



Rover SFPRR #15

March 27, 2018

Timeline

1. Vandalism Discovered 9/5/17
2. Emergency Response 9/5 thru 9/7/17
3. Excavated Soil Disposed at Landfill 9/7/17
4. Soil Assessment Initiated 10/5/17
5. Proposed Plan for Remediation Current



INFORMATION ONLY



Release from Tank



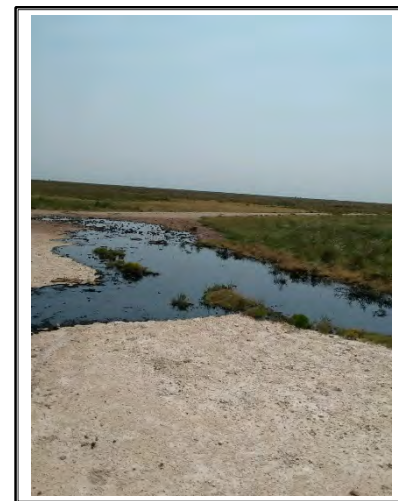
Release Source



Shed Area



Bermed Area



Turn-Around Area

Photographs taken 9/5/17 of
recently-released oily liquid



Response Action



Equipment Area
after scrapping



Shed Area
after scrapping



Turn-Around Area
after scrapping

Photographs taken 9/7/17
after soil was scrapped of staining



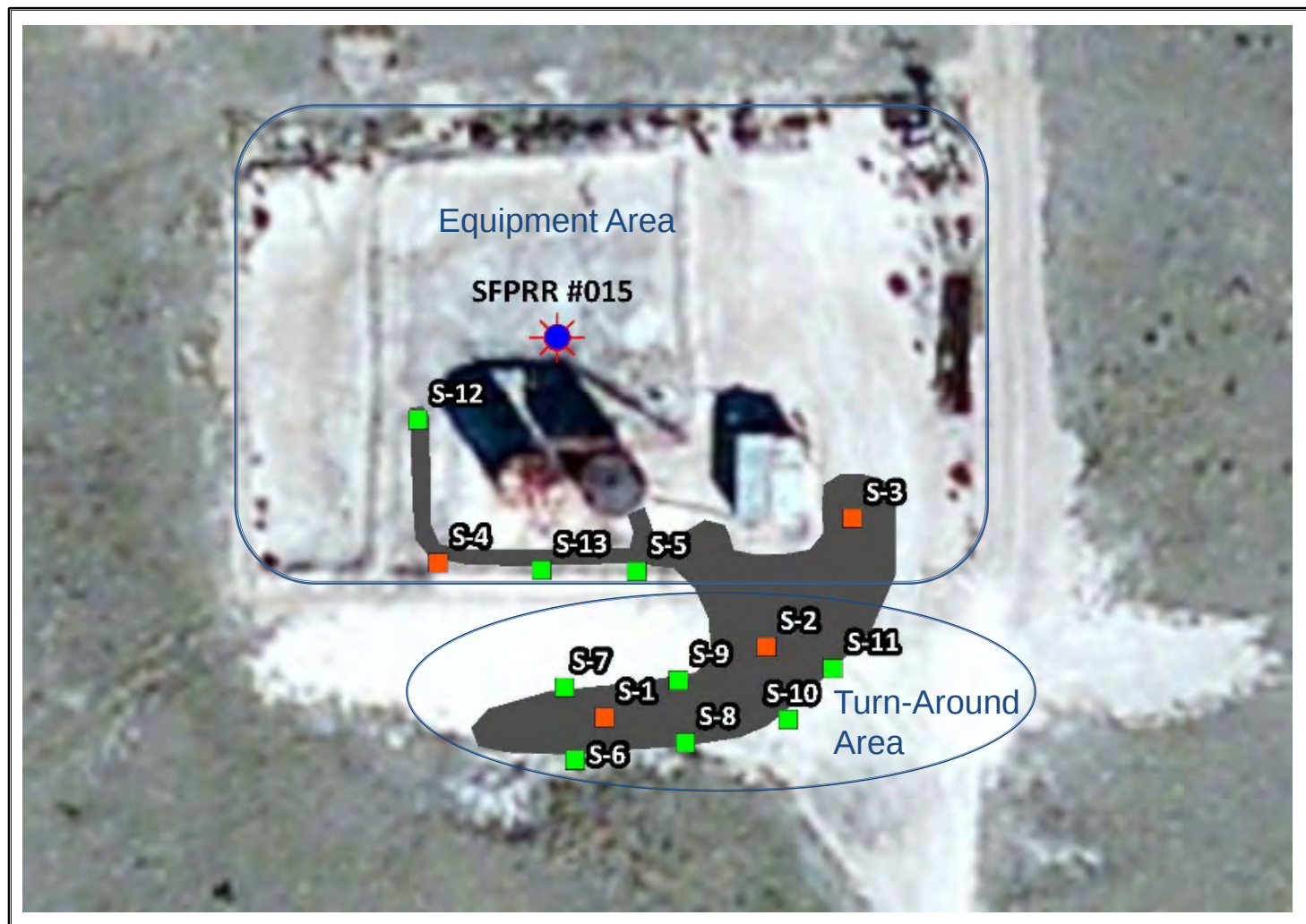
Soil Sampling



Backhoe used to complete
test trenches up to 5 ft Deep



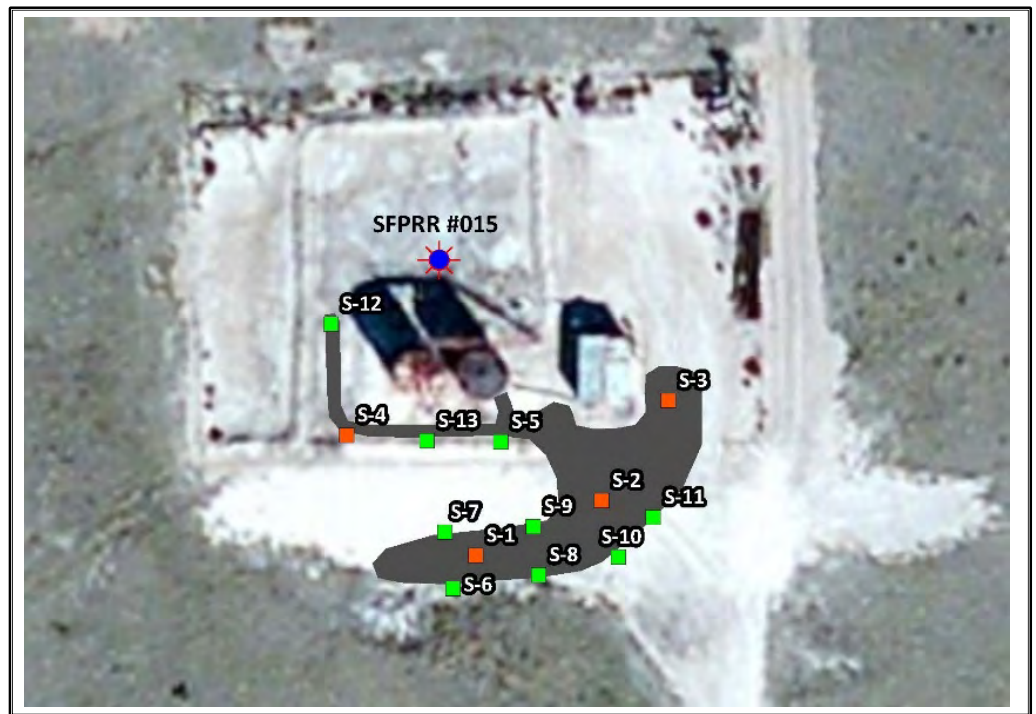
Soil Sampling Locations



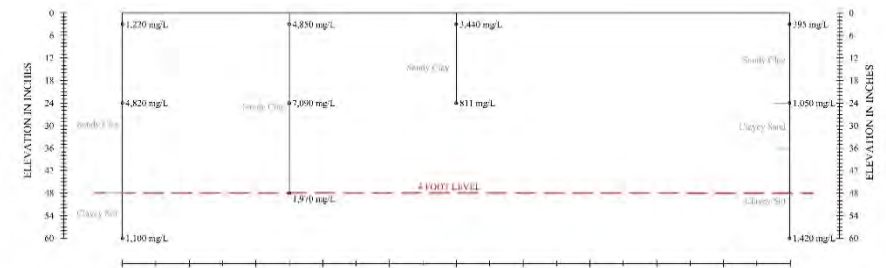
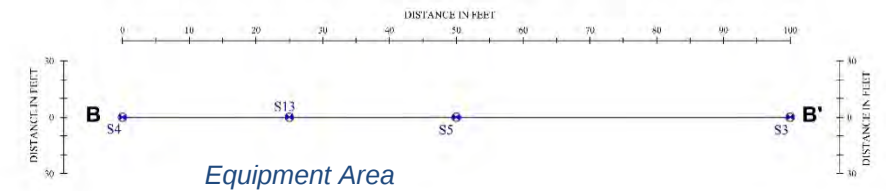
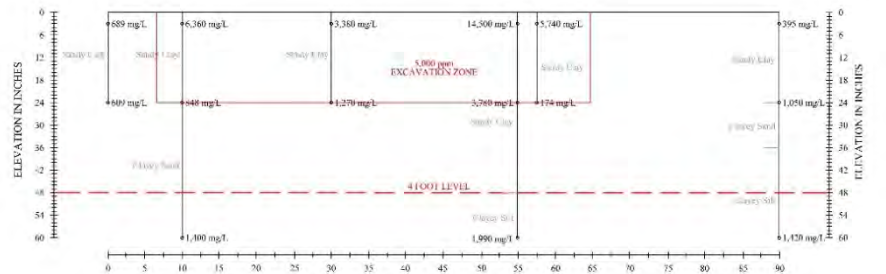
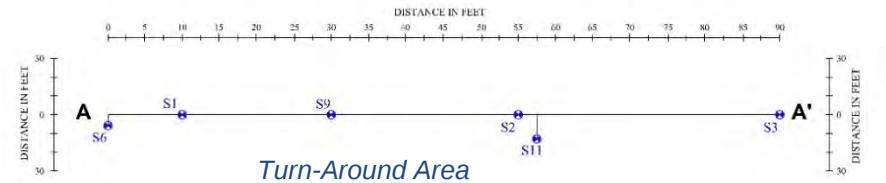
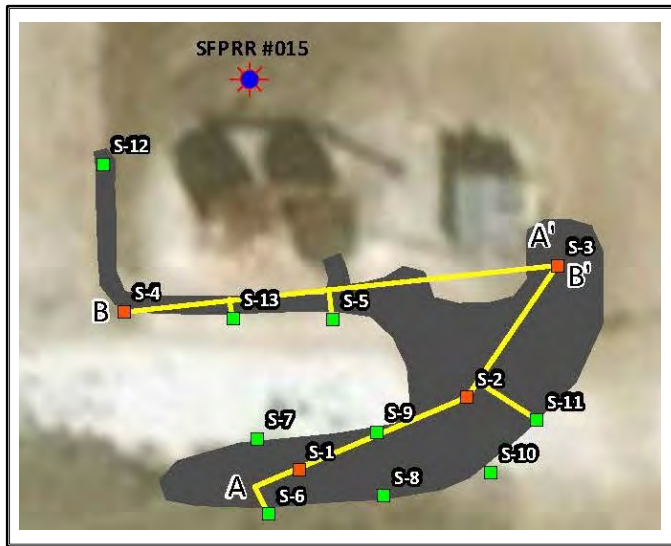


Soil Sampling Results

1. Max. shallow chloride concentration - 14,000 mg/kg (S2, upper 3 inches)
2. Max. deeper chloride concentration – 1,990 mg/kg (S2, 5 feet)
3. TPH fractions exceedance in one sample (S13, upper 3 inches)
4. No BTEX exceedances

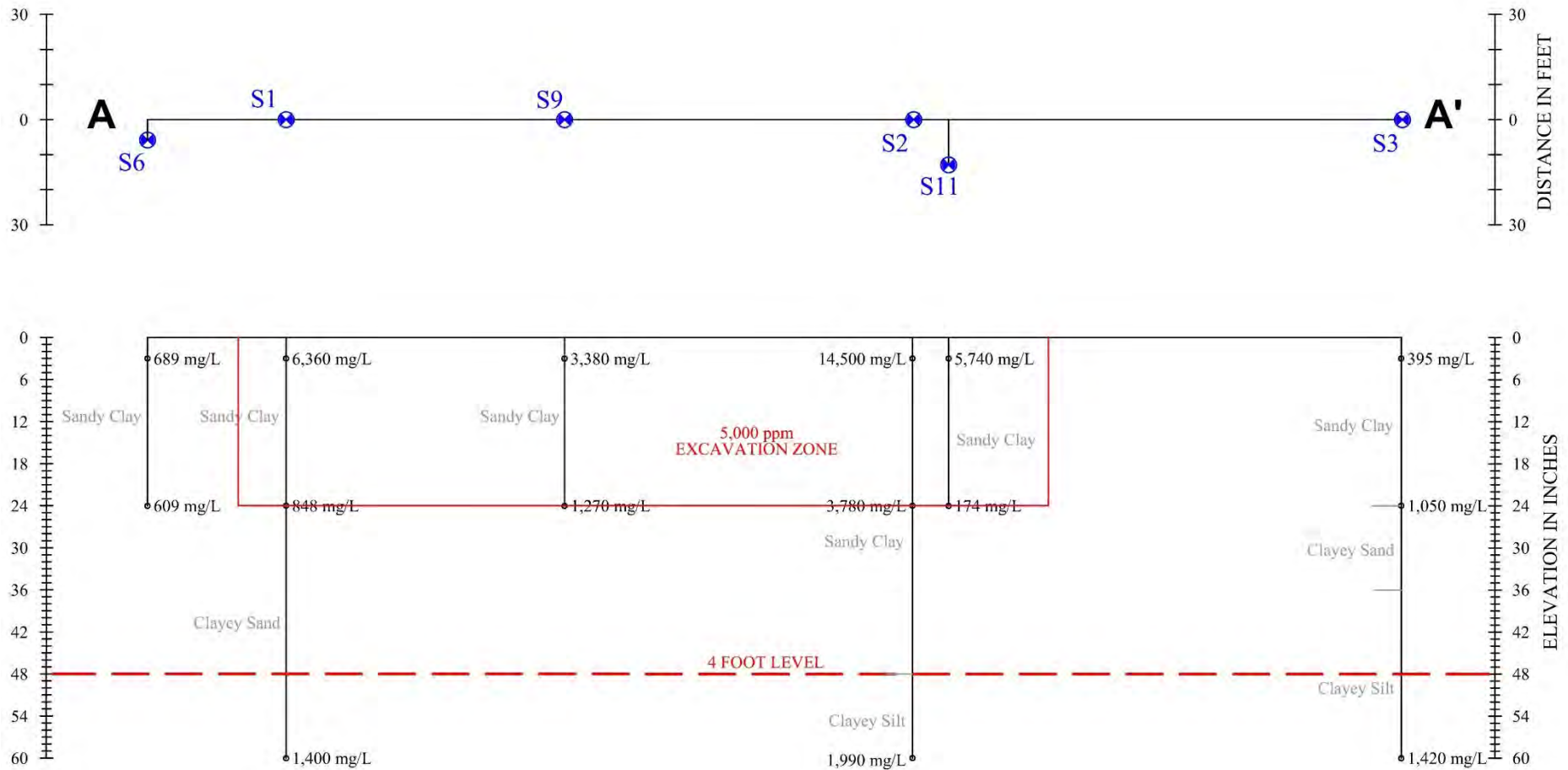


Cross-Sections



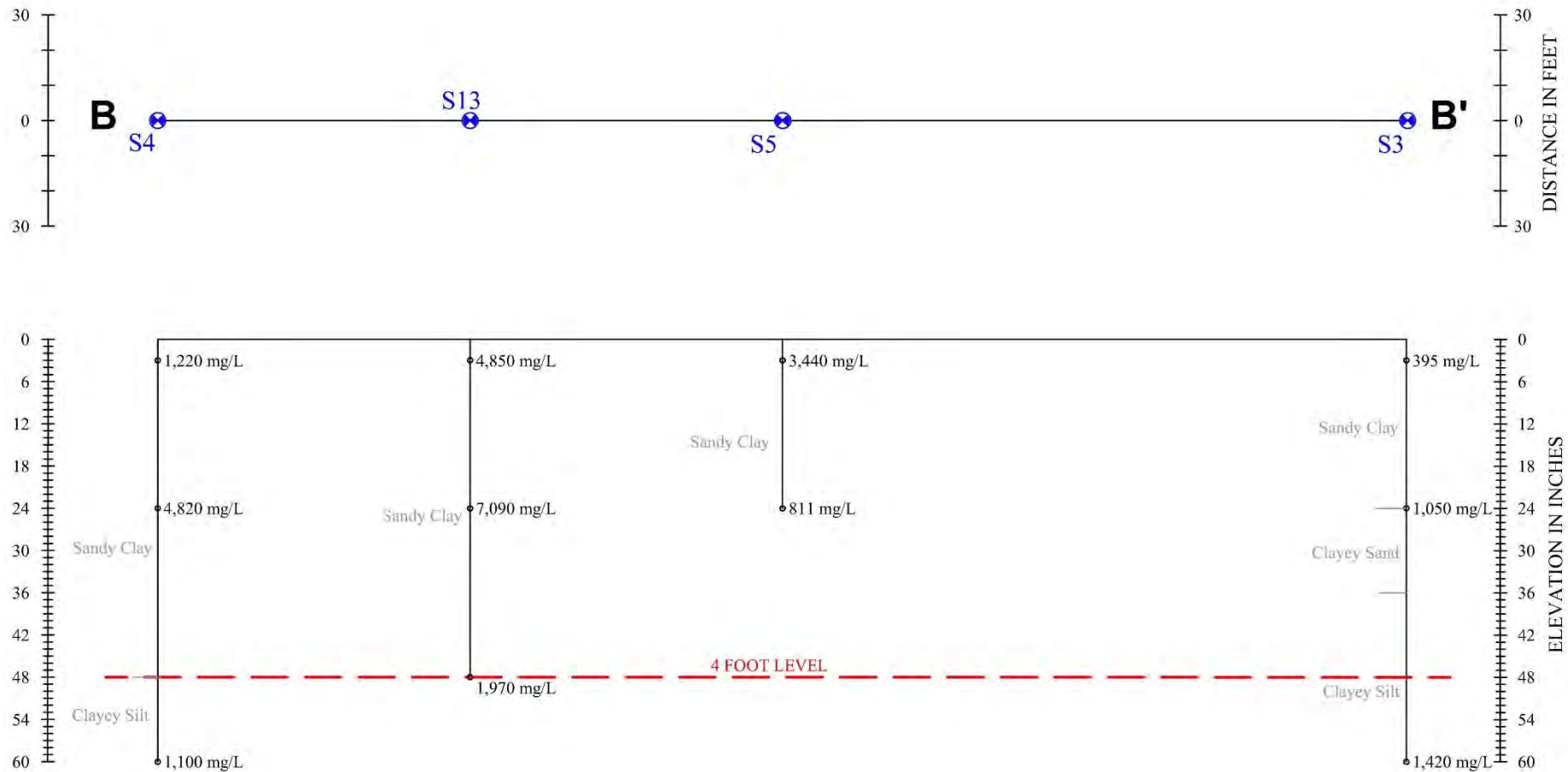


Turn-Around Area (Expanded View)





Equipment Area (Expanded View)



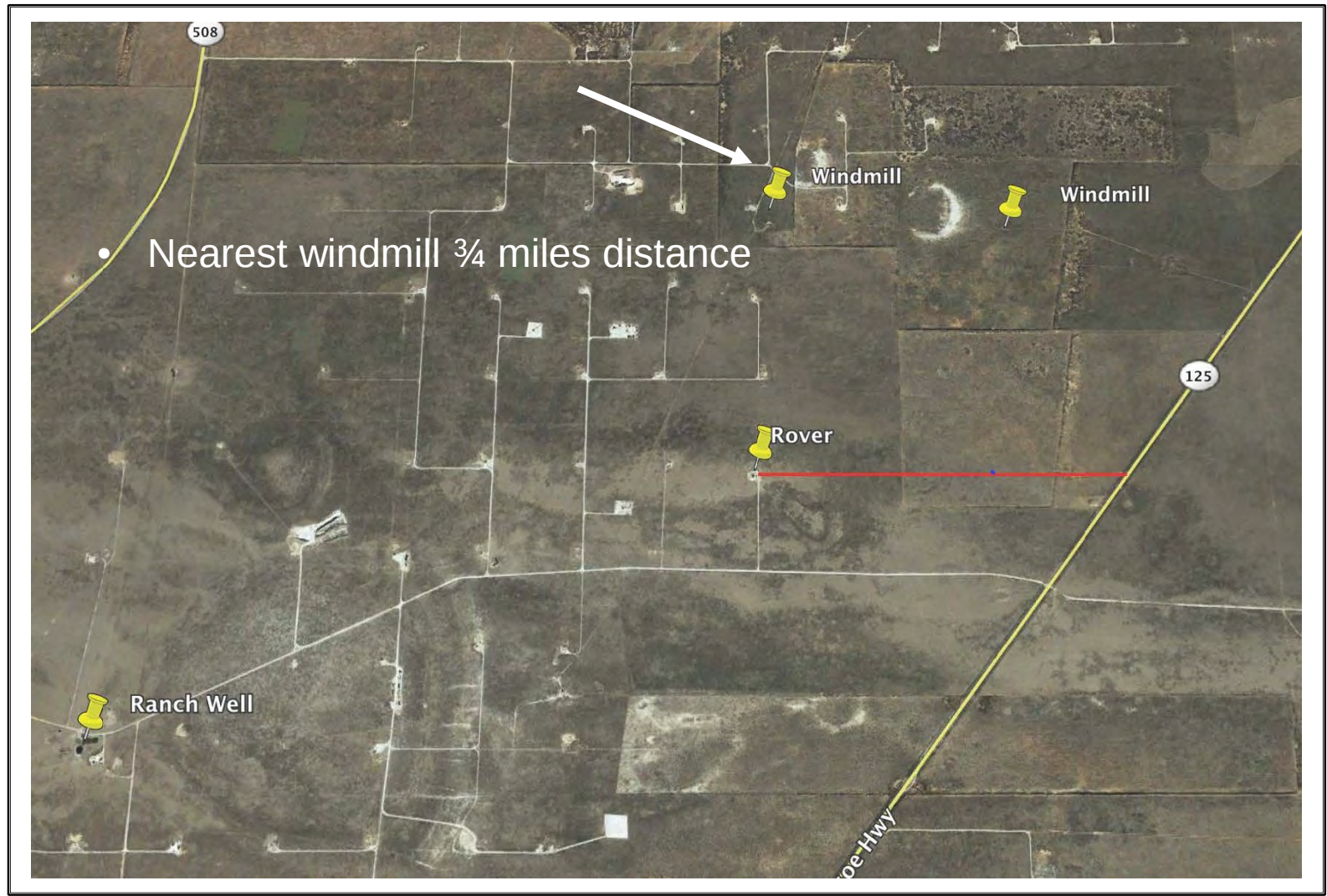


Proposed Workplan

1. Excavate soil in Turn-Around Area to 4 feet and place liner
2. Dispose of soil with chlorides >5,000 mg/kg
3. Blend remaining soil in Turn-Around Area with clean backfill to 600 mg/kg chlorides
4. Replace caliche surface cover in Turn-Around Area
5. Defer excavation in Equipment Area until decommissioning



Area of Review





SFPRR #015
Unit B, SEC.34-T9S-R37E

Lat: 33.495683
Lon: -103.138998

Lat: 33° 29' 44.4594" N
Lon: 103° 8' 20.3926" W



Legend

- Background Sample
- Sample Location (2' deep)
- Sample Location (5' deep)
- Tank Release (0.07 acres)

Imagery: 2016 NAIP, USDA FSA, 6/17/2016.



Rover Operating, LLC
Dallas, Texas

Site Investigation Report

Sample Location Map

Lea County



Drawn: CAL	Checked: RTK
Date: 10/24/17	Approved: KEN
Dwg. No.: B15429-02	Figure 3

Soil Analytical Summary
Rover Operating, LLC
SFPRR #15

SAMPLE ID	TPH (GC/FID) LOW FRACTION	C10-C28 DIESEL RANGE	C28-C40 OIL RANGE	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES, TOTAL	CHLORIDE	TOTAL SOLIDS
OCD Standard	5000 mg/kg			10 mg/kg Benzene, 50 mg/kg BTEX				600 mg/kg*	Not Applicable
BG-1 3"	<0.122	<4.88 J3	<4.88	<0.00305	<0.0061	<0.00305	<0.00915	44.8	82
BG-1 24"	<0.108	<4.32 J3	4.58	<0.0027	<0.0054	<0.0027	<0.0081	47.9	92.6
BG-2 3"	<0.119	<4.77 J3	6.66	<0.00298	<0.00596	<0.00298	<0.00895	45.3	83.8
BG-2 24"	<0.107	<4.3 J3	<4.3	<0.00269	<0.00537	<0.00269	<0.00806	45.5	93.1
S-1 3"	<0.115	15.6 J3	9.65	<0.00287	<0.00573	0.00931	0.00898 B	6360	87.2
S-1 3" DUP	<0.115	7.46 J3	<4.59	<0.00287	<0.00574	0.00629	<0.00861	2730	87.1
S-1 24"	<0.116	<4.64 J3	<4.64	<0.0029	<0.0058	<0.0029	<0.0087	848	86.2
S-1 5'	<0.114	<4.55	<4.55	<0.00284	<0.00568	<0.00284	<0.00852	1400	88
S-1 5'DUP	<0.121	<4.83 J3	<4.83	<0.00302	<0.00603	<0.00302	<0.00905	796	82.9
S-2 3"	<0.112	172 J3	307	<0.0028	<0.0056	<0.0028	<0.00839	14500	89.4
S-2 24"	<0.113	<4.52 J3	<4.52	<0.00283	<0.00565	<0.00283	<0.00848	3780	88.5
S-2 5'	<0.121	<4.83 J3	<4.83	<0.00302	<0.00603	<0.00302	<0.00905	1990	82.9
S-3 3"	<0.12	<4.8	<4.8	<0.003	<0.006	<0.003	<0.009	395	83.3
S-3 24"	<0.119	<4.75	<4.75	<0.00297	<0.00594	<0.00297	<0.00892	1050	84.1
S-3 5'	<0.117	<4.66	<4.66	<0.00291	<0.00583	<0.00291	<0.00874	1420	85.8
S-4 3"	<0.23	<5.17	<5.17	<0.00323	<0.00646	<0.00323	<0.00968	1220	77.4
S-4 24"	<0.116	269	577	<0.00289	<0.00579	<0.00289	<0.00868	4820	86.4
S-4 5'	<0.14	<5.6	<5.6	<0.0035	<0.007	<0.0035	<0.0105	1100	71.4
S-5 3"	<0.117	503	1010	<0.00292	<0.00584	0.00391	0.0173	3440	85.6
S-5 24"	<0.114	<4.55	<4.55	<0.00284	<0.00569	<0.00284	<0.00853	811	87.9
S-6 3"	<0.115	<4.59	8	<0.00287	<0.00574	<0.00287	<0.00861	689	87.1
S-6 24"	<0.113	<4.54	<4.54	<0.00284	<0.00567	<0.00284	<0.00851	609	88.2
S-7 3"	<0.121	<4.86 J3	<4.86	<0.00304	<0.00607	<0.00304	<0.00911	618	82.3
S-7 24"	<0.12	<4.81 J3	<4.81	<0.00301	<0.00602	<0.00301	<0.00902	346	83.1
S-8 3"	<0.115	<4.59 J3	<4.59	<0.00287	<0.00574	<0.00287	<0.00861	598	87.1
S-8 24"	<0.115	<4.62 J3	<4.62	<0.00289	<0.00577	<0.00289	<0.00866	402	86.6
S-8 24" DUP	<0.118	<4.7 J3	<4.7	<0.00294	<0.00588	<0.00294	<0.00882	570	85.1
S-9 3"	<0.121	<4.86 J3	<4.86	<0.00304	<0.00607	<0.00304	<0.00911	3380	82.4
S-9 24"	<0.113	<4.5 J3	<4.5	<0.00281	<0.00563	<0.00281	<0.00844	1270	88.8
S-10 3"	<0.108 J3	17.5	23.4	<0.0027	<0.00539	0.00309	0.0172	2800	92.8
S-10 24"	<0.117	<4.69	<4.69	<0.00293	<0.00586	<0.00293	<0.00878	3590	85.4
S-11 3"	<0.109	<4.38	<4.38	<0.00274	<0.00547	<0.00274	<0.00821	5740	91.3
S-11 24"	<0.135	<5.39	<5.39	<0.00337	<0.00674	<0.00337	<0.0101	174	74.1
S-11 24" DUP	<0.121	<4.85	<4.85	<0.00303	<0.00606	<0.00303	<0.00909	196	82.5
S-12 3"	<0.121	<4.84	<4.84	<0.00303	<0.00606	<0.00303	<0.00908	6090	82.6
S-12 24"	<0.138	15.7	16.6	<0.00345	<0.0069	<0.00345	<0.0103	2310	72.5
S-13 3"	2.7	22200	11800	<0.00304	<0.00609	<0.00304	<0.00913	4850	82.2
S-13 24"	<0.12	5.46	<4.79	<0.003	<0.00599	<0.003	<0.00899	7090	83.5
S-13A 4'	<0.114	<4.55	<4.55	<0.00284	<0.00569	<0.00284	<0.00853	1970	87.9

Note:

Samples collected on 10/05/2017 and 1/30/18

All units reported in milligram/kilogram (mg/kg)

Standards based Guidelines for Remediation of Leaks Spills and Releases (August 13, 1993) New Mexico Oil of Conservation Division

(NMOCD) J3 - The associated batch QC was outside the established quality control range for precision

*The 600 mg/kg standard is based on verbal communication with NMOCD District 1



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Rover Operating, LLC
Dallas, Texas

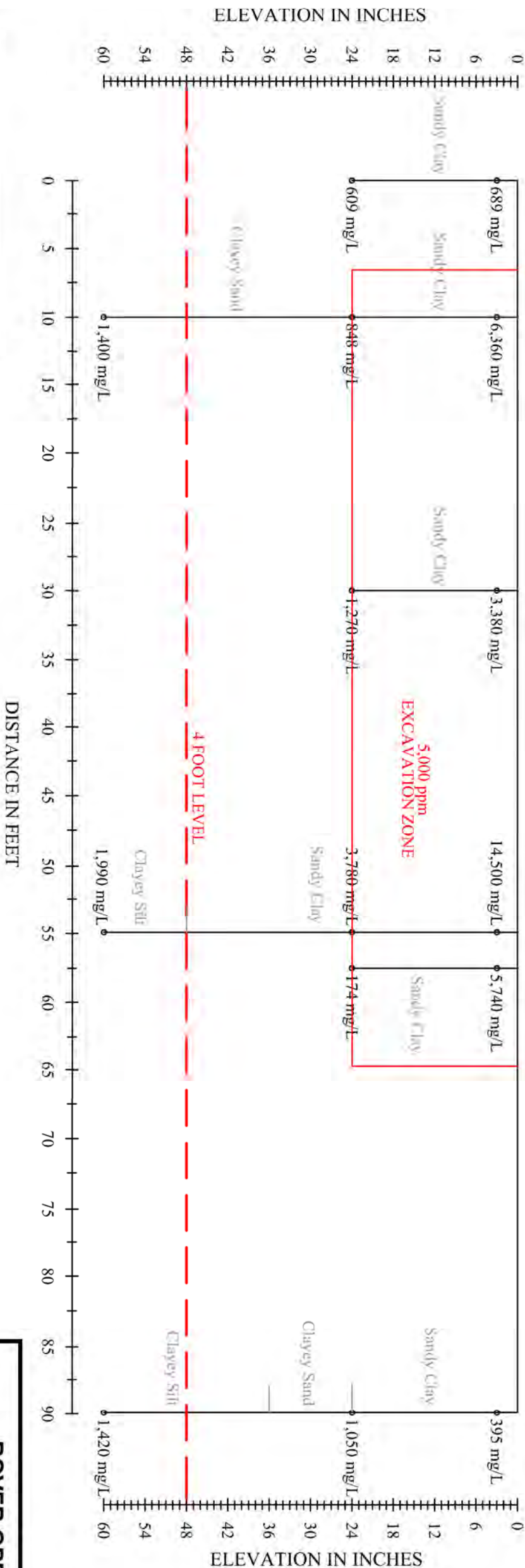
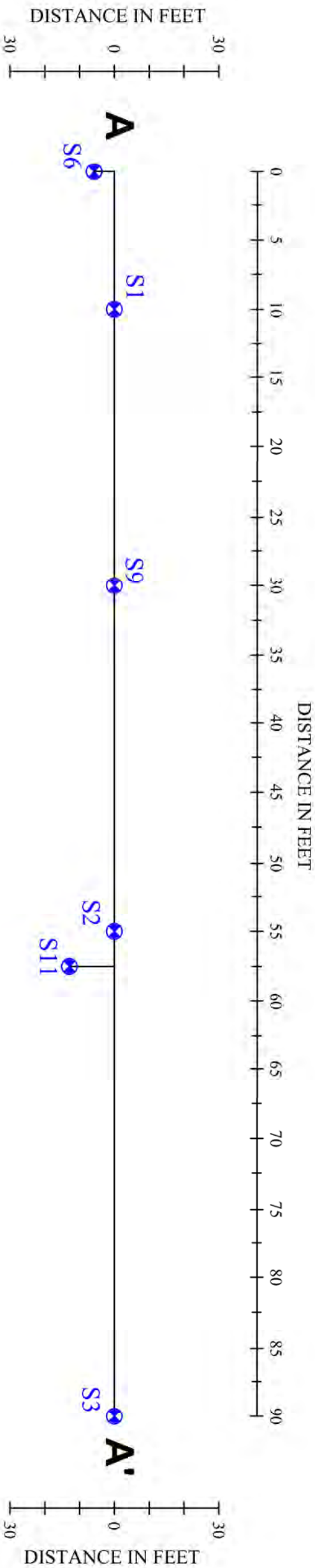
Site Investigation Report

Chloride Concentrations
Cross Section Location Map

Lea County



Drawn: KAC	Checked: HFM
Date: 01/19/18	Approved: HFM
Dwg. No.: B15429-06	Figure 3



LEGEND

● Soil Sample Location

848 mg/L Chloride Concentration

ROVER OPERATING, LLC

SITE INVESTIGATION REPORT

CHLORIDE CONCENTRATIONS
CROSS-SECTION A-A'

LEA COUNTY, NEW MEXICO

Drawn: KAC/ACAD2018

Checked: JCR

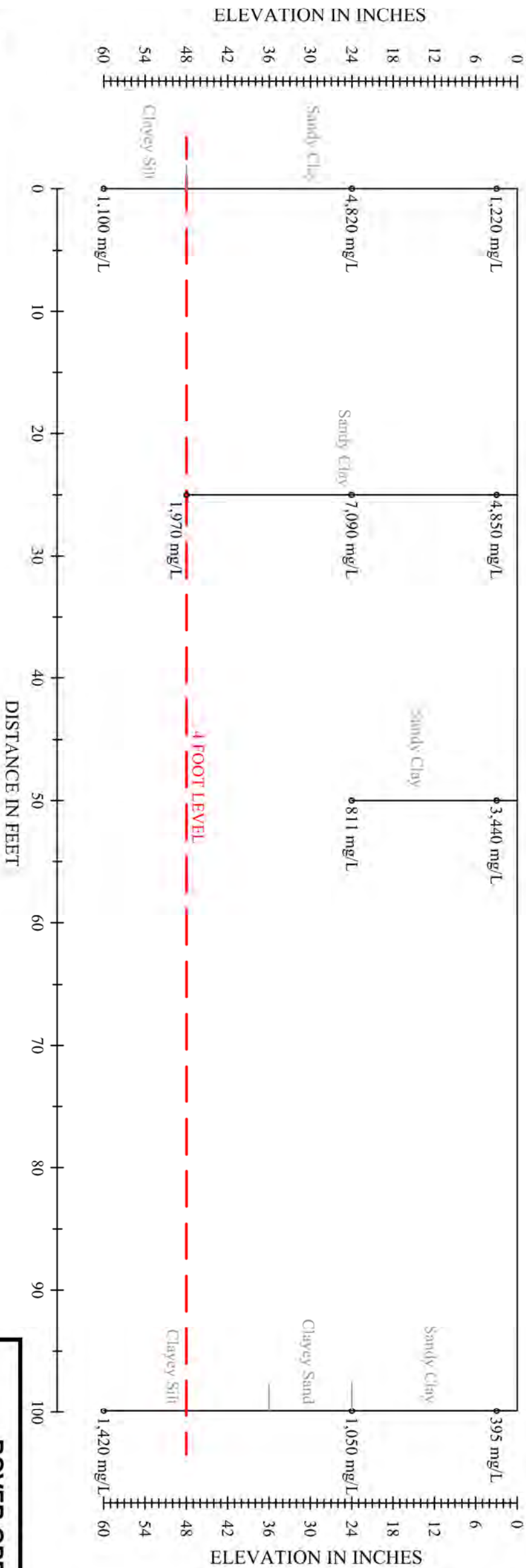
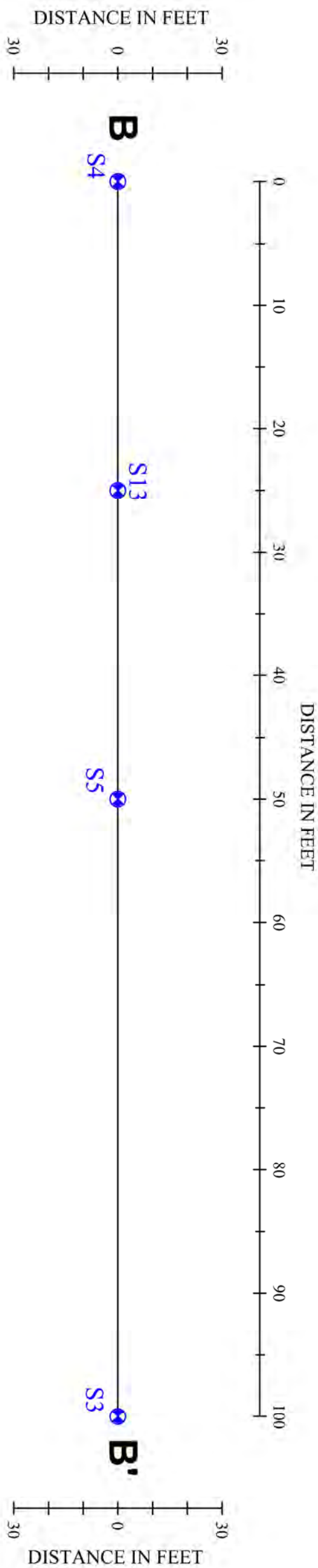
Approved: HFM

Date: 02/08/2018

Dwg. No.: 15429-01

CK ASSOCIATES
Environmental Consultants

FIGURE 1



LEGEND

● Soil Sample Location

○ 848 mg/L Chloride Concentration

ROVER OPERATING, LLC

SITE INVESTIGATION REPORT

CHLORIDE CONCENTRATIONS
CROSS-SECTION B-B'

LEA COUNTY, NEW MEXICO

Drawn: KAC/ACAD2018

Checked: JCR

Approved: HFM

Date: 02/19/2018

Dwg. No.: 15429-02

CK ASSOCIATES
Environmental Consultants

FIGURE 2