



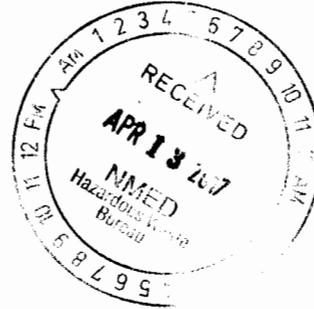
AQS, Inc.
2112 Deer Run Drive
South Weber, Utah 84405

(801) 476-1365
www.aqsnet.com

April 10, 2017

DCN: NMED-2017-18

Mr. David Cobrain
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Dr. East
Building One
Santa Fe, NM 87505



RE: Draft Technical Review Comments on the "RCRA Facility Investigation at SS501",
Cannon Air Force Base, New Mexico, dated September 2016

Dear Mr. Cobrain:

Attached please find draft technical review comments on the "RCRA Facility Investigation at SS501".

An ecological risk assessment was not conducted as the pathway was deemed incomplete in the 2013 report *Site Investigation at Eight Sites*. It is agreed that there is no viable habitat at SS501.

Tables E-3 and E-4 included a comparison of the maximum detected concentrations for metals to the CAFB background reference values. Barium, cadmium, selenium, and silver were not retained as constituents of potential concern as the maximum concentration was less than background. This screening is consistent with the NMED Soil Screening Guidance. A minor editorial issue was noted during the review of Table E-4: the column headers should be revised to reflect surface soil.

If a NMED soil screening level (SSL) was not available, the USEPA Regional Screening Level was applied (and adjusted to a risk level of 1E-05 if cancer-based). This is acceptable and consistent with the NMED SSG. Derivation of the value is not required.

The total petroleum hydrocarbon (TPH) concentrations were compared to SSLs. Consistent with the NMED SSG, the resulting risks were not added to the calculated risks in Tables E-7 through E-9 as only a qualitative discussion is needed.

The human health risk assessments incorporated all historical data but applied an outdated SSL for arsenic. If the current SSL for arsenic had been used, site risks would be below the target risk level of 1E-05 for all receptors. As such, it is agreed that the site meets corrective action complete with no controls.

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

Thank you, .

Paige Walton

Paige Walton
AQS Senior Scientist and Program Manager

Enclosure

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

**Draft Technical Review Comments on the RCRA Facility Investigation at SS501,
Cannon Air Force Base, New Mexico, dated September 2016**

1. Section 3.5.4, Comparison of Site Metals Concentrations to Background Levels. A comparison of site concentrations to background levels was conducted using a tiered approach. If the site maximum detected concentration was greater than the background reference value, a comparison to the range of background was conducted. In the event that the maximum concentration fell above the range of background, a statistical comparison was done. The NMED SSG does not allow for comparison of site data to the range of background. As noted in Section 2.8.3.2 of the SSG, if the maximum site concentration is greater than the background reference value, a two-sample hypothesis test should be used to compare the data distributions. Under certain circumstances, comparison to the range may be applicable. NMED will allow the comparison to the background dataset range for the identification of COPCs if nature and extent has been defined and only when sufficient samples are not available to conduct a statistical analysis. The comparison must be coupled with multiple lines of evidence to include looking at the number of detections versus the total number of samples, history of the site (as best known), and locations (to discern any spatial variation or trend). If there is site history to suspect the constituent to be present from site activities, then it would be possible that the constituent could be present from historical activities at low levels (in the high range of background). In these cases, the constituent still must be carried forward as a COPC and retained in the risk assessment (even if it will likely not be a risk driver). Data were compare to the background reference value (revised) followed by a statistical evaluation to eliminate arsenic from further evaluation in the risk assessment. Since no metals (arsenic, chromium and lead) were eliminated using the Tier 2 process, and a statistical comparison of site data to background was conducted, the site attribution analyses is acceptable.

1. Appendix E, Human Health Risk Assessment. Site data are assumed to represent total chromium. The total chromium data were compared to the trivalent chromium screening level. It is not clear, but it appears that no speciation of chromium was conducted as part of the 1997 background study and that the background data for chromium represents total chromium. As such, site concentrations of chromium should be compared to the NMED SSLs for total chromium. Comparison to the trivalent SSL will likely result in an underestimation of risk. If background chromium data has been speciated and the results indicate background levels of chromium are primarily due to trivalent chromium, the trivalent chromium SSLs may be applied. It is noted that use of the total chromium SSLs will not change the conclusions of the risk assessments.

2. Appendix E, Human Health Risk Assessment. The human health risk assessment included all historical data. The risks to the resident, industrial worker, and construction worker were all equivalent to or slightly above the NMED target risk level of 1E-05. However, the soil screening level (SSL) that was applied for arsenic is based on outdated toxicity information. The current 2017 NMED SSL for arsenic incorporates a relative bioavailability factor. The 2017 SSLs for the resident, industrial worker, and construction worker are 7.07 milligrams per kilogram (mg/kg), 3.59E+01 mg/kg, and 2.16E+02 mg/kg, respectively. Use of the new

SSLs for arsenic in Tables E-7 through E-9 would result in total cancer risks meeting the target risk level of $1E-05$.