AE Order Number Banner

Report Description

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App Number: pGRL1311953585

1RP - 2912

SIANA OPERATING LLC

7/27/2016

BLM-Carlsbad review of Proposed Site Remediation Work Plan
Siana Operating, LLC - Curry Federal #2 SWD
Sec 22, T23S R34E
[BLM Undesirable Event No NU12188LB]
Proposed plan presented by Sport Environmental Services, PLLC
Plan date January 2, 2013
C-141 date: 8/21/2012; API No 30-025-24003

Review by Randal Pair
Environmental Protection Specialist - Realty Compliance
18 January 2013

1. Page 1 - sample collection.

Please revise text to include a statement of soil depths represented by the samples. Randal Pair (BLM) was present during some of the sample collection, but does not remember how the samples were collected; and this document may be reviewed by others who were not present.

2. Page 1 - area of excavation at sample points SP-1, SP-2, and SP-2b

Please revise to include a proposed diagram of this proposed excavation area; Samples SP-2 and SP-2b are located some distance apart on separate spill flow sub-paths.

3. Pages 1 & 2 - areas not proposed for excavation.

The comparison of field titrations for chloride as compared to lab analysis (as presented on pages 3 & 4) show a disappointing level of accuracy obtained by the field titration. Only one field value was close to the lab value (Sample SP-2); all other lab values were significantly higher than the field values. Lab values range from 98% to 206% of the field values. Even discarding sample SP-2b (206%) as some sort of anomaly, the other five value comparisons show that the lab value averaged 127% of the field value. See comparison table at bottom of these comments.

Given this lack of field accuracy, two samples with relatively high field values indicate additional areas that probably should be remediated. If adjusted for the 1.27 correction factor, Samples SP-10 and PP-1 would probably exceed 1000 ppm chloride if they had been sent to the lab. Sample SP-10, at 956 ppm field value, was so close to the action level that I am surprised it was not sent to the lab.

Please revise the proposed remediation plan to either (1) include additional remediation areas at the locations of samples SP-10 and PP-1, or (2) provide additional sampling with lab analyses for those two areas, showing them to be below the 1000 ppm level by lab analysis.

4. Page 2 - confirmation samples at edges/bottom of excavated area (first bullet).

The inaccuracy of the field titrations also raises doubts about the use of field titrations for confirmation of removal of chlorides. BLM requests lab analysis on all confirmation samples where the field titration value is above 850-ppm chloride.

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5. Page 2 - proposed treatment of contaminated soil.

The third bullet proposes that the contaminated soil be blended with nearby native soils to achieve levels in the blend below the 1000 ppm action level.

This proposal is not acceptable to BLM. The solution to pollution is **NOT** dilution.

Please revise the proposed remediation plan to require that contaminated soils be removed and placed in a licensed landfill facility, and the excavations backfilled with clean fill.

Please note that obtaining fill from BLM-managed lands would also require a permit from the BLM-Carlsbad office.

Comparison table on next page

Comparison table

	Sample ID	Field Titration Chloride Conc. ppm	Lab Chloride ppm	Lab result as Percentage of Field result	Borderline field analysis multiplied by mean error
SP-1	SP-1-001	2912	4280	147	
SP-2	SP-2-001	1716	1690	98	
SP-2b	SP-2b-001	1556	3210	206	
SP-3	SP-3-001	<112			
SP-3b	SP-3b-001	<112			
SP-4	SP-4-001	<112			
SP-5	SP-5-001	304			
SP-6	SP-6-001	304			
SP-7	SP-7-001	112			
SP-8	SP-8-001	336			
SP-9	SP-9-001	1116	1820	163	
SP-10	SP-10-001	956			956 x 1.27 = 1214
SP-11	SP-11-001	304			
SP-12	SP-12-001	<112			
SP-13	SP-13-001	240			
PP-1	PP-1-001	884			884 x 1.27 = 1123
PP-2	PP-2-001	2536	2730	108	
PP-3	PP-3-001	336			
PP-4	PP-4-001	2640	3120	118	

Omit Sample SP-2b-001 as an anomaly. Mean of remaining errors (147+98+163+108+118/5)
is 127% or 1.27-times the field value.

End of RPair review