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NEW MEXICO ENVIRONMENT DEPARTMENT ENTERED

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**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

May 30, 2019

John Moore  
Environmental Superintendent  
Western Refining Southwest Inc., Gallup Refinery  
92 Giant Crossing Road  
Gallup, New Mexico 87301

**RE: DISAPPROVAL  
INVESTIGATION WORK PLAN  
BACKGROUND CONCENTRATIONS  
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY  
EPA ID # NMD000333211  
HWB-WRG-18-013**

Dear Mr. Moore:

The New Mexico Environment Department (NMED) reviewed the Marathon Petroleum Company LP dba Western Refining Southwest, Inc. Gallup Refinery (the Permittee) *Investigation Work Plan Background Concentrations* (Work Plan) dated November 2018. NMED hereby issues this Disapproval. The Permittee must address the following comments.

**Comment 1**

In Section 2.3.1 (Anticipated Activities) the Permittee discusses sample collection from two areas to collect samples from three soil sample types: the Rehobeth soils, the Simitarq-Celavar soils, and the Chinle Group bedrock. A total of eight samples are proposed for each of these areas. While eight samples are sufficient for conducting statistical analyses, the NMED Risk Assessment Guidance for Investigations and Remediation (NMED, 2017 and 2019) (NMED Guidance) recommends a minimum sample size of 10 per background reference area. Additionally, the proposed sample locations appear to represent a very small proportion of each soil type. Additional samples will also help account for natural variations in metals/inorganic concentrations. To address spatial variability, additional sample locations must to be selected

and the number of background samples must be increased to a minimum of 10 samples per soil type. Revise the Work Plan to propose to collect additional samples.

**Comment 2**

The Permittee proposes to collect rock core samples and soil samples. In Section 3.1 (Soil Boring Drilling – Bedrock Sampling) the Permittee states, “[e]ight samples in total will be collected from four borings. The soil borings to be completed as background locations for the Chinle Group background samples will be drilled into the top of bedrock with samples collected from approximately 6” – 18” and 24” – 30” below the top of bedrock at each boring.” Regarding soil sample collection, in Section 3.2 (Soil Sampling) the Permittee states, “[s]oil samples will be collected at the shallow background soil borings (Rehobeth and Simitarq-Celavar) from the near surface (6” to 18”) interval to establish background concentrations for inorganic constituents. Eight sample locations will be selected for each of the two major soil types to support the development of distinct background concentrations for each major soil type, if required.” One of the primary data objectives for the collection of background samples for delineation of naturally occurring inorganics is to provide background data as a comparison to soil laboratory analytical results and NMED’s soil screening Guidance. The primary method for defining the magnitude of potential contamination is through conducting screening level risk assessments. As such, investigation data will be collected at soil exposure intervals sufficient to conduct not only a site attribution analysis and determine nature and extent of contamination, but also to conduct risk assessments. The soil screening levels for risk assessments (human health and ecological) include surface soil (0-1 foot below ground surface, bgs) and 0-10 feet bgs. The proposed background intervals are between 6 to 18 inches for soils and 6 to 18 inches and twenty-four to thirty inches in rock and will not provide relevant data to support comparison of site investigations for risk assessments. Collection of background data must be designed to represent the exposure intervals needed for risk assessment: 1) soils representative of the 0-1 foot bgs exposure interval; 2) soils representative of the 0-10 foot bgs exposure interval. Revise the depth of background samples and provide lines of evidence that the data will be suitable for both determinations and nature and extent of contamination as well as for risk assessments.

**Comment 3**

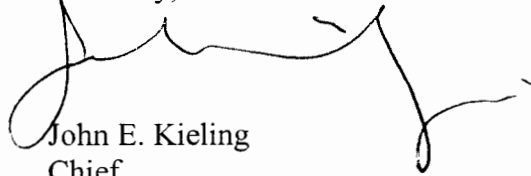
Work Plan Section 2.3.1 states that the 95 percent upper tolerance limit (95UTL) will be derived for the background samples. However, the Work Plan does not discuss how the 95UTL will be determined. The most recent version of ProUCL must be used to derive the 95UTLs. Revise the Work Plan to discuss how the 95UTL will be derived.

The Permittee must address all comments in this Disapproval and submit a revised Work Plan. The revised Work Plan must be accompanied with a response letter that details where all revisions to the Work Plan were made, cross-referencing NMED’s numbered comments. A electronic copy of the red-line strikeout version of the Work Plan that shows where all changes have been made must also be submitted. The revised Work Plan must be submitted no later than **September 18, 2019**.

Mr. Moore  
May 30, 2019  
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If you have questions regarding this correspondence, please contact Kristen Van Horn of my staff at 505-476-6046.

Sincerely,

A handwritten signature in black ink, appearing to read "John E. Kieling". The signature is fluid and cursive, with a large initial "J" and a long horizontal stroke.

John E. Kieling  
Chief  
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB  
K. Van Horn, NMED HWB  
C. Chavez, EMNRD OCD  
B. Moore, MPC  
L. King, EPA

File: Reading File and WRG 2019 File  
WRG-18-013