SOUTHERN UTE INDIAN TRIBE

SAFETY & ENVIRONMENTAL
COMPLIANCE MANAGEMENT GROUP

APPROVED
By Olivia Yu at 7:57 am, Sep 22, 2017

September 7, 2017

Ms. Olivia Yu
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NMOCD approves of the proposed additional delineation and remediation for 1RP-4671.

Subject: Frontier Field Services, LLC
Remediation and Closure of Rhombus Union State Com 1
1RP-4671

Dear Ms. Yu,

On behalf of Frontier Field Services, LLC (Frontier), a wholly-owned subsidiary of the Southern Ute Indian Tribe, the following responses are provided to address questions posed in your email dated August 7, 2017, regarding the release at the Rhombus State Com 1. The questions from your email are numbered below and italicized, with Frontier's responses below each question.

1. *The release volume has been revised. Provide calculations for this adjustment from 10-15 bbls reported on the initial C141 to the 5 bbls volume indicated in the report dated July 7, 2017.*

Frontier will revise the report to match the original estimated release volume of 10 – 15 bbl. Frontier will submit the report to NMOCD once final cleanup activities are complete.

2. *Explain the rationale for the June 27-30 series of sampling dates for Sample location 6, 10, Repeat #1 and #5. Was sampling on these days at the same spot? Repeat sampling at specific locations does not represent delineation. As explained in the email dated June 9, 2017, vertical delineation must show a minimal of 5 ft. of permissible chloride levels. In other words, NMOCD expects to see confirmatory laboratory results of the first depth with <= 600 mg/kg and the depth 5 ft. further with <= 600 mg/kg.*

The repeat samples collected between June 27th and June 30th were collected after additional impacted soil was excavated. Frontier mobilized heavy equipment to excavate the additional soil in the areas with elevated chloride levels (Sample locations #1, #2, #5, #6 and #10) and then resampled at the stated depths (A - surface, B - 2.5 feet below ground surface (bgs), C - 5 feet below ground surface). Repeat samples were not collected at the same locations, rather the repeat samples were collected as near to the original sample location as possible after excavation and removal of additional impacted soil. Each of the sample locations that had chloride concentrations which exceeded the NMOCD standard of 600 mg/kg are addressed individually below.

Sample #1 Location

Frontier excavated additional soil to a depth of seven (7) feet bgs from the Sample #1 location on June 27th – 29th, and then resampled. The final sample collected on July 6th was reported below the applicable chloride cleanup level. Frontier proposes collecting an additional sample from this

location at 12 feet bgs to demonstrate that there is five (5) feet of soil that meets the permissible chloride level.

Sample #2 Location

Frontier excavated additional soil from the Sample #2 location on June 27th and then resampled, with samples collected from the surficial soil (Sample 2-A) as well as 2.5 feet bgs (Sample 2-B) and five (5) feet bgs (Sample 2-C). All samples were reported below the chloride cleanup level of 600 mg/kg, and no additional excavation or sampling is proposed at this location as five (5) feet of soil which meet the chloride cleanup level has been demonstrated (Samples 2-A, 2-B and 2-C collected on June 27th).

Sample #5 Location

Frontier excavated additional soil from the Sample #5 location on June 27th and 28th and then resampled. The sample collected from five (5) feet bgs on June 29th (Sample Repeat #5) was reported below the applicable chloride cleanup level. Frontier proposes collecting an additional sample from this location at ten (10) feet bgs to demonstrate that there is five (5) feet of soil that meets the permissible chloride level.

Sample #6 Location

Frontier excavated additional soil from the Sample #6 location between June 27th and 29th and then resampled on June 30th, with samples collected from the surficial soil (Sample 6-A) as well as 2.5 feet bgs (Sample 6-B) and five (5) feet bgs (Sample 6-C). All samples were reported below the chloride cleanup level of 600 mg/kg, and no additional excavation or sampling is proposed at this location as five (5) feet of soil which meet the chloride cleanup level has been demonstrated (Sample 6-A, 6-B and 6-C collected on June 30th).

Sample #10 Location

Frontier excavated additional soil from the Sample #10 location on June 27th and 28th and then resampled on June 29th, with samples collected from the surficial soil (Sample 10-A) as well as two (2) feet bgs (Sample 10-B) and four (4) feet bgs (Sample 10-C). All samples were reported below the chloride cleanup level of 600 mg/kg, however, as five (5) feet of soil below the chloride cleanup level has not been demonstrated, Frontier proposes collecting an additional sample from this location at five (5) feet bgs.

3. *What does A, B, and C denote in the Sample ID? Do these refer to the sampling depth?*

A, B, and C denote different sampling depths for the analytical samples. Sampling depths are noted in Tables 2 and 3 of the *Remediation and Closure of Rhombus Union State Com 1 1RP-4671* report.

4. *Samples 4, 7, 8, 9, X have total TPH levels above permissible 1000 mg/kg. Vertical delineation is not complete. Total TPH levels must be obtained and maintained for a minimum of 2 ft. further in depth.*

Frontier proposes excavating additional soil from the locations of samples 4, 7, 8/X (Sample X is a blind duplicate of Sample #8), and 9. Once analytical closure samples collected from the bottom of the excavation are reported with TPH concentrations below the NMOCD TPH cleanup level of 1,000 mg/kg, Frontier will collect an additional analytical sample two (2) feet below the bottom of the excavation using a hand auger.

5. *As per the appended to the reviewed initial C141, to confirm that permissible levels of BTEX, TPH, and chlorides are obtained horizontally, a minimum of 4 cardinal sample locations should be established laterally around the release area.*

The previously collected samples include samples collected in three (3) of the cardinal directions around the release location including to the north (Sample #2), south (Sample #3) and west (Sample #1). Frontier will collect an additional sample to the east of the release location.

6. *What is the proposed remedial plan? Please be advised that sidewall and bottom confirmation samples are required for closure.*

The remedial plan is to excavate impacted soils to below NMOCD applicable levels. Additional excavation is proposed for the following locations with TPH levels above 1,000 mg/kg; Samples 4, 7, 8/X, and 9. Frontier will excavate additional soil from these locations and collect a closure sample from the bottom of the excavation. If the closure sample is below the NMOCD TPH cleanup level of 1,000 mg/kg, Frontier will use a hand auger to collect an additional analytical sample from two (2) feet below the bottom closure sample.

Once closure samples confirm that contaminants have been removed to below NMOCD levels (600 mg/kg for chlorides, 1,000 mg/kg TPH), the area will be backfilled. As this area is within a roadway, the backfilled area will be compacted to ensure structural stability of the roadway. No seeding will take place within the areas required for use as roadways. Frontier will seed the bar ditch and road shoulder as required.

7. *NMSLO may have differing requirements for the revegetation plan.*

The proposed seed mixture and application rates for the bar ditch and road shoulder are included below:

Table 1 – Proposed Seed Mix and Application Rates

Common Name	Scientific Name	Pounds of Pure Live Seed per Acre
Sand Bluestem	Anthropogo hallii	0.5
Little Bluestem	Schizachyrium scoparium	0.5
Sideoats grama	Bouteloua curtipendula	1.5
Sand Dropseed	Sporobolus cryptandrus	0.5
Spike Dropseed	S. contrandus	0.5
Mesa Dropseed	S. flexuosus	0.5
Plains Bristlegrass	Sentaria macrostachya	2.0
Desert or Scarlket Globermallow	Sphaeralcea ambigua or S. coccinea	0.5
Buckwheat	Eriogonum spp.	1.5

Conclusion

In summary, Frontier has addressed the questions posed in your August 7th, 2017 email and has developed the following tables with proposed sampling locations and depths for NMOCD approval prior to initiating additional excavation work and sampling.

Table 2 – Proposed Additional Excavation and Sampling for Chlorides

Sample ID	Description	Chloride Concentration of Deepest Sample	Proposed Action
Sample #1	Northeast floor	80 mg/kg @ 7 feet bgs	Collect additional sample at 12 feet bgs
Sample #5	Middle floor	480 mg/kg @ 5 feet bgs	Collect additional sample at ten (10) feet bgs
Sample #10	Southwest wall	112 mg/kg @ 4 feet bgs	Collect additional sample at five (5) feet bgs

Table 3 – Proposed Additional Excavation and Sampling for TPH

Sample ID	Description	TPH Concentration	Proposed Action
Sample #4	Northwest wall	2,244 mg/kg @ 2.5 feet bgs	Additional excavation until TPH concentration in closure sample is below 1,000 mg/kg and then additional sample two (2) feet below.
Sample #7	Middle west wall	1,457 mg/kg @2.5 feet bgs	Additional excavation until TPH concentration in closure sample is below 1,000 mg/kg and then additional sample two (2) feet below.
Sample #8/X	Middle south floor	1,730 and 1,210 mg/kg respectively @ 3 feet bgs	Additional excavation until TPH concentration in closure sample is below 1,000 mg/kg and then additional sample two (2) feet below.
Sample #9	Southeast wall	2,361 mg/kg @ 2.5 feet bgs	Additional excavation until TPH concentration in closure sample is below 1,000 mg/kg and then additional sample two (2) feet below.

Should you have any questions regarding this response or proposed additional excavation and sampling, please contact me at (970) 764-6484.

Respectfully Submitted,

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Southern Ute Growth Fund

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