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20 December 2024

Nix #1

Remediation #23426

Operator #100322

This Supplemental Site Investigation Summary Report has been prepared by Environmental Resources Management, Inc. (ERM), on behalf of Chevron, for the Nix #1 Site (Remediation #23426). As detailed in the third quarter 2024 Supplemental Site Investigation and Remediation Workplan (Form 27) submitted on 20 September 2024 (Document #403909537) by Eagle Environmental Consulting, Inc. (Eagle), one soil sample exceeded the Colorado Energy and Carbon Management Commission (ECMC) Table 915-1 regulatory standards for pH (sample SEP at 2-feet below ground surface (bgs)). Further action is needed to delineate and assess possible in-situ reclamation and naturally occurring soil characteristics at the Site.

ERM performed shallow delineation and background soil sampling via hand auger around the former separator, sample SEP at 2-feet bgs, as depicted on **Figure 1**. The analytical results from the recent Site investigation activities are summarized in the following sections and presented on **Table 1**.

SITE INVESTIGATION ACTIVITIES

SOIL SAMPLING

On 26 September 2024, ERM advanced four delineation soil borings (FL-01-N, F-L-01-E, FL-01-W, and FL-01-S) around the Nix #1 flowline to delineate in the area of the former separator and flowline; collecting samples at 1-, 2-, and 4-feet bgs, respectively.

Additionally, four background soil borings (BG-01 through BG-04) were advanced to serve as nearby, non-impacted sampling locations to evaluate background concentrations of target analytes. Samples were collected at 2-feet bgs at all background sampling locations. Sample locations and relevant features are depicted on **Figure 1**.

A total of 16 soil samples, 12 delineation soil samples and four background soil samples, were collected in association with the flowline and former separator to delineate pH proximal to sample SEP at 2-feet bgs. The samples were submitted to Summit Scientific Laboratory, an accredited laboratory located in Golden, Colorado, for analysis of pH by United States Environmental Protection Agency (EPA) Method 9045D.

RESULTS

Analytical results for pH are summarized in **Table 1** and the laboratory analytical report is included in **Attachment A**. Sampling locations and corresponding analytical results for the 26 September 2024 sampling event are illustrated on **Figure 1**.

Upon receipt of laboratory analytical results, data was reviewed for general quality assurance and quality control measures. The following notable observations and data qualifiers were associated with this data set:

- Soil samples at the time of laboratory receipt were measured at 4.1 degrees Celsius (°C), within the acceptable range of 0 to 6°C. Samples were submitted to the laboratory the same day as sampling.
- All sample bottles were received intact, and samples analyzed within their respective hold times.
- No data qualifier codes were flagged in the analytical results.

Laboratory analytical results reported concentration levels below the Colorado ECMC Table 915-1 range for pH for Soil Suitability for Reclamation in all 12 of the delineation soil samples submitted. Two of the four background samples had laboratory analytical results for residual pH at concentration levels above the Colorado ECMC Table 915-1 range for residual pH.

FLOWLINE AND SEPARATOR DELINEATION SAMPLES

- Flowline delineation borings FL-01-N, FL-01-E, FL-01-W, and FL-01-S laboratory results were reported at concentrations within the ECMC Table 915-1 pH range of 6.0 to 8.3 standard units (SU) in all 12 samples collected. The residual pH values ranged from 7.5 to 8.2 SUs.

BACKGROUND SOIL SAMPLES

- Background soil borings BG-01 and BG-02 had laboratory analytical results for residual pH at concentrations that exceeded the ECMC Table 915-1 pH range of 6.0 to 8.3 SUs, and the pH values were reported as 8.8 and 8.4 SUs, respectively. Samples BG-03 and BG-04 laboratory results were reported within the Colorado ECMC range for pH.

SOIL SUITABILITY FOR RECLAMATION STATUS

The laboratory-reported values for residual pH in the soil samples collected from delineation borings around the Nix #1 former separator and flowline were reported within the acceptable range from 6.0 to 8.3 SUs for residual pH in all delineation borings and sample depths. Exceedances of the Colorado ECMC Table 915-1 for residual pH were reported at elevated concentrations in two of the four background samples.

ERM recommends conducting further assessment of pH on-Site and the background samples from non-impacted portions of the Site in 1st Quarter 2025.



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TABLE

Table 1
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION CHEMISTRY DATA
OPERATOR: 100322
NIX #1, Weld County, Colorado
REM# 23426

			Analyte	pH (Standard Units)
			CO-ECMC Table 915-1 Limits	6.0-8.3
			Maximum Background Concentration	8.8
			Mean Background Concentration	8.1
Sample ID	Sample Date	Depth (ft bgs)	Sample Results	
Background Samples				
BG-01	09/26/2024	2	8.8	
BG-02	09/26/2024	2	8.4	
BG-03	09/26/2024	2	7.6	
BG-04	09/26/2024	2	7.6	
Delineation Soil Samples				
FL-01-E	09/26/2024	1	7.8	
FL-01-E	09/26/2024	2	7.8	
FL-01-E	09/26/2024	4	8.2	
FL-01-N	09/26/2024	1	7.8	
FL-01-N	09/26/2024	2	7.8	
FL-01-N	09/26/2024	4	7.8	
FL-01-S	09/26/2024	1	7.9	
FL-01-S	09/26/2024	2	8.0	
FL-01-S	09/26/2024	4	7.5	
FL-01-W	09/26/2024	1	7.5	
FL-01-W	09/26/2024	2	7.6	
FL-01-W	09/26/2024	4	7.6	

Notes:

ft bgs = feet below ground surface

NA = Not Analyzed

pH = pH Standard Units

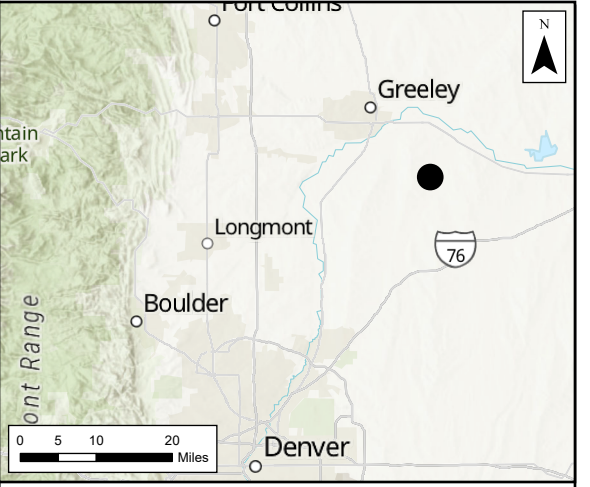
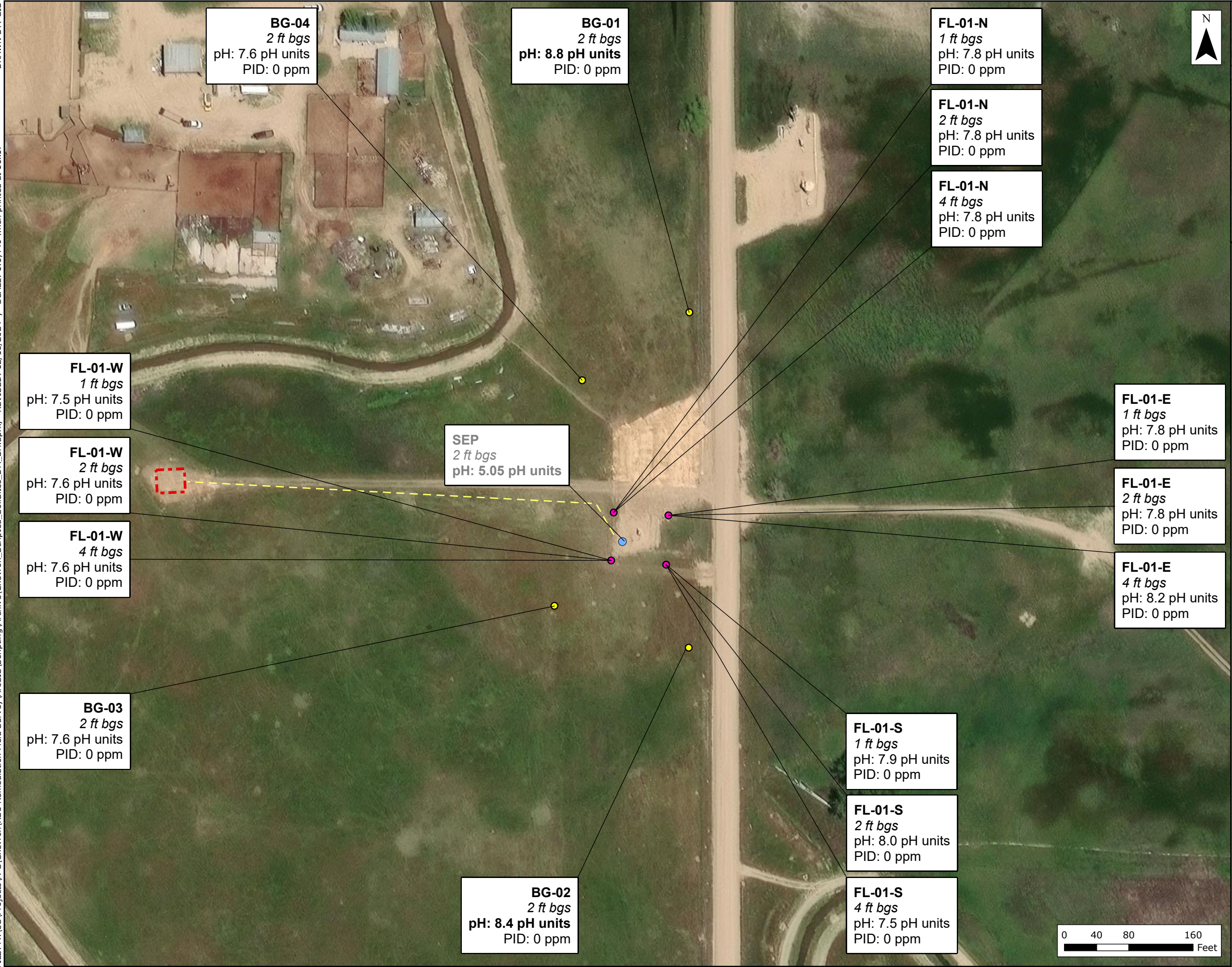
CO-ECMC = Colorado Energy and Carbon Management Commission

Bold and blue analytical result values exceed the ECMC Table 915-1 limit(s)



FIGURE

FILE: M:\US\Projects\A-C\Chevron\RBU Remediation Field Survey\ArcGIS\Scripting\Archive\Chevron_SoilSites_DM_BH.aprx, REVISED: 12/18/2024, SCALE: 1:1,440 when printed at 11x17
DRAWN BY: GIS



Legend

- Former Sample Location
- Background
- Flowline Delineation
- Wellhead Delineation
- - Former Flowline
- - - Former Wellhead

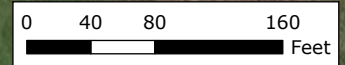
Notes:

Bold values exceed the ECMC criteria for soil suitability.

ECMC = Energy and Carbon Management Commission
PID = Photo Ionization Detector
ppm = parts per million

ECMC Table 915-1 limit(s)
pH: 6.0 - 8.3 pH Units

Figure 1
Soils Analytical Data
26 September 2024
NIX #1
REM #23426
Operator: 100322
RBU Remediation Field Survey
Chevron
Weld County, Colorado





ATTACHMENT A LABORATORY ANALYTICAL REPORT