



**BISHOP LOSS OF CONTAINMENT
GALETON, COLORADO
NON-RESIDENTIAL SOIL SAMPLING LOCATIONS PLAN**

Version 1.2

Prepared for:
ECMC Form 27 Submittal

Prepared By:
CTEH, LLC
5120 Northshore Drive
Little Rock, AR 72118

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Change Management

Change 001: May 3, 2025. V1.0 to V1.1		
Added note that parcels outside the AOI may be assessed based on the PIO scheduling assessments; added clarification of confirmation and comprehensive sampling; updated flow chart (attachment A)		
	Name/Position	Date Signed
Prepared By:	Ken Forster, Senior Consultant	05/03/2025
Approved By:		
Change 002:		
<ul style="list-style-type: none"> ○ Added change management table ○ Reference to ESAP – addedand subsequent revisions ○ Corrected 1.5 acres to miles ○ Changed CTEH will conduct remedial actions to Noble will conduct remedial actions 		
	Name/Position	Date Signed
Prepared By:	Tony Palagyi	06/17/2025
Approved By:		

1.0 Introduction and Purpose

This Non-Residential Soil Sampling Locations Plan was prepared by CTEH® on behalf of Noble Energy, Inc. (Noble) in response to the Bishop Loss of Containment in Galeton, Colorado. The incident occurred on April 6, 2025. The GPS coordinates for the approximate location of the release Site are: (40.505384, -104.585581).

The purpose of the plan is to develop a systematic process to select sample locations representative of each parcel such that the data from the initial sampling and screening can be used to form the basis to prioritize further sampling and assessment. Data will be compiled and available for use in planning future assessments, including remedial actions, under the authority of the Colorado Energy & Carbon Management Commission (ECMC), which may be specifically addressed in subsequent ECMC-overseen remediation forms and workplans (e.g., Form 27, Site Investigation and Remediation Workplan), if warranted. Once sample locations are identified utilizing the methodology outlined in this plan, soil sampling will be conducted in accordance with the Incident Command (IC)-approved Environmental Sampling and Analysis Plan (ESAP), dated April 17, 2025, and subsequent revisions.

2.0 Health and Safety

Safety is the most important consideration when implementing this plan. All Site personnel will review and adhere to the incident Site Safety and Control Plan (ICS Form 208) and company/contractor-specific Health and Safety Plans (HASP), as applicable. Daily tailgate safety briefings will be conducted prior to going into the field. Additional safety briefings may be given prior to undertaking particular activities such as sampling near water. In general, sampling will only be conducted during daylight hours by qualified third-party personnel and under weather or other environmental conditions that do not create unsafe working conditions. The appropriate personal protective equipment (PPE) will be utilized for each task. Any incident will be promptly reported in accordance with the Site-specific Site safety plan and to Incident Command (IC).

3.0 Landowner Access

Prior to CTEH accessing private land, Noble will obtain access approval via a signed access agreement or a verbal approval. Once Noble secures access to a parcel, CTEH will be notified so the parcel can be accessed for assessment and/or sampling. CTEH will not assess a private land parcel without landowner permission.

4.0 Soil Sampling

4.1 Soil Sampling Methodology and Analysis

Soil sampling will be conducted in accordance with the ESAP, dated April 17, 2025, and subsequent revisions. Elements of that plan include, but are not limited to: Health and Safety, Data Quality Objectives, Monitoring and Sampling, Sample Handling and Documentation, Program Quality Assurance, Decontamination, Data Analysis, and Records Management remain unchanged for this phase of the assessment. The following sampling plan is summarized in the flow chart presented in **Attachment A**.

4.2 Sample Locations

Initially, the area of interest (AOI) will be from the Site out to 1.5-mile (mi) radius. A map of the AOI is provided in **Attachment B**. The AOI may be expanded as needed based on analytical data from within the AOI or based on visual observations from the Rapid Assessment Technique (RAT) Plan. Parcels outside the 1.5-mile AOI may be assessed based on the Public Information Officer (PIO) scheduling assessments. Following the RAT and visual assessments, mowing/monitoring of any affected vegetation may be conducted prior to the soil sampling. Once the mowing/monitoring is completed, the following soil sampling will be conducted.

In ArcGIS Pro, a 200 meter by 200 meter (m) grid was laid atop a 1.5mi radius around the incident site then centered at the nearest intersection of Co Rd 72 and Co Rd 51. This grid was clipped by the Weld County right-of-way 60 foot buffer, and the Weld County parcel data. Any grid fragments were merged where possible such that most, but not all resulting grids cover ~40,000 square meters (m²) or 9.9 acres.

The AOI contains 229 property parcels and the approximate 200m X 200m grids will be trimmed to align with property parcels so that a grid is not on two different property parcels. Each grid will have a minimum of one soil sample collected, and the number of samples may increase depending on if source material is observed within the grid or if there are basins and/or surface water in the grid. The samples collected per grid will/may include:

- One randomly generated discrete grab sample (collected in every grid that is not residential)
- One discrete grab sample targeting source material (this sample will only be collected if source material is observed)
- One discrete grab sample if a dry basin is observed that will contain water once Greeley Canal #2 is flowing (collected if a basin is present)
- Initial soil grab samples will be collected at 0-6 inches (in) as detailed in the ESAP.

- If surface water used for irrigation or other purposes is encountered in a grid, a surface water sample may be collected.

Randomly Generated Sample Location

One randomly generated discrete grab sample will be collected from each approximately 40,000 m² (~9.9 acres) grid. To eliminate the potential perception of sampler bias, the sample location within the grid was randomly generated in ArcGIS Pro. The “Create Spatial Sampling Locations Geoprocessing tool” was set to “stratified by individual polygon sampling method” to randomly generate sampling locations resulting in one per grid. No minimum distance between sample points was used, thus sample points may lay adjacent one another on neighboring grids.

A .KMZ file will be generated for each parcel so samplers can navigate to the randomly generated sampling points. Alternatively, samplers may utilize a Georeferenced PDF and the Avenza mobile application to navigate to the randomly selected sampling points. If a randomly generated sampling point lands on concrete or other impervious surface obstructing sampling, the samplers will document that and move to the closest location where soil is exposed. Example parcel maps with the grids and random sample locations are provided in **Attachment C**.

Sample Location Targeting Source Material

RAT assessments may also be used to determine sampling locations for areas of dispersed source materials where randomized sampling locations do not cover areas with visible source material. If RAT surveys identify source material, one additional discrete sample per grid will be collected targeting source material identified during RAT Surveys. If sampling under this plan is conducted prior to a RAT survey, field samplers will collect one discrete grab sample targeting source material if observed.

Sample Location Targeting Dry Basins and Surface Water

If a dry basin is identified by RAT or field samplers, one discrete grab sample per basin may be collected by the field sampling team to characterize the soil prior to the basin filling up with water. If surface water is encountered in basins used for irrigation or other purposes, one surface water sample per basin may be collected.

Parcels with residential houses will be addressed under separate cover and will have more sampling locations per acre. If a residential house is observed within the 40,000 m² grid, samples will not be collected per this non-residential sample location plan, since more samples will be collected for the house under the residential sample location plan.

Background samples will be collected from areas that have not been impacted by any of the activities associated with onsite operations or the incident. Maps of background sample locations will be provided through Form 27 supplemental.

5.0 Sample Results

Sampling results will be compared to background concentrations and screening levels established in the ECMC Table 915-1. If an analyte does not have screening criteria listed in ECMC Table 915-1, concentrations may be compared to United States Environmental Protection Agency (US EPA) Risk-Based Screening Levels (RBSL's), or other applicable screening criteria.

If sampling results indicate that concentrations of target analytes are below their respective background concentrations or screening values no further action will be required. Exceedances of risk-based screening levels do not necessarily indicate the existence of a health, agricultural, or ecological concern.

If analytical results are above appropriate screening criteria, additional site characterization and remedial actions will occur.

6.0 Additional Site Characterization, Agricultural Sampling, and Remedial Actions

Additional site characterization steps, if needed, may include but not limited to:

- Horizontal and vertical (to 12 in. depth) delineation of screening criteria exceedance areas
 - Headspace screening will be conducted with a PID.
 - Discrete grab surface confirmation soil samples will be collected to verify extent of horizontal and vertical (to 12 in depth) impacts.
 - Four delineation soil samples will be collected at 0-3 in, 3-6 in, 6-9 in, and 9-12 in.

Once the horizontal extent is determined, sampling for agricultural parameters will occur. Agricultural parameter comprehensive sampling will be conducted in accordance with the Agricultural and Reclamation Sampling and Analysis Plan (Agricultural SAP) which is prepared under separate cover.

Following the Agricultural comprehensive sampling, Noble will conduct remedial actions as needed. Remedial actions of impacted areas, after delineation and Agricultural comprehensive sampling, may include but not be limited to excavation and removal, in-situ treatment, ex-situ soil shredding/treatment, treatment and tilling, etc., or other remedial measures approved by IC and ECMC once in the project phase. Once the remedial actions are complete, additional confirmation sampling will be conducted. If

analysis indicates target analyte concentrations are below their respective background concentrations or screening values no further action will be required.

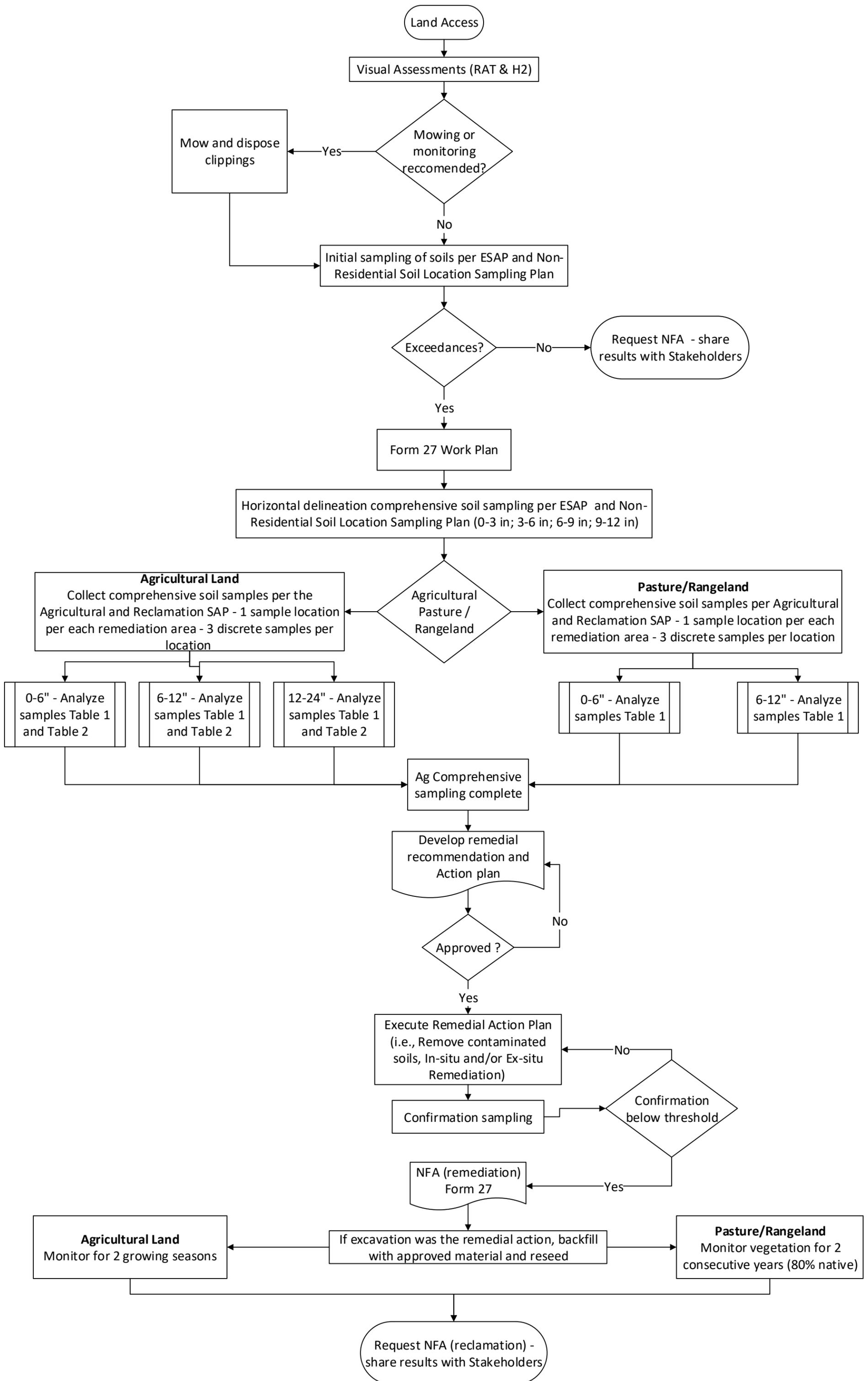
If target analyte concentrations are above background and/or screening values, additional remedial actions (i.e., excavation, amendments, and/or treatments) may be required.

Any impacted soil which is excavated will be replaced by backfill/topsoil material. The backfill/topsoil material used will be sampled in accordance with the ESAP and the Agricultural SAP.

7.0 Landowner Letters

Individual chains of custody (COC) will be created for each parcel so that each lab report only contains sample results data from a single parcel. After receiving validated lab results, CTEH will draft a letter for each parcel owner which will include a map showing the sample location(s), an analytical summary table, and the analytical lab report.

Attachment A: Flow Chart



Land Access

Visual Assessments (RAT & H2)

Mowing or monitoring recommended?

Mow and dispose clippings

Initial sampling of soils per ESAP and Non-Residential Soil Location Sampling Plan

Exceedances?

Request NFA - share results with Stakeholders

Form 27 Work Plan

Horizontal delineation comprehensive soil sampling per ESAP and Non-Residential Soil Location Sampling Plan (0-3 in; 3-6 in; 6-9 in; 9-12 in)

Agricultural Land

Collect comprehensive soil samples per the Agricultural and Reclamation SAP - 1 sample location per each remediation area - 3 discrete samples per location

Pasture/Rangeland

Collect comprehensive soil samples per Agricultural and Reclamation SAP - 1 sample location per each remediation area - 3 discrete samples per location

Agricultural Pasture / Rangeland

0-6" - Analyze samples Table 1 and Table 2

6-12" - Analyze samples Table 1 and Table 2

12-24" - Analyze samples Table 1 and Table 2

0-6" - Analyze samples Table 1

6-12" - Analyze samples Table 1

Ag Comprehensive sampling complete

Develop remedial recommendation and Action plan

Approved?

Execute Remedial Action Plan (i.e., Remove contaminated soils, In-situ and/or Ex-situ Remediation)

Confirmation sampling

Confirmation below threshold

NFA (remediation) Form 27

If excavation was the remedial action, backfill with approved material and reseed

Agricultural Land
Monitor for 2 growing seasons

Pasture/Rangeland
Monitor vegetation for 2 consecutive years (80% native)

Request NFA (reclamation) - share results with Stakeholders

Attachment B: Map of the AOI

Attachment C: Example Parcel Maps
