February 6, 1998 which outline EPA's concerns regarding the RFI report. The sanitary sewer system at Carswell AFB is identified as Solid Waste Management Unit (SWMU) No. 66. An RFI was required by the TNRCC per our letter dated March 2, 1995. The referenced RFI report focused on three areas of the sanitary sewer system on Carswell AFB (now NAS Fort Worth): (1) industrial areas; (2) residential area exit points (including the U.S. Bureau of Prisons complex); and (3) the intersections with the City of Fort Worth sanitary sewer system.

Based upon our review of the draft RFI report, the TNRCC has also identified a number of concerns with the RFI report in addition to those already provided to AFBCA by EPA Region 6. The final RFI report must be revised to adequately address both EPA and TNRCC's concerns. Where these joint TNRCC/EPA concerns cannot adequately be addressed through revisions to the RFI report, additional field work may be required. TNRCC specific concerns are as follows:

- Section 4.0 Nature and Extent of Contamination: It is not readily apparent from the review of this section whether or not the sanitary sewer system RFI has fully characterized the nature and extent of releases of hazardous constituents. 30 TAC §335 Subchapter S requires that the full nature and extent of a release of hazardous constituents be delineated to the practical quantitation limit (PQL) for organics and to background for inorganics. Section 4.0 is very vague as to whether this was

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accomplished or not. Please clarify this section so that it clearly details how the requirements of 30 TAC §335 Subchapter S were met.

- Our review of Section 4.0 suggests that an attempt was made to link the baseline risk assessment found in Section 6.0 with the need for further delineation of the nature and extent. For example, on page 2 of 39 (Section 4.0) there is a discussion of the results of the near-surface soil volatile organic compounds (VOC) sampling results. In reference to VOCs, a statement is made that “both significant concentrations and quantity were identified as constituents of potential concern (COPC) in the baseline risk assessment”. A list of detected VOCs and the maximum concentrations are provided, however, the RFI states that the VOCs do not exceed 0.2 mg/kg. What does 0.2 mg/kg represent? Please note that the human health risk calculated for a specific COPC cannot be used during the RFI process as justification for not fully characterizing the nature and extent of a release. The purpose of the baseline risk assessment is to describe the potential adverse effects under both current and future conditions caused by the release of contaminants in the absence of any actions to control or mitigate the release. According to 30 TAC §335.553(b)(1) and (2), a baseline risk assessment cannot be prepared until after, among other things, the investigation has characterized the nature and extent. Section 4.0 must be clarified. If releases of hazardous constituents were not fully defined to background and/or PQLs, additional investigatory activities will be required.
- The discussion in Section 4.0 of the results of both the near-surface and subsurface soil inorganic constituents sampling results is very confusing. As noted in the RFI report, facility-wide background concentration UTLs were developed by an Air Force contractor. With the exception of the stream sediment UTLs, the remaining facility-wide background UTLs were approved by the TNRCC for use in the evaluation of SWMU investigation data to determine whether a release has occurred. A direct comparison of soil analytical data to the specific UTL should be made and the magnitude and frequency of the exceedances should be evaluated to determine whether a pattern is present which suggests a release. There is discussion in Section 4.0 about specific inorganic constituent (i.e., lead, cadmium and arsenic) sampling results which exceed the facility background UTLs yet these constituents are dismissed as COPC. Why? The RFI report indicates that the concentration of lead in subsurface soils is not “unacceptably high” given the common occurrence of lead in the environment due to use in motor fuels and industrial materials. Please note that the purpose of this RFI was to identify and fully characterize areas of the sanitary sewer system where releases of hazardous constituents have occurred. Whether these releases represent an unacceptable risk and therefore require corrective action should be evaluated after the completion of the RFI. The baseline risk assessment should be completed in conjunction with the corrective measures study. Section 4.0 must be clarified from the standpoint of: (1) has a release of hazardous constituents occurred; and (2) was this release fully characterized as required by 30 TAC §335 Subchapter S.
- Section 4.1.3 Groundwater Investigation Results: Consistent with comments listed above concerning the soils investigation, it is not readily apparent from our review of the RFI report to what extent releases of hazardous constituents from the sanitary sewer system have impacted ground water and whether or not these releases have been adequately characterized for both nature

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and extent. As previously pointed out, 30 TAC §335 Subchapter S requires that a release be delineated to the practical quantitation limit (PQL) for organics and to background for inorganics. Section 4.1.3 does not provide the required level of detail to allow this determination to be made. For example, it is stated that "arsenic, which was not retained as a COPC, was detected in five of the groundwater samples and ranged in concentration from 24.4 to 51.7 ug/L." Please be aware that the approved facility-wide background ground water UTL for arsenic is 0.0049 mg/L (4.9 ug/L) and equates to the method PQL. The maximum contaminant level (MCL) for arsenic is 50 ug/L. Why was arsenic "not retained" as a COPC when the five sample results all exceed the background UTL and the sample from well WITCTA031 exceeds the MCL?

- Please explain why the required turbidity for monitoring well development and sampling (10 nephelometric turbidity units (NTUs)) was not possible to achieve. The RFI report states that well ST14MW24 exhibited a turbidity reading of 320 NTUs "due to poor development". Please explain why this well and/or any of the other wells which exhibited excessive turbidity readings were not properly developed prior to sampling.
- Section 5.0 Source and Transport of Contaminants: The discussion of source and transport of contaminants contained in this section appears to be premature. Based upon the review of Section 4.0 it is not clear that the nature and extent of releases has been fully characterized. Section 5.0 will need to be revised if in fact the RFI has not been completed.
- Section 6.0 Human Health Baseline Risk Assessment: As a general comment, the purpose of an RFI report is to detail the results of the site investigations and identify the full nature and extent of releases of hazardous constituents to the environment. The inclusion of a baseline risk assessment in an RFI report is generally not appropriate. Rather, the baseline risk assessment should be submitted as a "stand alone" document or in conjunction with the Corrective Measures Study (CMS). In light of the serious concerns that the TNRCC has with Section 4.0, it is strongly recommended that the Section 6.0 be removed from the revised RFI report and submitted in conjunction with the CMS.
- As stated in the RFI report, the baseline risk assessment was developed using the existing Risk Reduction Standards and incorporating provisions outlined in the Texas Risk Reduction Program's (TRRP) 1996 concept document. Specifically, Section 6.0 states that "the proposed TRRP target risk and hazard values were employed to compare with the quantification of risks at the site and for the calculation of cleanup goals." Please be aware that the TRRP has been withdrawn from the rule making process and is currently undergoing significant review and revision. Until such time as the TRRP is formally adopted as the replacement rule to the RRS, a baseline risk assessment must comply strictly with the RRS.
- Section 6.2.1 Comparison to Background Concentrations: According to the RFI report, a 95% upper confidence limit (UCL) of the mean concentration was calculated for surface and subsurface soil data sets and the UCL compared with the corresponding background UTL. This comparison is not appropriate as the UCL cannot be compared to the UTL. Instead, a direct comparison of individual sample results to the background UTL is required. The UCL comparison outlined in

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30 TAC §335.553(d)(2) was developed for use with the media-specific concentrations found at 30 TAC §335.568, Appendix II, not for use with site specific UTLs. In lieu of a direct comparison with the UTL, a comparison of the site specific 95% UCL with a 95% UCL calculated from the background data sets is acceptable. Section 6.2.1 must be revised to address this error in the approach to background comparisons.

- Section 7.0 Ecological Risk Assessment: Consistent with our comments concerning Section 6.0, the ecological risk assessment should be removed from the revised RFI report and submitted as part of the CMS.
- Section 8.0 Determination of Cleanup Goals: Based upon our review of the RFI report, the TNRCC was not able to determine whether releases of hazardous constituents from the sanitary sewer system have been adequately characterized as required by 30 TAC §335 Subchapter S. Therefore, a determination that no remedial action is necessary and/or that there is no need to establish cleanup goals seems premature.
- RFI Report Volumes 2A and 2B Figures: Please review the figures contained in Volume 2A and 2B. All analytical results which exceed the facility-wide background UTLs for inorganics and PQLs for organics should be shown on the site specific figures unless exclusion as a contaminant of concern can be justified (e.g., lab contamination and/or blank contamination). In some cases, only one sampling location was plotted per map sheet. The consolidation of figures and sampling locations via the use of a map scale which shows a larger portion of the site would ease the review process.

Within 60 days of receipt of this letter AFBCA must either submit a revised RFI report which adequately addresses both TNRCC and EPA's concerns or a Phase II RFI work plan designed to achieve compliance with the requirements of 30 TAC §335 Subchapter S. If you have any questions regarding our review, please contact me at (512) 239-2360, Mail Code MC 127, e-mail mweegar@tnrcc.state.tx.us.

Sincerely,



Mark A. Weegar, Project Manager
Corrective Action Section
Remediation Division

MW:cr:mw

cc: Mr. Charlie Rice, AFCEE, Brooks AFB, San Antonio, TX
Mr. Gary Miller, U.S. EPA Region VI, Dallas, TX (6PD-NB)
Mr. Thomas Edwards, Texas Attorney Generals Office, Austin
Mr. Tim Sewell, TNRCC Region 4, Arlington, TX
Mr. Parker Wilson, TNRCC Legal Division, Austin
Ms. Tennie Larson, TNRCC Corrective Action Section (CA191)

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