



DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER

ENTERED



July 18, 2019

Christipher N. Gierke
Remedial Project Manager
AFCEC/CZO
506 N. Air Commando Way
Cannon AFB, NM 88103

Mr. Gabriel Acevedo
Environmental Scientist & Specialist-Operational
New Mexico Environmental Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe NM 87501

Dear Mr. Acevedo

Cannon AFB is pleased to provide the response letter, replacement pages including redline-strikeout, and amended CDs, prepared by the Air Force Civil Engineer Center (AFCEC), as requested in the 03 July 2019 "*Approval with Modifications RCRA Facility Investigation Work Plan at Site DP034*" letter, Cannon AFB. If you have any further comments or questions pertaining to the referenced document, please contact the AFCEC Remedial Project Manager, Mr. Christopher Gierke at (575) 904-6744 or at christipher.gierke@us.af.mil.

Sincerely

C.N. GIERKE, GS-12, AFCEC
Remedial Project Manager

Attachment:
Errata Pages DP034 RFI Work Plan

cc:
NMED, David Cobrain
NMED, Benjamin Wear

soils from 0 to 10 feet; therefore, background levels for subsurface soils will be used for these receptors. If the maximum concentration for a constituent is below background, it will not be included further in the screening analysis.

3.6.5 Screening Exposure Concentrations

The maximum concentration in the soil exposure interval applicable to each receptor will be selected as the screening exposure concentration for datasets with limited samples and/or detections. For appropriate datasets (i.e., those with ≥ 8 samples and ≥ 5 detections), 95% upper confidence limits will be calculated using USEPA's statistical software ProUCL (Version 5.1) and used as the exposure point concentration.

3.6.6 Cumulative Human Health Risk Screening

NMED guidance indicates that the potential cumulative risks and hazards should be evaluated in the screening evaluation to conclude whether further evaluation may be necessary. Therefore, consistent with the guidance, screening will be performed by comparing maximum chemical concentrations detected at the site with NMED human health SSLs. NMED has published SSLs for a resident, industrial/occupational worker, and construction worker. In the absence of NMED SSLs, USEPA RSLs will be selected (carcinogenic RSLs will be adjusted to a risk of 1E-05, consistent with NMED SSLs). Residential soil RSLs will be selected for resident user scenarios. Industrial soil RSLs will be selected for the industrial/occupational worker and construction worker (NMED, 2019).

SSLs for individual carcinogenic chemicals are based on a cancer risk of 1E-05. SSLs for individual noncarcinogenic chemicals are based on a hazard quotient of 1. Cumulative site screening risks and hazards will be calculated as follows:

$$\text{Site Screening Risk} = \left(\frac{C_1}{SSL_1} + \frac{C_2}{SSL_2} + \dots + \frac{C_i}{SSL_i} \right) \times 10^{-5}$$

$$\text{Site Screening Hazard Index (HI)} = \left(\frac{C_1}{SSL_1} + \frac{C_2}{SSL_2} + \dots + \frac{C_i}{SSL_i} \right) \times 1$$

Where:

$C_1 \dots C_i$ = Screening exposure concentration for chemical "1" to chemical "i."

$SSL_1 \dots SSL_i$ = Soil screening level for chemical "1" to chemical "I" based on an SSL carcinogenic risk of 1E-05 or noncarcinogenic hazard of 1.

A screening HI of 1 or less means that noncarcinogenic effects are acceptable and no further evaluation is necessary. A cumulative risk of 1E-05 or less indicates the carcinogenic risks are acceptable and no further evaluation is warranted. If the screening HI is 1 or less and the cumulative risk is 1E-05 or less, CAC without controls will be recommended. If the screening HI is greater than 1 or the cumulative risk is greater than 1E-05, further investigation and/or evaluation of potential risks may be recommended.

3.6.7 Radiologicals

Radionuclides (thorium-232 and radium-226) are included in the site's analytical suite and are not directly discussed in NMED (2019). Radionuclide data will be screened against receptor-specific radionuclide preliminary remedial goals (PRG) calculated using USEPA's calculator available at https://epa-prgs.ornl.gov/cgi-bin/radionuclides/rprg_search. The PRGs will be calculated using default exposure parameters and a target cancer risk of 1E-05 and a non-cancer HQ of 1.0 in accordance with NMED (2019).

3.6.8 Evaluation of Petroleum Hydrocarbons

The SSLs adopted by NMED for petroleum hydrocarbons are screening guidelines for potential impacts to potable groundwater and are not necessarily risk-based values, but may reflect a ceiling level (NMED, 2019). Petroleum hydrocarbons represent a complex mixture of compounds and the amount and types of constituent compounds differ between products. Hazard quotients are not calculated for petroleum hydrocarbons. For screening, the maximum detected concentration is presented simply as a comparison with the receptor-specific screening guideline. NMED (NMED, 2019) provides screening guidelines for residential exposures and industrial exposures. Residential guidelines will be used for residential receptors. Industrial guidelines will be used for industrial/occupational and construction scenarios. TPH screening values for "unknown oil" will be used for screening purposes. Lastly, as a reference point, SSLs for residential exposure (100 milligrams/kilogram [mg/kg]) and industrial/construction work exposure (500 mg/kg) for TPH GRO are provided in NMED's 2019 Risk Assessment Guidance for Site Investigations and Remediation Table 6-2, TPH Soil Screening Levels, and Table 6-4, Groundwater and SL-SSLs for TPH Mixtures.

3.6.9 Vapor Intrusion Risks

The identified disposal pit that comprises Site DP034 is located within approximately 100 feet of two existing buildings, Building 252 and Building 3252. It is conservatively assumed that these buildings are regularly staffed and have a potentially complete vapor intrusion exposure pathway, though this information will be verified during the field investigation. The results of the soil samples collected from the DP034 disposal pit will be evaluated to assess the types of contaminants identified. If the disposal pit appears to be only contaminated with radiological compounds, as expected, the vapor intrusion exposure pathway will be qualitatively determined to be incomplete and require No Further Action. If soil is shown to be contaminated with sufficiently volatile and toxic chemicals (e.g., VOCs or SVOCs), additional site characterization (e.g., soil gas sampling) may be necessary to fully evaluate the vapor intrusion exposure pathway. However, dependent on the size of the DP034 disposal pit, excavation activities (i.e., source removal) may be recommended in lieu of additional investigation to characterize the vapor intrusion exposure pathway.

3.6.10 Planned Risk Assessment Activities

The HHRA will be completed for DP034 in accordance with NMED guidance (NMED, 2019) if required, based on a comparison of analytical results to SSLs and background concentrations (for

metals). The HHRA will be conducted incorporating the results of the soil samples collected during the RFI.

3.7 ECOLOGICAL RISK ASSESSMENT

The overall objectives of an ecological risk assessment are to understand how site-related chemicals may be distributed in relation to ecological receptors (including both habitats and/or species potentially present), and to evaluate how the entities may be affected by those chemicals. The debris pit at DP034 was uncovered beneath a concrete/asphalt cover located in an industrial area of Cannon AFB. It is assumed that the site area meets the site exclusion criteria regarding risk to ecological receptors (NMED, 2017), as DP034 does not include viable ecological habitat; is not utilized by potential (current and/or future) ecological receptors), and complete or potentially complete exposure pathways do not exist due to the presence of concrete/asphalt cover in an industrial setting. However, the site will be evaluated relative to the exclusion criteria, consistent with NMED Guidance (NMED, 2017), during the site visit and documented in the RFI.