



SPORT ENVIRONMENTAL SERVICES, PLLC

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Business: 432.683.1100 Fax: 888.500.0622

October 22, 2012

HOBBS OCD

OCT 30 2012

Mr. Geoffrey R. Leking, Environmental Engineer
State of New Mexico
Oil conservation Division, District 1
1625 N. French Drive
Hobbs, New Mexico 88240

RECEIVED

Mr. Legion Brumley, Realty Compliance
U.S. Department of the Interior
Bureau of Land Management
620 East Greene
Carlsbad, NM 88220

approved
Geoffrey Leking
Environmental Specialist
NMOC-DIST 1
11/01/12

Re: **RELEASE SITE – DELINEATION SAMPLING PLAN**
Siana Oil and Gas, Co., LLC
Curry Federal #2 SWD
Section 22, T-23-S, R-34-E
Lea County, New Mexico

Dear Gentlemen,

Siana Oil and Gas Co., LLC reported a release at the Curry Federal #2 SWD location. The spill report indicates that during the night of August 17, 2012 an estimated 1,400 bbls of disposal fluids (produced water with 1-2% skim oil) was released. The spill was immediately isolated and vacuum trucks were used to remove all pooled standing fluid and 1,100 bbls were recovered, resulting in a loss of approximately 300 bbl of disposal fluids.

Due to the terrain at the site, the release created two spill paths. The first spill path ran east off location into a closed caliche pit adjacent to the location resulting in a pooling of fluids within a depression in the northwest corner of the pit. The second spill path went north downhill resulting in a disturbed area approximately 2000' in length to the north along an overhead power line right of way. Initial release clean-up measures resulted in the removal of 732 cubic yards of contaminated soils for disposition at Sundance Services in Eunice, New Mexico.

Sport Environmental Services, PLLC (hereafter referred to as Sport Environmental) has been retained by Siana Oil and Gas Co., LLC to perform delineation sampling at Siana's Curry Federal #2 SWD release location. In order to perform the initial delineation of the site and determine the extent of the residual spill areas, the site will be divided into two distinct areas:

- 1) Area #1 – Spill Path (north of well pad location); and
- 2) Area #3 – BLM Caliche Pit (east of well pad location)

Each area will be delineated separately due to the unique nature of each area. The area specific delineation approach is described herein and sample locations are depicted on the attached aerial photograph. A GeoProbe environmental coring device will be utilized to vertically and horizontally delineate each area of concern. The actual number of samples will be determined in the field through chloride titration results. Approximately 30% of the total number of samples field analyzed will be sent to a certified laboratory under proper chain-of-custody procedures to confirm Cl titration results obtained in the field. Please refer to Appendices A and B for an Equipment List and Field Titration Procedures, respectively.

APR 29 2013

Area #1: Spill Path

The Spill Path is approximately 2,000 feet in length, extending north of the well pad. Sport Environmental will take soil samples approximately every 150 lineal feet for a total of fourteen (14) samples along the spill path. Field titrations will be performed on all the samples to determine the extent of the spill. The Spill Path area will be horizontally and vertically sampled with the use of the GeoProbe environmental coring device, paying particular attention to the accumulation area at the end of the spill path.

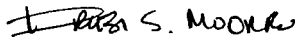
Area #2: BLM Caliche Pit

The BLM Caliche Pit area affected by the spill will be horizontally and vertically delineated. Approximately four (4) soil samples will be analyzed for chlorides using the field titration method. The Spill Path area will be horizontally and vertically sampled with the use of the GeoProbe environmental coring device, paying particular attention to the accumulation area at the end of the spill path.

Prior to delineation activities Sport Environmental will perform a one-call to determine if any underground obstructions are present prior to sampling. Once the 48-hour notification period has lapsed and the area is cleared, Sport Environmental will proceed with the delineation sampling. Forty-eight hour notification will also be provided to both the BLM and NMOCD offices, as required.

If you have any questions or comments, please feel free to contact me at my office (432-683-1100) or on my cell phone (432-553-8555).

Sincerely,



Debi Sport Moore, M.E., R.E.P.A.
President

Cc via email: Mr. Matt Doffer
Siana Oil and Gas Co., LLC
601 N. Marienfeld, Suite 300
Midland, Texas 79701

Mr. Paul J. Muthig, PG
Muthig Environmental, Inc.
100 East Springs Road
Columbia, SC 29223

Mr. Dale Reed
Travelers – Oil & Gas Claims
3245 Whitcomb Road
Casper, WY 82601

APPENDIX A – Equipment List

The following is a list of equipment Sport Environmental will utilize to delineate the three distinct areas affected by the spill.

- Field Chloride Titration Kit
- Trace Analysis - 4oz. Sample Jars
- Nitrile Gloves
- Shovel
- Sampling Bucket
- Soil Auger
- Decontamination Materials
- Ice Chest with Ice for Samples
- GeoProbe Model 540UD – a hydraulically powered soil probing unit equipped with a 10-gallon (38 liter) diesel tank, 14-gallon (53 liter) hydraulic oil reservoir, and integral hydraulic oil cooler. It requires no auxiliary power during probing operations. Powerful 20-hp, water cooled, V-twin engine.
- Additional equipment as necessary to complete job

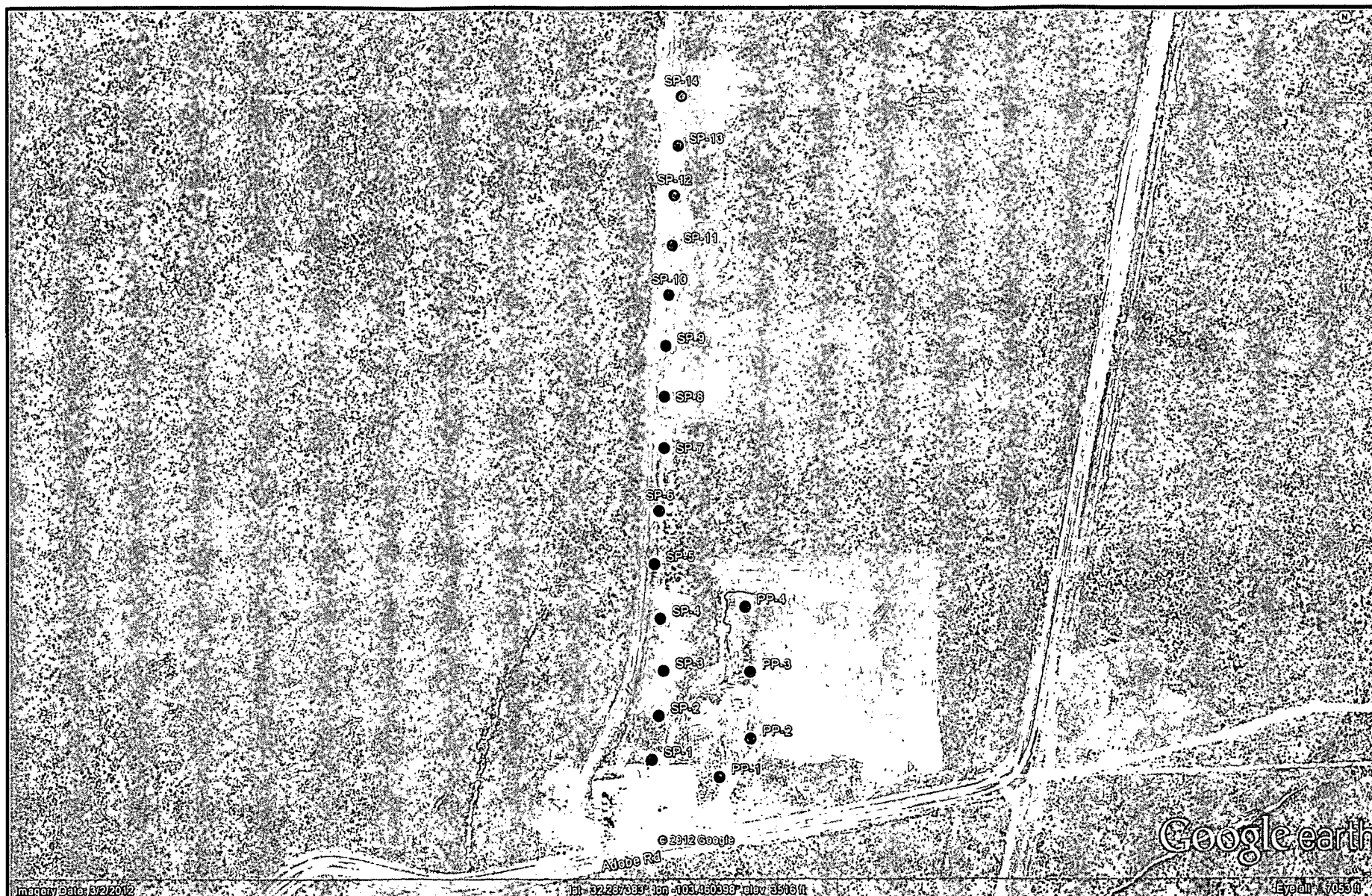
APPENDIX B – Field Titration Procedures

Sampling and Preparation Procedure:

Collect a soil sample from the surface or from a core barrel. Remove rocks and gravel larger than small pebbles. Weigh 25 grams of soil and place in a wide-mouth bottle. Then add 100mL of De-ionized water to the soil and shake vigorously for several minutes (no longer than 5 minutes). Let the sample settle for a minute or two to allow heavy particles to drop out of solution. Fold and place filter paper in the funnel and decant sample into filter. Collect the filtrate into a clean 40mL vial. Only about ½ inch of clear filtrate is needed for procedure.

Chloride Determination:

Place a high or low range Quantab strip in the vial (replace the cap on the Quantab Bottle to prevent moisture from degrading tabs). Wait until the yellow strip at the top of the tab turns blue/black. Read the value on the tabs and use the chart on the back of the corresponding bottle to get the chloride value of each strip. Multiply the chart value by four (4) to get the concentration of chloride in the soil in ppm (mg/kg). Record the value in the field book.



Siana Operating, LLC
Curry Federal #2 SWD Release
Section 22, T23S, R34E
Lea County, New Mexico

**Proposed Delineation
 Sampling Plan**

Author
 mlb

Date
 10/3/2012