



ENTERED

AQS, Inc.
2112 Deer Run Drive
South Weber, Utah 84405
(801) 476-1365
www.aqsnet.com

July 16, 2018

DCN: NMED-2018-08

Mr. David Cobrain
New Mexico Environment Department (NMED)
Hazardous Waste Bureau
2905 Rodeo Park Dr. E/Bldg 1
Santa Fe, NM 87505

RE: Draft Technical Review of the Responses to Comments on the *RCRA Facility Investigation at TU504 – Revision 1*, Cannon Air Force Base, New Mexico, dated November 2017.

Dear Mr. Cobrain:

Attached please find the draft technical review evaluations of the facility responses to comments on the *RCRA Facility Investigation at TU504 - Revision 1*, Cannon Air Force Base (CAFB), New Mexico dated November 2017 (Revised RFI). The Revised RFI includes a Response to Comments matrix and the text has been modified to reflect those responses.

The attached deliverable is divided into two parts. Part I evaluates how effectively the information provided in the Revised RFI addresses NMED’s original technical review comments. The facility responses to NMED Comments 5 and 6 indicate that risk and hazard were re-calculated in the Revised RFI based on the 2017 NMED *Risk Assessment Guidance for Site Investigations and Remediation* (2017 NMED RAG). Thus, the updated screening level risk analysis (Sections 3.4, 5.4 and 5.5; Appendix E) was subjected to a technical review. No technical issues were identified during the review although two editorial comments are presented in Part II of this deliverable.

If you have any questions, please contact me at (801) 451-2864 or via email at pwalton@aqsnnet.com.

Thank you,

Paige Walton
Paige Walton
AQS Senior Scientist and Program Manager

cc: Gabriel Acevedo, NMED (electronic)
Mike Smith, AQS (electronic)
Joel Workman, AQS (electronic)

Enclosure

**DRAFT TECHNICAL REVIEW OF THE FACILITY RESPONSES TO COMMENTS ON
RCRA FACILITY INVESTIGATION AT TU504 - REVISION 1
CANNON AIR FORCE BASE, NEW MEXICO
NOVEMBER 2017**

I. EVALUATION OF FACILITY RESPONSE TO ORIGINAL TECHNICAL REVIEW COMMENTS

Evaluation of Facility Response to NMED Comment 1: The response adequately addresses the issue raised in Comment 1.

Evaluation of Facility Response to NMED Comment 2: The response partially addresses the issue raised in the original comment. The information provided in the second paragraph of the response is adequate and has been fully incorporated into the *RCRA Facility Investigation at TU504 - Revision 1*, Cannon Air Force Base (CAFB), New Mexico dated November 2017 (Revised RFI). The balance of the response focuses on information for Section 5.4.8, Uncertainties. Section 5.4.8 has been revised to include this information. Most of this information adequately addresses the issue raised in the original comment; however, the last sentence introduces some confusion into the discussion. The last clause of the sentence states: “especially since the soil data indicates higher concentrations in the deeper samples.” It is not clear whether this clause refers to the soil data obtained from the 0 to 5 feet depth interval or to all the soil data (regardless of depth interval) collected during the 2014 RCRA Facility Assessment (2014 RFA). If the clause refers to soil data obtained from the 0 to 5 feet depth interval, additional information on the actual depth of constituent detections must be added to the Revised RFI. Currently, Table 2-4 does not provide that level of detail; only indicating that the detection occurred somewhere in the sampled interval. If the clause refers to all soil data collected during the 2014 RFA; it should be revised to read: “especially since the soil data from the 2014 RFA indicates higher concentrations in the deeper sample depth intervals.” Revise the text to eliminate any confusion regarding the last clause of the last sentence added to Section 5.4.8.

Evaluation of Facility Response to NMED Comment 3: The facility response adequately addresses the issue raised in the original comment. Section 3.5 has been revised as indicated in the response and the Ecological Exclusion Criteria Checklist has been included as Appendix G in the Revised RFI.

Evaluation of Facility Response to NMED Comment 4: The facility response adequately addresses the issue raised in the original comment. Table E-8 has been updated to reflect the frequency of detection cited in Section 5.4.3 of the text and Table E-1 of Appendix E.

Evaluation of Facility Response to NMED Comment 5: The facility response partially addresses the issue raised in the original comment. In response to this comment, CAFB has provided all ProUCL reports in Attachment 1 to Appendix E of the revised RFI Report. In addition, CAFB has provided information on ProUCL-recommended values for representing the average of the mean for a data set (e.g., 95%UCL, 97.5%UCL, 99%UCL). This information has

been incorporated into Section 5.4.6 (old Section 5.4.5). The values presented in Section 5.4.6 were compared to the values listed in the ProUCL reports included in Attachment 1 of Appendix E. The comparison confirmed that the values in Section 5.4.6 were 95%UCLs determined by ProUCL. The values listed in Table E-13 for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene could not be verified as the 95%UCL, the value of the mean recommended by ProUCL, or the maximum concentration for these constituents. It was verified that the values listed in Table E-13 were used to calculate the Estimated Cancer Risks and Estimated Hazard Quotients listed in the table. Revise Section 5.4.6 and Table E-13 for accuracy and consistency regarding the use of 95%UCLs determined by ProUCL to calculate Estimated Cancer Risk and Estimated Hazard Quotients for the residential scenario. If risks and hazards are re-calculated, ensure all affected sections of the Revised RFI are updated accordingly. If the values currently listed in Table E-13 are retained, revise Section 5.4.6 to explain the discrepancy between the values listed in Section 5.4.6 and those used in the risk and hazard calculations.

Evaluation of Facility Response to NMED Comment 6: The response adequately addresses the issue raised in the original comment. CAFB has created two new sections in the Revised RFI to discuss cumulative risk. As a response to NMED Comment 6, Sections 5.4.5 and 5.4.7 require no modification. However, the facility responses to NMED Comments 5 and 6 indicate that risk and hazard were re-calculated in the Revised RFI based on the 2017 update to the *Risk Assessment Guidance for Site Investigations and Remediation* (2017 NMED RAG). In addition, discrepancies have been noted in the Evaluation of Facility Response to NMED Comment 5 between the 95%UCLs calculated by ProUCL and the values used as exposure point concentrations for some PAHs in soil in the refined risk assessment. Thus, Sections 5.4.5 and 5.4.7 may require revision based on the facility response to the Evaluation of NMED Comment 5.

Evaluation of Facility Response to NMED Comment 7: The facility response adequately addresses the issue raised in the original comment. CAFB has eliminated Table E-15 from the Revised RFI because a refined risk analysis was not needed for the site worker and no additional action is required in response to NMED Comment 7. As noted above the facility responses to NMED Comments 5 and 6 indicate that risk and hazard were re-calculated in the Revised RFI based on the 2017 NMED RAG. However, no issues related to the elimination of the refined analysis for site workers were identified during the review of the updated risk analysis.

II. EDITORIAL COMMENTS ON THE REVISED SCREENING LEVEL RISK ASSESSMENT BASED ON THE 2017 NMED RAG

- 1. Section 5.4.2, Quantitative Risk Screening Evaluation, Page 5-3:** The first sentence of Section 5.4.2 references the 2015 version of the NMED RAG. While the methodology for the screening risk evaluation was developed using the 2015 version of guidance, the screening values used in the analysis were taken from the 2017 NMED RAG. For completeness, a reference to the 2017 NMED RAG should be added to the first sentence of Section 5.4.2 so all versions of the guidance used in formulating and performing the evaluation are cited. Revise Section 5.4.2 to address this issue.
- 2. Section 5.4.2, Quantitative Risk Screening Evaluation, Page 5-3:** Page 5-3 includes an in-text table entitled Hospital Abandoned UST (TU504) Screening-Level Cumulative Risks and Hazard Indices for Soil. The table lists the carcinogenic risk for site workers as “1E-4E-06”. The correct value is 4E-06. Revise the in-text table on Page 5-3 to list 4E-06 as the carcinogenic risk for site workers.