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LETTER REGARDING U S EPA REGION VI REVIEW AND COMMENTS ON RCRA FACILITY
INVESTIGATION OFFSITE WEAPONS STORAGE AREA NAS FORT WORTH TX
8/25/1997
U S EPA REGION VI

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NAVAL AIR STATION
FORT WORTH JRB
CARSWELL FIELD
TEXAS

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 337



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

File: 17A-76
A.F.

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AUG 25 1997

CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Mr. Mark A. Weegar, Project Coordinator
Texas Natural Resource Conservation Commission
Industrial and Hazardous Waste Division
Corrective Action Section
Federal Facilities Team
P.O. Box 13087
Austin, TX 78711-3087

Re: Comments
Draft Work Plan, RCRA Facility Investigation
Offsite Weapons Storage Area (December 1996)
Naval Air Station Fort Worth Joint Reserve Base
EPA ID No. TX0571924042

Dear Mr. Weegar:

The U.S. Environmental Protection Agency (EPA) has performed a technical review of the U.S. Air Force's (USAF) document titled "Draft Work Plan [WP], RCRA Facility Investigation [RFI] of the Offsite Weapons Storage Area" (WSA, December 1996) for Naval Air Station Fort Worth (NAS FW) Joint Reserve Base (formerly Carswell Air Force Base). Enclosed for your review are EPA's comments on the Draft RFI WP (and associated documents) for the Offsite WSA. These comments are being provided based on EPA's representation on the BRAC Cleanup Team for NAS FW.

This correspondence is concurrently being sent to USAF for their review and should not be considered as the final regulatory approval of the Draft RFI WP for the Offsite WSA. If you have any questions concerning the enclosed comments, please call me at (214) 665-7437.

Sincerely yours,

Rafael A. Casanova

Rafael A. Casanova
Remedial Project Manager
BRAC Cleanup Team

cc: ✓ Mr. Olen R. Long (BEC/BTC)
Air Force Base Conversion Agency

U.S. ENVIRONMENTAL PROTECTION AGENCY COMMENTS
 U.S. AIR FORCE
 DRAFT WORK PLAN, RCRA FACILITY INVESTIGATION
 OFFSITE WEAPONS STORAGE AREA
 NAVAL AIR STATION FORT WORTH JOINT RESERVE BASE

The U.S. Environmental Protection Agency has performed a technical review of the U.S. Air Force's (USAF) "Draft Work Plan [WP], RCRA Facility Investigation [RFI] of the Offsite Weapons Storage Area" (WSA, December 1996) for Naval Air Station Fort Worth (NAS FW) Joint Reserve Base (formerly Carswell Air Force Base). The following comments are presented alphabetically and by the chapters, sections, and pages corresponding to the Draft RFI WP for the WSA (including the Quality Assurance Project Plan [QAPP] and the Field Sampling Plan [FSP] for the WSA).

On June 12, 1997, USAF provided EPA with an overview of the Draft RFI WP and FSP for the WSA. EPA's comments and the discussions resulting from this technical meeting are included here for completeness. Additionally, EPA and USAF representatives performed a visual site inspection on July 31, 1997. EPA's comments as a result of this inspection are also included here for completeness.

COMMENTS

CHAPTER 1 - INTRODUCTION

- A. Sections 1.2.2.1 and 1.2.2.2 - RI/FS for Carswell AFB and RCRA Facility Assessment PR/VSI, Pages 1-4 and 1-5, respectively:

USAF's Draft RFI WP for the WSA

USAF describes the previous activities performed at Solid Waste Management Units (SWMUs) 60 (Low-Level Radioactive Waste Burial Site) and 65 (west of Building 8503) in the Draft RFI WP for the WSA.

EPA's Comments

For ease of reference, SWMUs 60 and 65 should be depicted in each of the figures included in the Draft RFI WP for the WSA.

B. Section 1.2.2.3 - Basewide Environmental Baseline Survey for Carswell AFB, Page 1-6:

USAF's Draft RFI WP for the WSA

USAF states that during the polychlorinated biphenyls (PCB) inventory all transformers with 50 parts per million (ppm) or more PCBs were replaced/retrofitted with PCB-free equipment. USAF adds that all transformers at the Offsite WSA are currently PCB-free.

EPA's Comments

During the technical meeting conducted on June 12, 1997, USAF indicated that media samples would not be analyzed for herbicides/PCBs. Simply based on the previous presence of PCB-containing transformers, the possibility exists that PCBs could have been released to the environment. USAF should provide additional information in the Draft RFI Report for the WSA which clearly documents that herbicides/PCBs are not of concern at the WSA and that justifies the exclusion of herbicides/PCBs from the sampling program. Otherwise, EPA recommends that all samples should be analyzed as indicated in the Draft RFI WP for the WSA.

C. Section 1.2.2.5 - Soil and Debris Removal Activity, Page 1-7:

USAF's Draft RFI WP for the WSA

USAF states that soil samples taken upgradient, down-gradient, and within the "soil and debris dump" were analyzed for volatile organic compounds; semi-volatile organic compounds; benzene, toluene, ethylbenzene, and xylene; total petroleum hydrocarbons; metals; and radionuclides. USAF adds that most of the analytical results were below the method detection limits and the rest were below regulatory levels.

EPA's Comments

USAF should provide the work plan for the field activities and the final report depicting the results of these activities as addenda to the Draft RFI Report for the Offsite WSA. USAF should also identify the method detection limits and regulatory levels referenced in the Draft RFI WP for the WSA.

D. Section 1.2.2.6 - Offsite WSA Radiological Site Assessment, Page 1-8:

USAF's Draft RFI WP for the WSA

USAF states that three small localized areas of low-level radioactive contamination were sampled at Bunker 8531. USAF adds that these evaluations demonstrated that the Offsite WSA meets the release criteria in accordance with U.S. Nuclear Regulatory Commission Regulatory Guide 1.86 and is considered releasable for public use.

EPA's Comments

USAF should provide the work plan for the field activities and the final report depicting the results of these activities as addenda to the Draft RFI Report for the Offsite WSA. USAF should also identify the release criteria referenced in the Draft RFI WP for the WSA.

E. Section 1.2.2.7 - LLRW Burial Site, Page 1-9:

USAF's Draft RFI WP for the WSA

USAF describes the studies conducted at SWMU 60 (LLRW Burial Site) and states that the results of the soil sampling previously performed are not yet available. USAF adds that a background study was proposed which focused on previously detected radio-nuclides in ground water.

EPA's Comments

TNRCC approved "partial closure" of SWMU 60 by correspondence to USAF dated November 5, 1996. TNRCC stated that "final closure" could not be approved until USAF completed its study of background radium in ground water. This background study (Weapons Storage Area Background Study, July 1997) was received by EPA on July 10, 1997. EPA will provide comments to TNRCC on this study by October 11, 1997, as specified in AFCEE's schedule for document reviews.

F. Section 1.2.3 - Existing Remedial Actions, Page 1-11:

USAF's Draft RFI WP for the WSA

USAF states that the Soil/Debris Waste Dump, EOD Range, and SWMU 60 have been remediated.

EPA's Comments

EPA is uncertain of the compliance status of the Soil/Debris Waste Dump, EOD Range, and SWMU 60. USAF should consult with the TNRCC for a determination of the compliance status of these areas of the WSA.

CHAPTER 2 - SUMMARY OF EXISTING INFORMATION**G. Section 2.2.3 - Ground Water, Page 2-4:***USAF's Draft RFI WP for the WSA*

USAF states that two wells, located on the Offsite WSA property, reportedly delivered non-potable water to the site.

EPA's Comments

USAF should provide detailed information in the Draft RFI Report for the WSA for all wells on the Offsite WSA property. This information must include detailed completion information, any stratigraphic data (e.g., cross-sections) derived from this completion information, and any analytical data available. This information is needed to completely characterize the subsurface at the WSA.

H. Sections 2.3 - Conceptual Site Model; Page 2-6; Figure 2-1 (Offsite Weapons Storage Area Preliminary Conceptual Site Model):*USAF's Draft RFI WP for the WSA*

Figure 2-1 summarizes the conceptual model for potential human and environmental exposures to soils, sediments, and surface/ground water.

EPA's Comments

See Comment Q Concerning the proposed risk assessment for the WSA.

I. Section 2.5.1.1 - Federal Chemical-Specific ARARs and TBCs, Page 2-14; Table 2-3 - Federal Lead Standards:

USAF's Draft RFI WP for the WSA

USAF summarizes the chemical-specific Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) requirements for lead-based paint (LBP) and states that the primary federal regulatory guidance document for investigating LBP hazards is the Department of Housing and Urban Development (HUD), Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (June 1995). Table 2-3 lists the standards to be used by USAF during the RFI activities for the WSA.

EPA's Comments

For clarification purposes, USAF should consider the TNRCC's MSC and EPA Region 6's Human Health Media-Specific Screening Level for lead in determining the regulatory compliance of the WSA. USAF should also consider EPA's directive titled "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities" (OSWER Directive #9355.4-12, July 14, 1994).

J. Section 2.5.2.1 - Federal Action-Specific ARARs and TBCs, Page 2-16:

USAF's Draft RFI WP for the WSA

USAF states that contaminant levels are expected to be low enough that the project team does not anticipate finding "toxicity characteristic" hazardous wastes at the site. USAF adds that if sampling activities identify high levels of contamination, the project team will consider additional Toxicity Characteristic Leaching Procedure (TCLP) analyses as needed.

EPA's Comments

EPA agrees with USAF's proposal to perform additional analyses if high levels of contamination are discovered during the activities proposed for the Draft RFI WP for the WSA. Additional analyses should be performed if the concentration of any constituent exceeds its maximum theoretical extract concentration or TCLP regulatory level when assuming 100% leachability. The following equation depicts this relationship

EPA's Comments (WSA)

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for wastes that are 100% solid (i.e., those that contain no filterable liquid):

$$\text{TCLP Regulatory Level (mg/L)} = \frac{\text{Constituent Concentration (mg/kg)}}{20}$$

Although a slightly different calculation would apply, this same relationship can be used for dual-phase samples. For liquid wastes (i.e., those that contain less than 0.5% dry solids), the waste after filtration, is defined as the TCLP extract. The purpose of the additional sampling would be to verify the toxicity characteristic of the media samples.

CHAPTER 3 - RCRA FACILITY INVESTIGATION TASKS

K. Section 3.3 - Investigative Tasks, Page 3-2:

USAF's Draft RFI WP for the WSA

USAF states that the disturbed area is southwest of the Control Fence.

EPA's Comments

EPA is assuming that the actual location of the "disturbed area" is southeast of the Control Fence.

L. Section 3.3.2 - Waste Accumulation Area and Building 8503 (A-3), Page 3-6:

USAF's Draft RFI WP for the WSA

USAF states that attention will be given to potential cracks and staining on the concrete at the Waste Accumulation Area (WAA) during the sampling activities proposed for WSA RFI.

EPA's Comments

The visual site inspection performed on July 31, 1997, revealed that the concrete slab at the WAA was initially laid in sections with approximately 1/2 inch separation between slabs. EPA believes that USAF should perform additional soil sampling in these areas for verification purposes. These sampling locations should be chosen based on any staining observed on the concrete. Cracks should not be the only reasoning for sampling beneath the concrete at the WSA.

EPA's Comments (WSA)

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M. Section 3.3.7 - Removed UST Locations, Page 3-11:*USAF's Draft RFI WP for the WSA*

USAF states that the objective of the borehole subsurface samples is to determine if potential tank and piping leaks have contaminated subsurface soils. Appendix C (Removed Underground Storage Tank Diagrams) provides the locations of each of the boreholes proposed for the removed storage tank locations.

EPA's Comments

USAF should ensure that the subsurface soil samples collected from the removed storage tank locations are not taken from fill materials applied after removal of the underground storage tanks.

N. Section 3.3.8 - Drainageways and Seeps (Task Scope and Rationale), Page 3-12:*USAF's Draft RFI WP for the WSA*

USAF states that sediment and surface water samples will be collected from all seep locations in drainage area D-5 depicted in Figure 3-4 (Drainageway and Seep Sample Locations). USAF adds that three sediment and surface water background locations will be established for comparison to the WSA-associated samples collected during the RFI.

EPA's Comments

No surface water seeps were observed during the visual site inspection conducted on July 31, 1997, in the areas proposed for investigation during the RFI for the WSA. Since it is unlikely that surface water seeps will be encountered during the initial RFI activities, USAF should perform periodic inspections of the site, especially after significant precipitation, and sample any observed seeps as stated in the Draft RFI WP for the WSA. This scheduling of events should not substantially delay submittal of the Draft RFI Report for the WSA.

O. Section 3.3.9 - Ground Water Monitoring (Task Scope and Rationale), Page 3-13:*USAF's Draft RFI WP for the WSA*

USAF states that three shallow wells are to be installed at the Offsite WSA before the RFI field work begins. Additionally,

USAF proposed to install four shallow overburden wells as part of the RFI field investigation.

EPA's Comments

During the technical meeting held on June 12, 1997, USAF stated that the three shallow wells referenced in the Draft RFI WP for the WSA were not installed due to the presence of bedrock at approximately 5 feet below the land surface, the seasonal occurrence of ground water in the "overburden," and the limited recharge area for this zone. Based on this reasoning, USAF proposed to exclude the four additional overburden wells from the RFI activities for the WSA. EPA agrees with USAF's proposal and believes that the installation of these wells would not be practical for purposes of this RFI; however, consideration should be given to the language in USAF's RCRA Permit. Regulatory requirements may require installation of these wells and USAF should consult with the TNRCC for this determination.

P. Section 3.7 - Characterization of Background Conditions,
Page 3-19:

USAF's Draft RFI WP for the WSA

USAF states that additional efforts to establish background conditions will be completed as part of the RFI field investigations. USAF adds that five surface and subsurface soil, three sediment and surface water, and three ground water background locations will be chosen and sampled for this effort.

EPA's Comments

USAF should consider the protocols described in EPA's guidance documents in the establishment of background for all environmental media of concern. These documents, not all inclusive, are titled "Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities" (Addendum to Interim Final Guidance, June 1992), "Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities" (Interim Final Guidance, April 1989, EPA/530-SW-89-026), and "Determination of Background Concentrations of Inorganics in Soils and Sediments at Hazardous Waste Sites" (December 1995, EPA/540/5-96/500).

Although the document has not been approved by TNRCC, USAF should also consider USAF's "Draft Base-Wide Background Study" (January 1997) in the development of background for the WSA, if applicable. The Draft RFI Report may require amendment based on TNRCC's comments concerning this background study.

For clarification purposes, the objective of the RFI is to delineate the full vertical and horizontal extent of contamination to background conditions. Therefore, it is imperative that true background conditions are established for the WSA. Simply investigating to MSCs, for example, does not account for impacts to environmental receptors or all pertinent exposure pathways applicable to NAS FW. Concluding the investigation at MSCs may not detect other areas of contamination associated with the disposal operations at the site. For deed certification, background is used to determine the boundaries of the area. EPA realizes that in some cases delineating the extent of contamination to unaffected background may not be possible or practical. USAF should discuss this issue with EPA and TNRCC if this is the case at NAS FW.

Q. Section 3.8 - Risk Assessment, Page 3-20:

USAF's Draft RFI WP for the WSA

USAF states that if analytical results indicate that chemical contamination is present above background levels in environmental media, the risk assessment will comply with the Texas Natural Resource Conservation Commission's RRS No. 2.

EPA's Comments

For clarification purposes, if chemical contamination is present above any of the Media-Specific Concentrations (MSCs) specified in the TNRCC's RRS No. 2 or EPA Region 6's Human Health Media-Specific Screening Levels, a "baseline risk assessment" (BRA) will be required, unless USAF remediates to background conditions under the TNRCC's RRS No. 1. This BRA should adhere to EPA's guidance titled "Risk Assessment Guidance for Superfund" (Volume 1, Human Health Evaluation Manual [Part A], EPA/540/1-89/002, December 1989).

Following are additional comments provided by EPA's toxicologist which should be discussed with EPA and TNRCC:

Figure 2-1 (Offsite Weapons Storage Area Preliminary Conceptual Site Model) -

- Why is groundwater ingestion not being considered?

Section 3.8 (Risk Assessment) -

- The frequency of detection should be evaluated along with the presence/absence of that contaminant in other media matrices.
- Chemicals with concentrations below background concentrations and their risk-based concentrations can be dropped as COC's; however, chemicals with background concentrations above risk-based concentrations should be retained as COC's. Risk attributable to naturally-occurring background can be characterized separately from site-related potential risk in the risk assessment. COC's should not be selected based on anthropogenic background. Anthropogenic background, if relevant, can be considered on a site-specific basis in the risk management decision.
- Page 3-21 states that target risk levels of 1×10^{-7} will be used for carcinogens. Is this statement correct? Additionally, will the risk levels consider all relevant exposure routes?
- Total Petroleum Hydrocarbons are not considered in the risk assessment and chemical-specific data should be used instead.
- Current and future land use should be considered in setting the exposure scenarios, pathways, and routes of exposure. Deed restriction agreements are not relevant in the baseline risk assessment since they are considered risk management decisions. However, based on TNRCC Risk Reduction Rules these factors are allowed to be considered. In the event that deed restrictions are considered, these should be explicitly stated in the risk assessment.
- Potential risk to future potential workers should be considered where relevant.
- Trespassers are not eliminated based on a fenced area.
- In the initial concentration comparisons to risk-based levels (i.e., MSC's) in the selection of COC's, the maximum detected concentration should be considered. The UCL can then be calculated to demonstrate final attainment of a risk reduction standard.

- The information presented in page 3-24 (first full paragraph, last sentence) appears to be from TNRCC's draft risk reduction program guidance which is not currently implementable.
- No specific exposure parameter values were presented in the Draft RFI WP for the WSA. It is unclear whether this work plan will fulfill the requirements for concurrence.

R. Section 3.8.3 - Toxicity Assessment, Page 3-22:

USAF's Draft RFI WP for the WSA

USAF states that toxicity factors for both carcinogens and noncarcinogens will be obtained from EPA's Integrated Risk Information System. USAF adds that alternative values will be obtained from the Agency for Toxic Substances and Disease Registry toxicological profiles.

EPA's Comments

USAF should also consult EPA's most current "Health Effects Assessment Summary Tables" for additional toxicity data.

CHAPTER 4 - REPORTING REQUIREMENTS

S. Section 4.7.2 - Ecological/Baseline Risk Assessment, Page 4-2:

USAF's Draft RFI WP for the WSA

USAF states that the ecological/baseline risk assessment will be conducted in accordance with the "Handbook."

EPA's Comments

USAF should perform the ecological risk assessment according to the protocols described in the document titled "Texas Natural Resource Conservation Commission Draft Guidance for Conducting Ecological Risk Assessments under the Texas Risk Reduction Program." USAF should also consider the protocols described in EPA's "Ecological Risk Assessment Guidance for Superfund, Process for Designing and Conducting Ecological Risk Assessments" (Interim Final, EPA 540-R-97-006, June 5, 1997).

EPA's Comments (WSA)

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CHAPTER 5 - PROJECT SCHEDULET. Section 5.0 - Project Schedule, Page 5-1:*USAF's Draft RFI WP for the WSA*

USAF included a project schedule in Appendix D (Proposed Schedule for RCRA Facility Investigation at Carswell Field WSA). This schedule indicates that the Draft RFI Report and the CMS WP are due in September 1997.

EPA's Comments

USAF provided EPA with a schedule of proposed review dates for several Base Realignment and Closure documents during the technical meeting held on June 12, 1997. It is our understanding that the Draft RFI Report and the CMS WP for the WSA are due to the TNRCC and EPA on November 5, 1997.

DRAFT QUALITY ASSURANCE PROJECT PLAN FOR THE WSAU. Section 7.2 - Analytical Procedures, Page 7-4:*USAF's Draft QAPP for the WSA*

Section 7.2 of the Draft QAPP for the WSA contains tables of practical quantitation limits (PQLs) for several analytes.

EPA's Comments

If any of the PQLs listed in Section 7.2 of the Draft QAPP for the WSA are greater than their respective background, then those PQLs shall be used as the cleanup levels under the TNRCC's RRS No. 1. If the PQL and/or the background concentration for a contaminant is greater than the cleanup level under the TNRCC's RRS No. 2, the greater of the PQL or background shall be used for determining compliance under this RRS. USAF must demonstrate in both cases, in the Draft RFI Report for the WSA or other documents required by the TNRCC, that lower levels of quantitation are not possible.

USAF did not provide a specific listing of the analytes to be investigated during the activities proposed in the Draft RFI WP for the WSA. It is our understanding that all of the analytes listed under each analytical method in Section 7.2 of the Draft QAPP for the WSA will be analyzed during the RFI activities as applicable to each area under investigation.

DRAFT FIELD SAMPLING PLAN FOR THE WSAV. Section 2.3 - Project Site Description, Page 2-2:*USAF's Draft FSP for the WSA*

USAF states that the EOD Range will not be investigated in this RFI except with respect to potential contaminant migration from the EOD.

EPA's Comments

EPA is assuming that the EOD Range will be investigated, as stated in the Draft RFI WP for the WSA, to determine if residual explosive related materials are present in the surface and subsurface soils.

W. Section 5.6 - Standard Monitoring Well Construction, Page 5-7:*USAF's Draft FSP for the WSA*

USAF outlines the requirements (i.e., drilling, borehole, casing, well screen, etc.) for monitoring well construction in selected geoprobe explorations and boreholes drilled with a hollow-stem auger.

EPA's Comments

It is our understanding that no monitoring wells will be installed for purposes of this RFI (see Comment P - Ground Water Monitoring). However, if USAF determines that monitoring wells are necessary for this project (including the background study), USAF must contact EPA and the TNRCC prior to planning and installation. Additionally, USAF should follow EPA's recommended procedures for the installation of "RCRA-compliant" ground water monitoring wells. EPA recommends the requirements specified in the guidance document titled "Handbook of Suggested Practices for the Design and Installation of Ground-Water Monitoring Wells" (EPA/600/4-89/034, March 1991).

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