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By Alameda County Environmental Health 2:13 pm, Jul 20, 2016

July 20, 2016

Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Attention: Karel Detterman

Subject: Report of Soil Remediation and Soil Sampling Activities
Niles Canyon Railway, Sunol Depot
6 Kilkare Road, Sunol, CA 94586

Ladies and Gentlemen:

Attached please find a copy of the **Report of Soil Remediation and Soil Sampling Activities** prepared by Gribi Associates. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Very truly yours,

Douglas W. Debs
Hazmat Manager
Pacific Locomotive Association DBA Niles Canyon Railway
mailing address: P.O. Box 515, Sunol, CA 94586-0515
cell 650-704-1487



July 20, 2016

Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Attention: Karel Detterman, PG

Subject: Report of Soil Remediation and Soil Sampling Activities
Niles Canyon Railway, Sunol Depot
6 Kilkare Road, Sunol, California

Ladies and Gentlemen:

Gribi Associates is pleased to submit this report on behalf of Niles Canyon Railway providing results of soil remediation and sampling of oil-impacted soil along a rail track area at the Niles Canyon Railway, Sunol Depot site in Sunol, California (Site)(see Figure 1 and Figure 2).

1.0 BACKGROUND

The Niles Canyon Railway is operated by the Pacific Locomotive Association and is classified as a museum railroad. The current railroad tracks present at the Site were laid in approximately 1987, and the railroad currently provides tourist rides between Sunol and Niles in Fremont.

From June 7 to June 14, 2014, oil from a steam locomotive dripped onto the railroad tracks immediately north of the Niles Canyon Railway, Sunol Depot. The oil consisted primarily of No 6 Fuel Oil, with a minor amount of Chevron Journal Bearing Oil. The volume of the spill was estimated to be less than 5 gallons.

On July 1, 2014, the Pacific Locomotive Association (dba Niles Canyon Railway) submitted a brief remediation workplan for the Site proposing the following tasks:

1. Document spill area with photos. (Inspector Dale Klettke has already done this for ACDEH.)
2. Remove surface oil with oil-sorbent pads. (*Steps 1 and 2 have been done, per e-mail authorization 4:21pm June 27 2014 from Paresh Katri, ACDEH.*)
3. Remove oil-soaked ballast (rocks and dirt) around affected railroad ties. Dig out with shovel sand/or power equipment, if necessary.
4. Put oil-soaked rocks & dirt in 55-gallon open-top steel drum. Label as "Solid Oily Waste" hazardous waste. Seal drum. (Our hazwaste transportation & disposal contractor is Safety-Kleen.)
5. Document with photos.
6. Backfill holes with clean ballast (crushed rock, ~2" average size).
7. Tamp ballast down against ties for good track support.
8. Final photo documentation.

This remediation plan was approved by Alameda County Environmental Health on July 9, 2014.

2.0 DESCRIPTION OF REMEDIATION AND VERIFICATION SAMPLING ACTIVITIES AND RESULTS

2.1 Description of Remediation Activities

On July 30, 2014, Mr. Jim Gribi, PG, of Gribi Associates was onsite to document remediation activities and conduct verification soil sampling. Site photographs are included in Attachment A.

The spill area extended approximately 46 feet along the railroad tracks. The rail ties are spaced at two-foot intervals, with approximately one foot of ballast between the ties. Thus, the spill area comprised ballast between approximately 23 railroad ties. For the easternmost three ties, it was noted that the ballast rock extended from surface downward below the railroad ties, whereas the remaining 20 ties had a surface layer of primarily dirt with some ballast down to the bottom of the ties, followed by ballast rock below the ties.

Volunteers for the Niles Canyon Railway removed soil and ballast to the extent possible using a jackhammer and shovels. Removed soil, which amounted to four filled drums, was shoveled directly into 55-gallon DOT-approved drums, which were labelled and moved to a railroad

storage yard. The four drums were subsequently disposed of at Clean Harbors in San Jose. A copy of the disposal manifest is included in Attachment B.

In late November 2015, the area between the railroad track and the depot building was raised six to eight inches and paved with asphalt. Also, to keep the new fill and asphalt from slumping onto the track, a partly-buried treated-timber retaining wall was installed between the track and the raised station platform. This new "station platform" is now level with the top of the rails. The spill site, which was on the adjacent track, was not affected by the new station platform.

2.2 Verification Soil Sampling

Following completion of remediation activities, six soil samples, SS-1 through SS-6, were collected between the railroad ties at approximately 10-foot intervals along the length of the spill area (see Figure 2). Soil samples SS-1 through SS-5 consisted primarily of silty soil with some small ballast rocks. The SS-6 sample consisted entirely of ballast rocks comprising angular 1 to 1-1/2 inch rocks with no dirt or other materials. The silty soils in samples SS-1 through SS-5 exhibited minor staining and moderate hydrocarbon (primarily diesel) odors. The ballast rocks in the SS-6 sample were coated with hydrocarbon staining and exhibited moderate hydrocarbon odors.

The samples were collected at the base of the excavated areas, which amounted to the approximate bottom of the railroad ties, approximately 6 inches below the surface of the railroad track bed. Soil samples were collected in brass sleeves using hand tools. Each brass sleeve was capped, labelled and placed in an iced cooler for transport to the analytical laboratory under formal chain of custody.

The six soil samples were analyzed for the following parameters:

- USEPA 8015C Total Extractable Petroleum Hydrocarbons (TPH as Gas, Diesel, Motor Oil)
- USEPA 8021B Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

All analyses were conducted by Sunstar Labs, a California-certified environmental laboratory, with standard turnaround time on results. Results of laboratory analyses are summarized in Table 1. The laboratory report and chain of custody records are included in Attachment C.

Table 1 SOIL LABORATORY ANALYTICAL RESULTS Niles Canyon Railway, Sunol, California								
Sample ID	Sample Depth	Concentration (milligrams per kilogram, mg/kg)						
		TPH-D	TPH-MO	TPH-G	B	T	E	X
SS-1	0.5 ft	470	2,800	<10	<0.005	<0.005	<0.005	<0.010
SS-2	0.5 ft	600	4,200	<10	<0.005	<0.005	<0.005	<0.010
SS-3	0.5 ft	170	1,300	<10	<0.005	<0.005	<0.005	<0.010
SS-4	0.5 ft	160	910	<10	<0.005	<0.005	<0.005	<0.010
SS-5	0.5 ft	190	1,000	<10	<0.005	<0.005	<0.005	<0.010
SS-6	0.5 ft	1,700	12,000	<10	<0.005	<0.005	<0.005	<0.010
ESL, Leaching to GW		570	NL	770	0.044	2.9	1.4	2.3
ESL, Direct Exposure		1,100	14,000	3,900	1.0	4,600	22	2,400

Table Notes

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-MO = Total Petroleum Hydrocarbons as Motor Oil

TPH-G = Total Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

X = Xylenes

<10 = Not detected above the expressed value

ESL = Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, February 2016 (Rev 3).

2.3 Discussion of Verification Soil Sampling Results

Laboratory analytical results for the six soil samples showed hydrocarbon levels which were generally below both the direct exposure and the leaching to groundwater Environmental Screening Levels (ESLs), except for the SS-6 soil sample. However, the SS-6 sample consisted of ballast rock and, as such, it is not clear that the result for the SS-6 sample is truly representative. According to Sunstar Labs, normal fine-grained soil samples, such as SS-1 through SS-5, are mixed and, to a certain extent, homogenized to get a representative sample for analysis. For a rock sample, such as SS-6, a piece, or a few pieces, are chipped off of the surface of the rock and mechanically ground up to make a fine-grained sample for analysis. In the latter case, with rock, pieces chipped off of the hydrocarbon-stained surface would tend to have a higher concentration of hydrocarbons, by weight, and would not be representative in terms of milligrams contaminant per kilograms of rock matrix.

On August 18, 2014, the draft *Report of Soil Remediation Activities* was submitted to Alameda County Department of Environmental Health (ACEH). On February 6, 2015, ACEH issued a letter providing technical comments relative to the State Water Resources Control Board's *Low Threat Underground Storage Tank Case Closure Policy* (LTCP, 2012) and requesting: (1) An evaluation of Groundwater Media-Specific Criteria relative to stormwater runoff, groundwater flow direction, and preferential migratory pathways/sensitive receptors; and (2) The collection and laboratory analysis of two soil samples (0-5 feet bgs and 5-10 feet bgs) in the vicinity of soil sample SS-2 in order to evaluate the Direct Exposure To Outdoor Air Media-Specific Criteria.

3.0 EVALUATION OF GROUNDWATER MEDIA-SPECIFIC CRITERIA

In accordance with the ACEH letter, Gribi Associates evaluated LTCP Groundwater Media Specific Criteria relative to stormwater runoff, groundwater flow direction, and preferential pathways/sensitive receptors.

- a) Stormwater Runoff: There are no stormwater catch basins or outfalls on the Site or in the site vicinity.
- b) Groundwater Flow Direction: A review of both ACEH and Geotracker databases indicates a generally southwesterly groundwater flow direction in the site vicinity, based on the following data (see Figure 3):
 1. Former Sunol Chevron Station, 11474 Main Street, 850 feet east from Site. Three groundwater measurement events occurred in the early 1990s, two showing a southwesterly flow direction and one showing a northwesterly flow direction. Groundwater depth was approximately 25 to 30 feet in depth.
 2. Sunol Water Department Facility, 505 Paloma Way, 1,825 feet southeast. One groundwater monitoring event in 1992 and the closure summary in 2012 indicate a southwesterly groundwater flow direction.
- c) Preferential Pathway and Sensitive Receptor Study:
 1. Surface water: Sinbad Creek, an intermittent stream, is located approximately 100 feet northeast (upgradient) from the Site, and Arroyo de la Laguna/Alameda Creek flows east-to-west approximately one-quarter mile southeast (crossgradient) and one-half mile southwest (downgradient) from the Site (see Figure 3).
 2. Well survey: Gribi Associates requested well records for water supply wells within a 1,500-foot radius from the Site from the California Department of Water Resources (CDWR) and from Zone 7 Water Agency (Zone 7). The CDWR records include two irrigation wells (identified as "1" and "2" on Figure 3), located more than 1,200 feet northeast from the Site at 11735 Foothill Boulevard. Zone 7 records included these

two irrigation wells, one irrigation well (identified as “3” on Figure 3, located approximately 850 feet east from the Site at 199 Bond Street, and one well of unknown use (identified as “4” on Figure 3), located approximately 1,450 feet west from the Site at an unknown address (Zone 7 does not have a well log for this well).

4.0 DESCRIPTION OF SOIL BORING ACTIVITIES AND RESULTS

In accordance with the February 5, 2015 ACEH letter, one soil boring, B-1, was drilled and sampled to evaluate Site conditions relative to the LTCP Direct Contact and Outdoor Air Exposure Criteria. Soil sampling was conducted by Gribi Associates personnel on November 9, 2015. All sampling was conducted using direct push drilling equipment, and all activities were conducted in accordance with standard sampling guidelines and protocols.

4.1 Prefield Activities

Prior to beginning field activities, a drilling permit was obtained from Zone 7 Water Agency. A copy of the drilling permits provided as Attachment D. In addition, prior to implementing field activities, the drilling location was marked with white paint, and Underground Services Alert (USA) was notified at least 48 hours prior to drilling. Also, prior to initiating drilling activities, a Site Safety Plan will be prepared, and a tailgate safety meeting will be conducted with all site workers.

4.2 Location of Soil Sample

The location of the shallow soil boring B-1 is shown on Figure 2. Boring B-1 was located on the railroad track inside the spill area, approximately 0.5 feet south of the previous sample SS-2.

4.3 Drilling and Soil Sampling of Investigative Boring

Boring activities were conducted by Greggs Drilling (C-57 License No. 485165) using a direct push coring equipment. Boring B-1 was cored to approximately 6.0 feet in depth, where hard bedrock and coring refusal was encountered. Continuous soil cores were collected from boring B-1 at depths of approximately 2.5 feet and 5.5 feet below surface in a clear plastic liner tube, nested inside a stainless steel core barrel. After the core was brought to the surface the soil-filled liner tube was exposed for visual examination. The soil was then examined, logged, and field screened for hydrocarbons by a qualified registered geologist using sight and smell. The selected sample interval was then collected by cutting the sample and liner tubing to the desired length and the ends of the selected sample were quickly wrapped with Teflon sheets

and capped with plastic end caps. The sealed soil sample was then labeled and placed in cold storage for transport to the analytical laboratory under formal chain-of-custody. After sampling, the boring was grouted to just below the rail bed. There was insufficient soil cuttings to save for offsite disposal.

4.4 Laboratory Analysis of Soil Samples

Two soil samples were analyzed for the following parameters:

- EPA Method 8015 TPH-Diesel/Motor Oil
- USEPA 8260B TPH-Gasoline, BTEX, Oxygenates
- USEPA 8270-sim Polynuclear Aromatic Hydrocarbons (PAHs) with Naphthalene

All analyses were conducted by Sunstar Laboratories, a California-certified analytical laboratory, with standard turnaround on results.

4.5 Results of Soil Boring Investigation

Soils in boring B-1 consisted of railroad ballast down to approximately 2.5 feet in depth, followed by brown hard gravelly sandstone to approximately 6.0 feet in depth (coring refusal). No unusual odors or staining was noted in native soils below 2.5 feet in depth. Also, no groundwater was encountered in the boring.

Soil laboratory analytical results are summarized in Table 2, and the laboratory data report is included in Attachment C.

Table 2											
SOIL LABORATORY ANALYTICAL RESULTS											
Niles Canyon Railway, Sunol, California											
Sample ID	Sample Depth	Concentration (milligrams per kilogram, mg/kg)									
		TPH-D	TPH-MO	TPH-G	B	T	E	X	Oxy	Naphth	PAHa
B-1-2.5	2.5 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010	ND	<0.005	ND
B-1-5.5	5.5 ft	<10	<10	<0.5	<0.005	<0.005	<0.005	<0.010	ND	<0.005	0.0057 Acenaphthylene 0.015 Benzo(a)anthracene 0.011 Benzo(b)fluoranthene 0.007 Benzo(g,h,i)perylene 0.010 Benzo(a)pyrene 0.012 Chrysene 0.025 Fluoranthene 0.010 Indeno(1,2,3-cd)pyrene 0.021 Phenanthrene 0.036 Pyrene (0.0106 B(a)P Equivalents)
ESL, Direct Exposure		1,100	14,000	3,900	1.0	4,600	22	2,400	Various	14	NL Acenaphthylene 2.9 Benzo(a)anthracene 2.9 Benzo(b)fluoranthene NL Benzo(g,h,i)perylene 0.29 Benzo(a)pyrene 260 Chrysene 30,000 Fluoranthene 2.9 Indeno(1,2,3-cd)pyrene NL Phenanthrene 23,000 Pyrene
LTCP, Table 1					8.2		89			45	0.68 B(a)P Equivalents

Table Notes

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-MO = Total Petroleum Hydrocarbons as Motor Oil

TPH-G = Total Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

X = Xylenes

Oxy = OXY = Oxygenates, includes Methyl ter-Butyl Ether (MTBE), Ter-Butanol (TBA), Di-isopropyl Ether (DIPE), Ethyl-t-butyl Ether (ETBE), and Tert-amyl Methyl Ether (TAME).

Naphth = Naphthalene

PAHs = Polynuclear Aromatic Hydrocarbons, includes approximately 15 individual compounds.

<10 = Not detected above the expressed value

B(a)P Equivalents = Benzo(a)pyrene toxicity equivalents (Florida Department of Environmental Protection Benzo(a)pyrene Conversion Table).

ESL = Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, February 2016 (Rev 3).

LTCP, Table 1 = Low-Threat Underground Storage Tank Case Closure Policy, Table 1 Concentrations of Petroleum Constituents in Soil that Will Have No Significant Risk of Adversely Affecting Human Health.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Results from post-remediation verification soil sampling and subsequent soil boring sampling clearly demonstrate that the fuel oil spill on the Niles Canyon Railroad tracks did not migrate a significant distance downward. This is due to (1) the immobile nature of the fuel oil itself, and (2) the occurrence of hard sandstone bedrock at shallow depth beneath the subject railroad tracks.

Relative to potential risks, it is clear that the residual fuel oil range hydrocarbons in shallow ballast, which have mostly been removed, do not pose a significant risk to human or environmental receptors. This conclusion is drawn from the following Site conditions: (1) The Site is almost completely unpaved, with no stormwater catch basins or runoff drainages; (2) The nearest surface water body, Sinbad Creek, is located approximately 100 feet away from the Site; (3) There are no nearby water supply wells; and (4) The residual hydrocarbon-impacted soil is located in an area, below railroad tracks, that is not expected to change use any time in the near future.

Based on these conclusions, we request that regulatory closure be granted for this Site.

We appreciate the opportunity to present this report for your review. Please call if you have questions or require additional information.

Very truly yours,



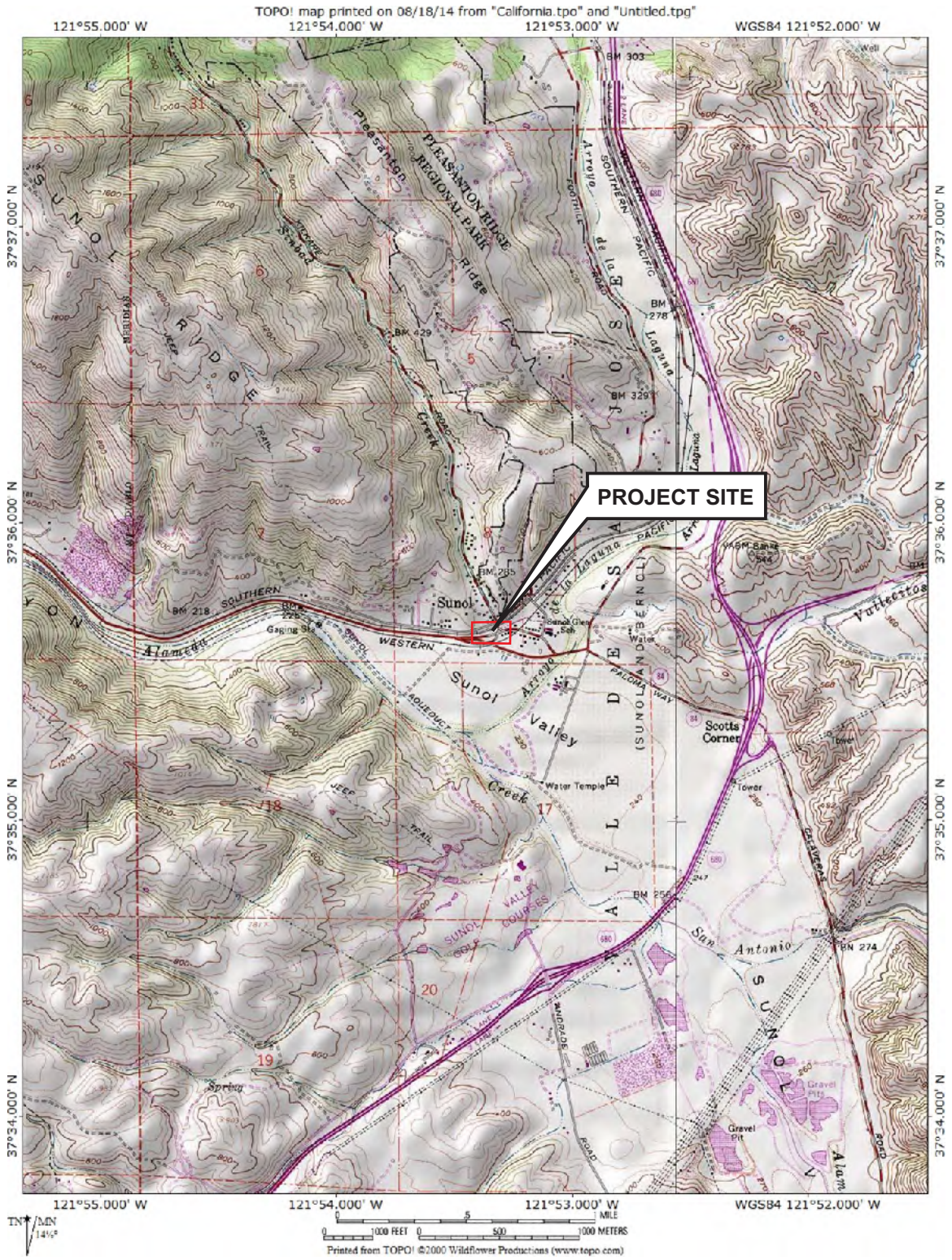
James E. Gribi
Registered Geologist
California No. 5843



c Mr. Doug Debs, Niles Canyon Railway

Enclosures

FIGURES



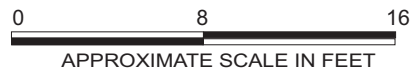
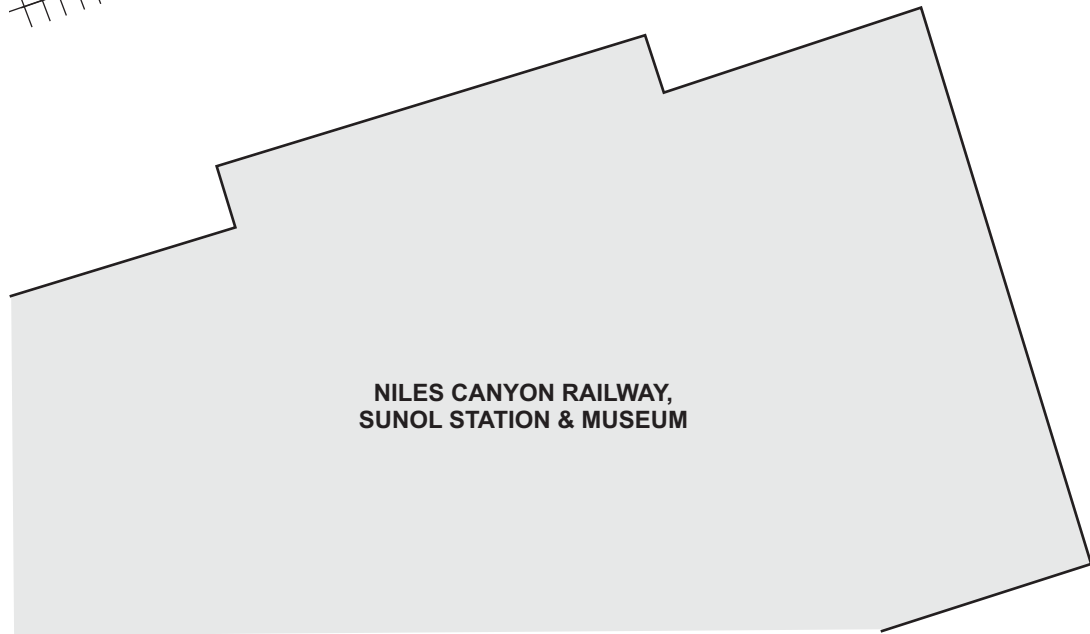
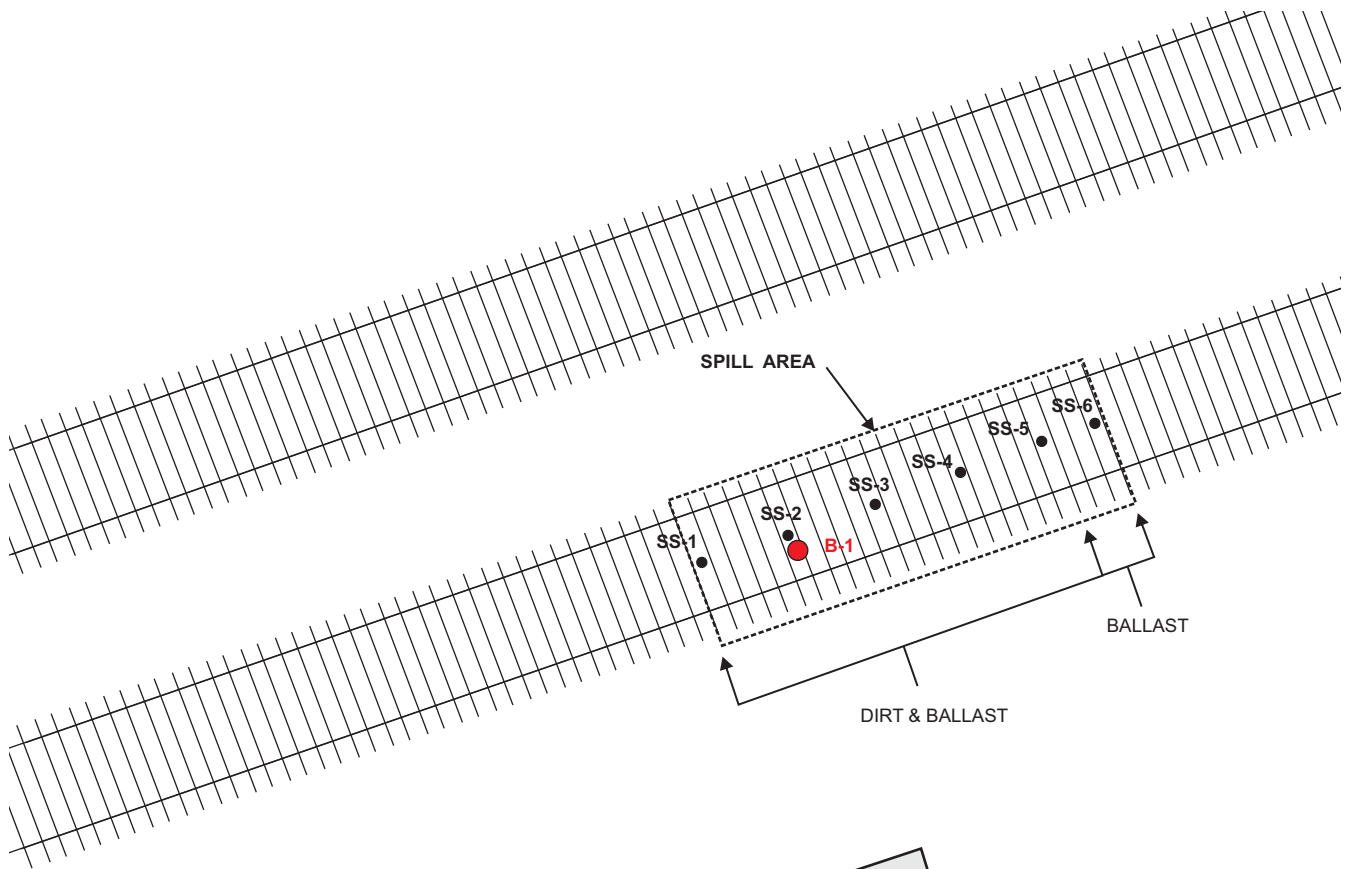
DESIGNED BY:	CHECKED BY: JG
DRAWN BY: RB	SCALE:
PROJECT NO:	

SITE VICINITY MAP

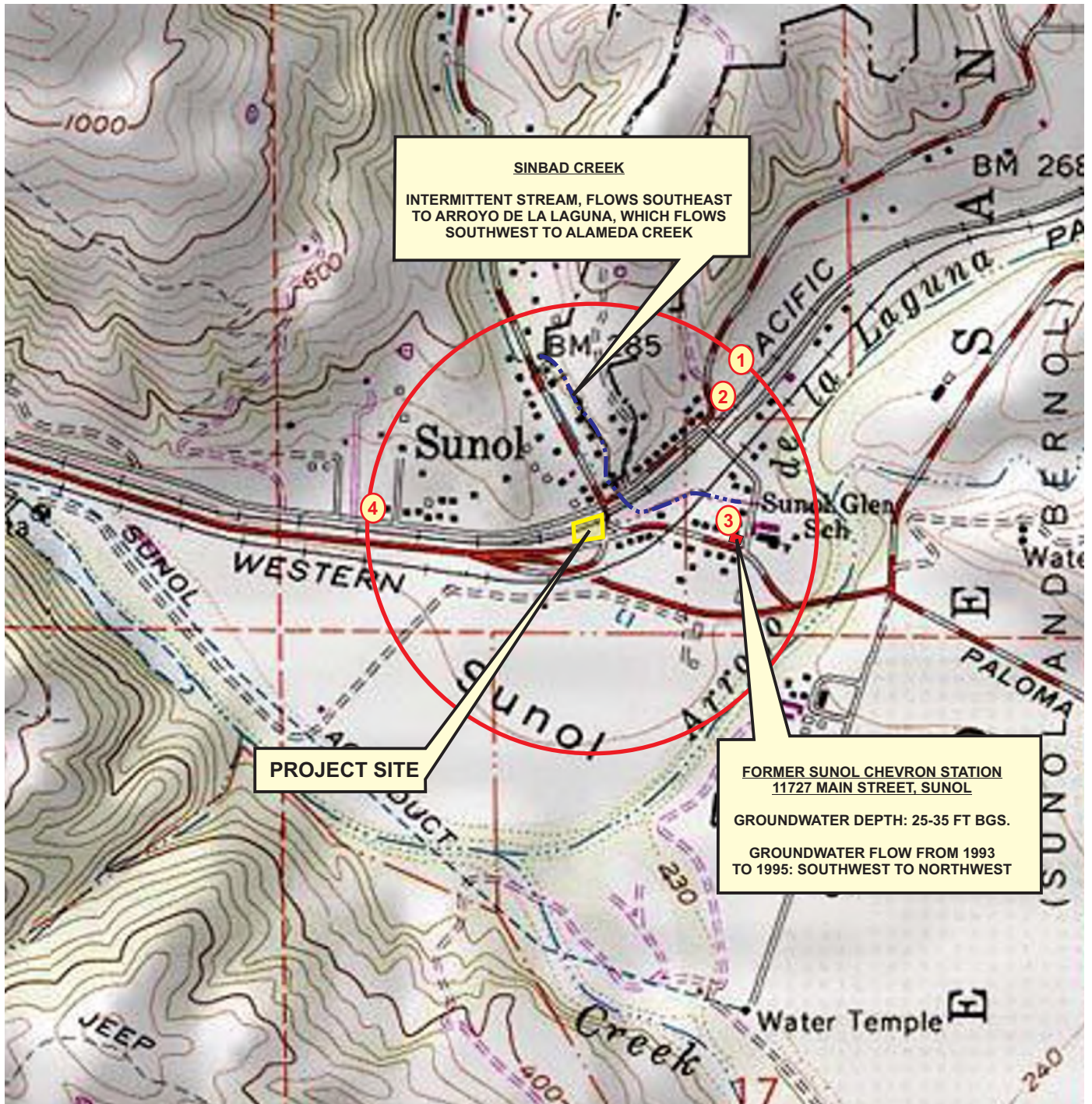
NILES CANYON RAILWAY
6 KILKARE ROAD
SUNOL, CALIFORNIA

DATE: 07/12/2016 FIGURE: 1





DESIGNED BY:	CHECKED BY:	SITE PLAN	DATE: 07/12/2016	FIGURE: 2
DRAWN BY:	SCALE:			
PROJECT NO:		NILES CANYON RAILWAY 6 KILKARE ROAD SUNOL, CALIFORNIA		



WELL MAP ID	WELL ADDRESS & DISTANCE FROM SITE	WELL USE	WELL DEPTH
①	11735 FOOTHILL BLVD., 1,500 FT NE	IRRIGATION	300
②	11735 FOOTHILL BLVD., 1,250 FT NE	IRRIGATION	420
③	199 BOND STREET, 850 FT EAST	IRRIGATION	120 FT
④	UNKNOWN ADDRESS, 1,450 FT WEST	UNKNOWN	UNKNOWN



DESIGNED BY:	CHECKED BY: JG	RECEPTORS SURVEY	DATE: 07/12/2016	FIGURE: 3
DRAWN BY: RB	SCALE:		GRIBI	
PROJECT NO:		NILES CANYON RAILWAY 6 KILKARE ROAD SUNOL, CALIFORNIA		

ATTACHMENT A

SITE PHOTOS



VIEW OF SOIL EXCAVATION AND REMOVAL ACTIVITIES



VIEW OF SOIL EXCAVATION AND REMOVAL ACTIVITIES



VIEW OF SOIL EXCAVATION AND REMOVAL ACTIVITIES



VIEW OF COMPLETED EXCAVATION, LOOKING EAST. SUNOL DEPOT IS ON FAR RIGHT EDGE OF PHOTO.



VIEW OF EXCAVATED TRACKS LOOKING WEST. BALLAST-ONLY AREA IS ON LOWER SIDE OF PHOTO, AND DIRT BALLAST AREA IS ON MIDDLE AND UPPER SIDE OF PHOTO.



VIEW OF EXCAVATED TRACKS LOOKING SOUTHWEST. NOTE THREE OF FOUR FILLED SOIL DRUMS PRESENT ADJACENT TO EXCAVATED TRACKS AREA.

ATTACHMENT B
SOIL DISPOSAL MANIFEST

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number CAL000399398	2. Page 1 of 1	3. Emergency Response Phone 1-800-468-1760	4. Manifest Tracking Number 004494837 SKS
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5. Generator's Name and Mailing Address Sunol Depot Pac Loc Assoc Dba Miles Canyon Rail 6 Kilkare Rd Sunol CA 94586-9527	Generator's Site Address (if different than mailing address) 6 Kilkare Rd, Sunol, CA 94586 is SITE address MAILING address is: P.O. Box 515, Sunol, CA 94586-0515
Generator's Phone: 650-704-1487	

6. Transporter 1 Company Name SAFETY-KLEEN SYSTEMS, INC.	U.S. EPA ID Number TXR000081205
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7. Transporter 2 Company Name	U.S. EPA ID Number
-------------------------------	--------------------

8. Designated Facility Name and Site Address CLEAN HARBORS SAN JOSE LLC 1021 BERRYESSA ROAD SAN JOSE, CA 95133 408-441-0962	U.S. EPA ID Number CAD059494310
Facility's Phone:	

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
		No.	Type					
	1. NONE, NON RCRA HAZARDOUS WASTE SOLIDS, (DEBRIS, PETROLEUM HYDROCARBONS), N/A	4	DM	2000	P	223		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information	TSD:BJ	65532539	SU30225	CS6:
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24 HR EMERGENCY #1-800-468-1760 (SAFETY-KLEEN)
SK AUTHORIZED TO RETAIN LICENSED SUBSEQUENT CARRIERS AS NECESSARY

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offoror's Printed/Typed Name DONG DEOS	Signature <i>[Signature]</i>	Month 12	Day 15	Year 11
---	---------------------------------	-------------	-----------	------------

16. International Shipments	<input type="checkbox"/> Import to U.S.	<input type="checkbox"/> Export from U.S.	Port of entry/exit: Date leaving U.S.:
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17. Transporter Acknowledgment of Receipt of Materials	Transporter 1 Printed/Typed Name Blender Co Inc	Signature <i>[Signature]</i>	Month 12	Day 15	Year 11
	Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

18. Discrepancy	18a. Discrepancy Indication Space	<input type="checkbox"/> Quantity	<input type="checkbox"/> Type	<input type="checkbox"/> Residue	<input type="checkbox"/> Partial Rejection	<input type="checkbox"/> Full Rejection
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18b. Alternate Facility (or Generator)	Manifest Reference Number: U.S. EPA ID Number
Facility's Phone:	

18c. Signature of Alternate Facility (or Generator)	Month Day Year
---	----------------------

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)			
1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a	Printed/Typed Name Signature
	Month Day Year

ATTACHMENT C

**LABORATORY DATA REPORTS AND
CHAIN-OF-CUSTODY RECORDS**



25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

07 August 2014

Jim Gribi
Gribi Associates
1090 Adam Street, Suite K
Benicia, CA 94510
RE: Niles Canyon Railway

Enclosed are the results of analyses for samples received by the laboratory on 07/31/14 08:52. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Katherine RunningCrane
Project Manager

Gribi Associates
1090 Adam Street, Suite K
Benicia CA, 94510

Project: Niles Canyon Railway
Project Number: [none]
Project Manager: Jim Gribi

Reported:
08/07/14 16:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-1	T141500-01	Soil	07/30/14 11:30	07/31/14 08:52
SS-2	T141500-02	Soil	07/30/14 11:35	07/31/14 08:52
SS-3	T141500-03	Soil	07/30/14 11:40	07/31/14 08:52
SS-4	T141500-04	Soil	07/30/14 11:43	07/31/14 08:52
SS-5	T141500-05	Soil	07/30/14 11:50	07/31/14 08:52
SS-6	T141500-06	Soil	07/30/14 11:55	07/31/14 08:52

DETECTIONS SUMMARY

Sample ID: SS-1

Laboratory ID: T141500-01

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
C13-C28 (DRO)	470	10	mg/kg	EPA 8015C	
C29-C40 (MORO)	2800	10	mg/kg	EPA 8015C	

Sample ID: SS-2

Laboratory ID: T141500-02

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
C13-C28 (DRO)	600	10	mg/kg	EPA 8015C	
C29-C40 (MORO)	4200	10	mg/kg	EPA 8015C	

Sample ID: SS-3

Laboratory ID: T141500-03

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
C13-C28 (DRO)	170	10	mg/kg	EPA 8015C	
C29-C40 (MORO)	1300	10	mg/kg	EPA 8015C	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane

Katherine RunningCrane, Project Manager

Gribi Associates
1090 Adam Street, Suite K
Benicia CA, 94510

Project: Niles Canyon Railway
Project Number: [none]
Project Manager: Jim Gribi

Reported:
08/07/14 16:58

Sample ID: SS-4

Laboratory ID: T141500-04

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
C13-C28 (DRO)	160	10		mg/kg	EPA 8015C	
C29-C40 (MORO)	910	10		mg/kg	EPA 8015C	

Sample ID: SS-5

Laboratory ID: T141500-05

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
C13-C28 (DRO)	190	10		mg/kg	EPA 8015C	
C29-C40 (MORO)	1000	10		mg/kg	EPA 8015C	

Sample ID: SS-6

Laboratory ID: T141500-06

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
C13-C28 (DRO)	1700	10		mg/kg	EPA 8015C	
C29-C40 (MORO)	12000	100		mg/kg	EPA 8015C	

Katherine RunningCrane



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 08/07/14 16:58
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SS-1
T141500-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	4073110	07/31/14	08/05/14	EPA 8015C	
C13-C28 (DRO)	470	10	"	"	"	"	"	"	
C29-C40 (MORO)	2800	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		102 %	65-135		"	"	"	"	

Volatile Organic Compounds by EPA Method 8021B

Benzene	ND	5.0	ug/kg	1	4073115	07/31/14	08/01/14	EPA 8021B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		69.3 %	65-135		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 08/07/14 16:58
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SS-2
T141500-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	4073110	07/31/14	08/05/14	EPA 8015C	
C13-C28 (DRO)	600	10	"	"	"	"	"	"	
C29-C40 (MORO)	4200	10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		98.7 %	65-135		"	"	"	"	

Volatile Organic Compounds by EPA Method 8021B

Benzene	ND	5.0	ug/kg	1	4073115	07/31/14	08/01/14	EPA 8021B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		88.2 %	65-135		"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 08/07/14 16:58
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SS-3
T141500-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	4073110	07/31/14	08/05/14	EPA 8015C	
C13-C28 (DRO)	170	10	"	"	"	"	"	"	
C29-C40 (MORO)	1300	10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		98.3 %		65-135	"	"	"	"	

Volatile Organic Compounds by EPA Method 8021B

Benzene	ND	5.0	ug/kg	1	4073115	07/31/14	08/01/14	EPA 8021B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		99.9 %		65-135	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 08/07/14 16:58
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**SS-4
T141500-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	4073110	07/31/14	08/05/14	EPA 8015C	
C13-C28 (DRO)	160	10	"	"	"	"	"	"	
C29-C40 (MORO)	910	10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		98.6 %		65-135	"	"	"	"	

Volatile Organic Compounds by EPA Method 8021B

Benzene	ND	5.0	ug/kg	1	4073115	07/31/14	08/01/14	EPA 8021B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97.7 %		65-135	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 08/07/14 16:58
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SS-5
T141500-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	4073110	07/31/14	08/05/14	EPA 8015C	
C13-C28 (DRO)	190	10	"	"	"	"	"	"	
C29-C40 (MORO)	1000	10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		115 %	65-135		"	"	"	"	

Volatile Organic Compounds by EPA Method 8021B

Benzene	ND	5.0	ug/kg	1	4073115	07/31/14	08/01/14	EPA 8021B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97.9 %	65-135		"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 08/07/14 16:58
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**SS-6
T141500-06 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	4073110	07/31/14	08/05/14	EPA 8015C	
C13-C28 (DRO)	1700	10	"	"	"	"	"	"	
C29-C40 (MORO)	12000	100	"	10	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		80.2 %	65-135		"	"	"	"	

Volatile Organic Compounds by EPA Method 8021B

Benzene	ND	5.0	ug/kg	1	4073115	07/31/14	08/01/14	EPA 8021B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		66.2 %	65-135		"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 08/07/14 16:58
--	---	-----------------------------

Extractable Petroleum Hydrocarbons by 8015C - Quality Control
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4073110 - EPA 3550B GC

Blank (4073110-BLK1) Prepared: 07/31/14 Analyzed: 08/05/14

C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	101		"	100		101	65-135			

LCS (4073110-BS1) Prepared: 07/31/14 Analyzed: 08/05/14

C13-C28 (DRO)	440	10	mg/kg	500		87.8	75-125			
Surrogate: p-Terphenyl	104		"	100		104	65-135			

Matrix Spike (4073110-MS1) Source: T141499-01 Prepared: 07/31/14 Analyzed: 08/06/14

C13-C28 (DRO)	710	10	mg/kg	500	370	66.6	75-125			QM-05
Surrogate: p-Terphenyl	86.8		"	100		86.8	65-135			

Matrix Spike Dup (4073110-MSD1) Source: T141499-01 Prepared: 07/31/14 Analyzed: 08/06/14

C13-C28 (DRO)	630	10	mg/kg	500	370	51.7	75-125	11.2	20	QM-05
Surrogate: p-Terphenyl	97.0		"	100		97.0	65-135			

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates
 1090 Adam Street, Suite K
 Benicia CA, 94510

Project: Niles Canyon Railway
 Project Number: [none]
 Project Manager: Jim Gribi

Reported:
 08/07/14 16:58

Volatile Organic Compounds by EPA Method 8021B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4073115 - EPA 5030 GC

Blank (4073115-BLK1)

Prepared: 07/31/14 Analyzed: 08/01/14

Benzene	ND	5.0	ug/kg							
Toluene	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
m,p-Xylene	ND	10	"							
o-Xylene	ND	5.0	"							
<i>Surrogate: 4-Bromofluorobenzene</i>	90.5		"	100		90.5	65-135			

LCS (4073115-BS1)

Prepared: 07/31/14 Analyzed: 08/01/14

Benzene	225	5.0	ug/kg	250		90.1	70-130			
Toluene	214	5.0	"	250		85.8	70-130			
Ethylbenzene	220	5.0	"	250		88.0	70-130			
m,p-Xylene	475	10	"	500		94.9	70-130			
o-Xylene	217	5.0	"	250		86.9	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	90.0		"	100		90.0	65-135			

Matrix Spike (4073115-MS1)

Source: T141500-01

Prepared: 07/31/14 Analyzed: 08/01/14

Benzene	213	5.0	ug/kg	250	ND	85.1	70-130			
Toluene	180	5.0	"	250	ND	71.9	70-130			
Ethylbenzene	176	5.0	"	250	ND	70.2	70-130			
m,p-Xylene	357	10	"	500	ND	71.4	70-130			
o-Xylene	175	5.0	"	250	ND	70.1	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	84.3		"	100		84.3	65-135			

Matrix Spike Dup (4073115-MSD1)

Source: T141500-01

Prepared: 07/31/14 Analyzed: 08/01/14

Benzene	213	5.0	ug/kg	250	ND	85.0	70-130	0.0223	20	
Toluene	178	5.0	"	250	ND	71.3	70-130	0.887	20	
Ethylbenzene	180	5.0	"	250	ND	72.2	70-130	2.68	20	
m,p-Xylene	352	10	"	500	ND	70.4	70-130	1.38	20	
o-Xylene	178	5.0	"	250	ND	71.2	70-130	1.56	20	
<i>Surrogate: 4-Bromofluorobenzene</i>	81.4		"	100		81.4	65-135			

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager

Gribi Associates
1090 Adam Street, Suite K
Benicia CA, 94510

Project: Niles Canyon Railway
Project Number: [none]
Project Manager: Jim Gribi

Reported:
08/07/14 16:58

Notes and Definitions

- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS was within acceptance criteria. The data is acceptable as no negative impact on data is expected.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Katherine RunningCrane

SunStar Laboratories, Inc.
 25712 Commercentre Dr
 Lake Forest, CA 92630
 949-297-5020

Chain of Custody Record

Client: Gribi Associates
 Address: _____
 Phone: _____ Fax: _____
 Project Manager: J Gribi

Date: 7/30/14 Page: 1 Of 1
 Project Name: NILES CANYON RAILWAY
 Collector: J Gribi Client Project #: _____
 Batch #: T141500 EDF #: _____

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	Laboratory ID #	Comments/Preservative	Total # of containers	
SS-1	7/30/14	1130	Soil	Sleeve					XX	XX	XX	XX	XX	01			
SS-2	↓	1135	↓	↓					XX	XX	XX	XX	XX	02			
SS-3	↓	1140	↓	↓					XX	XX	XX	XX	XX	03			
SS-4	↓	1145	↓	↓					XX	XX	XX	XX	XX	04			
SS-5	↓	1150	↓	↓					XX	XX	XX	XX	XX	05			
SS-6	↓	1155	↓	↓					XX	XX	XX	XX	XX	06			
STD. TAT																	
Relinquished by: (signature) <u>[Signature]</u>		Date / Time <u>7/30/14</u>		Received by: (signature) <u>[Signature]</u>		Date / Time <u>7-30-14</u>		Total # of containers <u>6</u>		Chain of Custody seals Y/N/NA <u>Y</u>		Seals intact? Y/N/NA <u>Y</u>		Received good condition/cold <u>5.9</u>		Notes <u>SS-6 is ballast; may be difficult to analyze</u>	
Relinquished by: (signature) <u>[Signature]</u>		Date / Time <u>7-31-14 8:52</u>		Received by: (signature) <u>[Signature]</u>		Date / Time <u>7-31-14 8:52</u>		Turn around time: <u>8:15 PM</u>		Need EDF		T1000006021					

Sample disposal Instructions: Disposal @ \$2.00 each _____ Return to client _____ Pickup _____

COC 101176

SAMPLE RECEIVING REVIEW SHEET

BATCH # T141500

Client Name: GRIBI

Project: MILES CANYON RAILWAY

Received by: BRIAN

Date/Time Received: 7.31.14 8:52

Delivered by: Client SunStar Courier GSO FedEx Other _____

Total number of coolers received 1 Temp criteria = 6°C > 0°C (no frozen containers)

Temperature: cooler #1 5.6 °C +/- the CF (-0.2°C) = 5.4 °C corrected temperature

cooler #2 _____ °C +/- the CF (-0.2°C) = _____ °C corrected temperature

cooler #3 _____ °C +/- the CF (-0.2°C) = _____ °C corrected temperature

Samples outside temp. but received on ice, w/in 6 hours of final sampling. Yes No* N/A

Custody Seals Intact on Cooler/Sample Yes No* N/A

Sample Containers Intact Yes No*

Sample labels match COC ID's Yes No*

Total number of containers received match COC Yes No*

Proper containers received for analyses requested on COC Yes No*

Proper preservative indicated on COC/containers for analyses requested Yes No* N/A

Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times. Yes No*

* Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date BC 7.31.14

Comments:



25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

18 November 2015

Jim Gribi
Gribi Associates
1090 Adam Street, Suite K
Benicia, CA 94510
RE: Niles Canyon Railway

Enclosed are the results of analyses for samples received by the laboratory on 11/07/15 11:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Katherine RunningCrane
Project Manager



25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Gribi Associates
1090 Adam Street, Suite K
Benicia CA, 94510

Project: Niles Canyon Railway
Project Number: [none]
Project Manager: Jim Gribi

Reported:
11/18/15 17:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-1-2.5	T152793-01	Soil	11/04/15 09:45	11/07/15 11:15
B-1-5.5	T152793-02	Soil	11/04/15 10:00	11/07/15 11:15

SunStar Laboratories, Inc.

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Katherine RunningCrane, Project Manager

Gribi Associates
1090 Adam Street, Suite K
Benicia CA, 94510

Project: Niles Canyon Railway
Project Number: [none]
Project Manager: Jim Gribi

Reported:
11/18/15 17:04

DETECTIONS SUMMARY

Sample ID: B-1-2.5

Laboratory ID: T152793-01

No Results Detected


Sample ID: B-1-5.5

Laboratory ID: T152793-02

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
Acenaphthylene	5.7	5.0	ug/kg	EPA 8270C SIM	
Benzo (a) anthracene	15	5.0	ug/kg	EPA 8270C SIM	
Benzo (b) fluoranthene	11	10	ug/kg	EPA 8270C SIM	
Benzo (g,h,i) perylene	7.0	5.0	ug/kg	EPA 8270C SIM	
Benzo (a) pyrene	10	10	ug/kg	EPA 8270C SIM	
Chrysene	12	5.0	ug/kg	EPA 8270C SIM	
Fluoranthene	25	5.0	ug/kg	EPA 8270C SIM	
Indeno (1,2,3-cd) pyrene	10	5.0	ug/kg	EPA 8270C SIM	
Phenanthrene	21	5.0	ug/kg	EPA 8270C SIM	
Pyrene	36	10	ug/kg	EPA 8270C SIM	

SunStar Laboratories, Inc.

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Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 11/18/15 17:04
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B-1-2.5
T152793-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C13-C28 (DRO)	ND	10	mg/kg	1	5110933	11/09/15	11/10/15	EPA 8015C	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		51.9 %	65-135		"	"	"	"	S-03

Volatile Organic Compounds by EPA Method 8260B

Benzene	ND	5.0	ug/kg	1	5111114	11/11/15	11/17/15	EPA 8260B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"	
Tert-butyl alcohol	ND	50	"	"	"	"	"	"	
Di-isopropyl ether	ND	20	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"	
C6-C12 (GRO)	ND	500	"	"	"	"	"	"	
Surrogate: Toluene-d8		85.8 %	85.5-116		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	81.2-123		"	"	"	"	
Surrogate: Dibromofluoromethane		134 %	95.7-135		"	"	"	"	

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

Acenaphthene	ND	10	ug/kg	1	5110944	11/09/15	11/10/15	EPA 8270C SIM	
Acenaphthylene	ND	5.0	"	"	"	"	"	"	
Anthracene	ND	5.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	5.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	
Chrysene	ND	5.0	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	5.0	"	"	"	"	"	"	
Fluoranthene	ND	5.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 11/18/15 17:04
--	---	-----------------------------

B-1-2.5
T152793-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

SunStar Laboratories, Inc.

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

Fluorene	ND	10	ug/kg	1	5110944	11/09/15	11/10/15	EPA 8270C SIM	"
Indeno (1,2,3-cd) pyrene	ND	5.0	"	"	"	"	"	"	"
Naphthalene	ND	5.0	"	"	"	"	"	"	"
Phenanthrene	ND	5.0	"	"	"	"	"	"	"
Pyrene	ND	10	"	"	"	"	"	"	"
Surrogate: Terphenyl-d14		50.8 %		18-137		"	"	"	"

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 11/18/15 17:04
--	---	-----------------------------

B-1-5.5
T152793-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C13-C28 (DRO)	ND	10	mg/kg	1	5110933	11/09/15	11/10/15	EPA 8015C	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		65.8 %	65-135		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Benzene	ND	5.0	ug/kg	1	5111114	11/11/15	11/17/15	EPA 8260B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"	
Tert-butyl alcohol	ND	50	"	"	"	"	"	"	
Di-isopropyl ether	ND	20	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"	
C6-C12 (GRO)	ND	500	"	"	"	"	"	"	
Surrogate: <i>Toluene-d8</i>		88.9 %	85.5-116		"	"	"	"	
Surrogate: <i>4-Bromofluorobenzene</i>		89.0 %	81.2-123		"	"	"	"	
Surrogate: <i>Dibromofluoromethane</i>		115 %	95.7-135		"	"	"	"	

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

Acenaphthene	ND	10	ug/kg	1	5110944	11/09/15	11/10/15	EPA 8270C SIM	
Acenaphthylene	5.7	5.0	"	"	"	"	"	"	
Anthracene	ND	5.0	"	"	"	"	"	"	
Benzo (a) anthracene	15	5.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	11	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	7.0	5.0	"	"	"	"	"	"	
Benzo (a) pyrene	10	10	"	"	"	"	"	"	
Chrysene	12	5.0	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	5.0	"	"	"	"	"	"	
Fluoranthene	25	5.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane, Project Manager



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 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 11/18/15 17:04
--	---	-----------------------------

B-1-5.5
T152793-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

SunStar Laboratories, Inc.

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

Fluorene	ND	10	ug/kg	1	5110944	11/09/15	11/10/15	EPA 8270C SIM	"
Indeno (1,2,3-cd) pyrene	10	5.0	"	"	"	"	"	"	"
Naphthalene	ND	5.0	"	"	"	"	"	"	"
Phenanthrene	21	5.0	"	"	"	"	"	"	"
Pyrene	36	10	"	"	"	"	"	"	"
<i>Surrogate: Terphenyl-d14</i>		87.5 %		18-137	"	"	"	"	"

SunStar Laboratories, Inc.

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 Lake Forest, California 92630
 949.297.5020 Phone
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Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 11/18/15 17:04
--	---	-----------------------------

Extractable Petroleum Hydrocarbons by 8015C - Quality Control
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5110933 - EPA 3550B GC

Blank (5110933-BLK1)		Prepared: 11/09/15 Analyzed: 11/10/15								
C13-C28 (DRO)	ND	10	mg/kg							
C29-C40 (MORO)	ND	10	"							
Surrogate: <i>p</i> -Terphenyl	66.1		"	99.8		66.2	65-135			
LCS (5110933-BS1)		Prepared: 11/09/15 Analyzed: 11/10/15								
C13-C28 (DRO)	480	10	mg/kg	500		96.8	75-125			
Surrogate: <i>p</i> -Terphenyl	77.4		"	100		77.4	65-135			
Matrix Spike (5110933-MS1)		Source: T152791-05		Prepared: 11/09/15 Analyzed: 11/10/15						
C13-C28 (DRO)	430	10	mg/kg	500	38	78.8	75-125			
Surrogate: <i>p</i> -Terphenyl	66.5		"	100		66.5	65-135			
Matrix Spike Dup (5110933-MSD1)		Source: T152791-05		Prepared: 11/09/15 Analyzed: 11/10/15						
C13-C28 (DRO)	450	10	mg/kg	500	38	82.4	75-125	4.00	20	
Surrogate: <i>p</i> -Terphenyl	77.7		"	99.9		77.8	65-135			

SunStar Laboratories, Inc.

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 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 11/18/15 17:04
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5111114 - EPA 5030 GCMS

Blank (5111114-BLK1)

Prepared: 11/11/15 Analyzed: 11/17/15

Benzene	ND	5.0	ug/kg							
Toluene	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
m,p-Xylene	ND	10	"							
o-Xylene	ND	5.0	"							
Tert-amyl methyl ether	ND	20	"							
Tert-butyl alcohol	ND	50	"							
Di-isopropyl ether	ND	20	"							
Ethyl tert-butyl ether	ND	20	"							
Methyl tert-butyl ether	ND	20	"							
C6-C12 (GRO)	ND	500	"							
Surrogate: Toluene-d8	35.0		"	40.0		87.6	85.5-116			
Surrogate: 4-Bromofluorobenzene	39.8		"	40.0		99.4	81.2-123			
Surrogate: Dibromofluoromethane	46.8		"	40.0		117	95.7-135			

LCS (5111114-BS1)

Prepared: 11/11/15 Analyzed: 11/17/15

Chlorobenzene	109	5.0	ug/kg	100	109	75-125				
1,1-Dichloroethene	145	5.0	"	100	145	75-125				QM-11
Trichloroethene	103	5.0	"	100	103	75-125				
Benzene	115	5.0	"	100	115	75-125				
Toluene	98.3	5.0	"	100	98.3	75-125				
Surrogate: Toluene-d8	34.6		"	40.0	86.4	85.5-116				
Surrogate: 4-Bromofluorobenzene	40.4		"	40.0	101	81.2-123				
Surrogate: Dibromofluoromethane	49.8		"	40.0	124	95.7-135				

LCS Dup (5111114-BSD1)

Prepared: 11/11/15 Analyzed: 11/17/15

Chlorobenzene	106	5.0	ug/kg	100	106	75-125	3.34	20		
1,1-Dichloroethene	132	5.0	"	100	132	75-125	9.65	20		QM-11
Trichloroethene	94.4	5.0	"	100	94.4	75-125	8.42	20		
Benzene	108	5.0	"	100	108	75-125	6.49	20		
Toluene	91.2	5.0	"	100	91.2	75-125	7.44	20		
Surrogate: Toluene-d8	35.2		"	40.0	88.1	85.5-116				
Surrogate: 4-Bromofluorobenzene	37.8		"	40.0	94.6	81.2-123				
Surrogate: Dibromofluoromethane	50.6		"	40.0	127	95.7-135				

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 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 11/18/15 17:04
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Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5110944 - EPA 3550 ECD/GCMS

Blank (5110944-BLK1)

Prepared & Analyzed: 11/09/15

Acenaphthene	ND	10	ug/kg							
Acenaphthylene	ND	5.0	"							
Anthracene	ND	5.0	"							
Benzo (a) anthracene	ND	5.0	"							
Benzo (b) fluoranthene	ND	10	"							
Benzo (k) fluoranthene	ND	10	"							
Benzo (g,h,i) perylene	ND	5.0	"							
Benzo (a) pyrene	ND	10	"							
Chrysene	ND	5.0	"							
Dibenz (a,h) anthracene	ND	5.0	"							
Fluoranthene	ND	5.0	"							
Fluorene	ND	10	"							
Indeno (1,2,3-cd) pyrene	ND	5.0	"							
Naphthalene	ND	5.0	"							
Phenanthrene	ND	5.0	"							
Pyrene	ND	10	"							

Surrogate: Terphenyl-dl4 351 " 333 105 18-137

LCS (5110944-BS1)

Prepared: 11/09/15 Analyzed: 11/10/15

Acenaphthene	234	10	ug/kg	333		70.2	50-130			
Pyrene	240	10	"	333		72.1	50-130			

Surrogate: Terphenyl-dl4 290 " 333 87.2 18-137

Matrix Spike (5110944-MS1)

Source: T152788-01

Prepared: 11/09/15 Analyzed: 11/10/15

Acenaphthene	134	10	ug/kg	333	ND	40.3	50-130			QM-07
Pyrene	118	10	"	333	12.3	31.8	50-130			QM-07

Surrogate: Terphenyl-dl4 145 " 333 43.6 18-137

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 Lake Forest, California 92630
 949.297.5020 Phone
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Gribi Associates 1090 Adam Street, Suite K Benicia CA, 94510	Project: Niles Canyon Railway Project Number: [none] Project Manager: Jim Gribi	Reported: 11/18/15 17:04
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Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5110944 - EPA 3550 ECD/GCMS

Matrix Spike Dup (5110944-MSD1)

Source: T152788-01

Prepared: 11/09/15 Analyzed: 11/10/15

Acenaphthene	205	10	ug/kg	333	ND	61.7	50-130	41.9	31	QM-07
Pyrene	182	10	"	333	12.3	51.0	50-130	42.5	31	QM-07
Surrogate: Terphenyl-d14	190		"	333		57.2	18-137			

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager

Gribi Associates
1090 Adam Street, Suite K
Benicia CA, 94510

Project: Niles Canyon Railway
Project Number: [none]
Project Manager: Jim Gribi

Reported:
11/18/15 17:04

Notes and Definitions

- S-03 The surrogate recovery was below acceptance criteria in the sample because of a possible matrix effect. The surrogate recovery was within acceptance criteria in the method blank and LCS.
- QM-11 The LCS and LCSD were above acceptance criteria. The method blank and sample were ND for the analyte in question. The CCV was within acceptance criteria. There was insufficient sample for reextraction. No negative impact on data is expected.
- QM-07 The spike recovery and or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

SunStar Laboratories, Inc.

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Katherine RunningCrane, Project Manager

SAMPLE RECEIVING REVIEW SHEET

BATCH # 7152793

Client Name: GRIEL

Project: NILES CANYON RAILWAY

Received by: BEYON

Date/Time Received: 11/7/15 11:15

Delivered by: Client SunStar Courier GSO FedEx Other _____

Total number of coolers received 1 Temp criteria = 6°C > 0°C (no frozen containers)

Temperature: cooler #1 5.1 °C +/- the CF (-0.2°C) = 4.9 °C corrected temperature

cooler #2 _____ °C +/- the CF (-0.2°C) = _____ °C corrected temperature

cooler #3 _____ °C +/- the CF (-0.2°C) = _____ °C corrected temperature

- Samples outside temp. but received on ice, w/in 6 hours of final sampling. Yes No* N/A
- Custody Seals Intact on Cooler/Sample Yes No* N/A
- Sample Containers Intact Yes No*
- Sample labels match COC ID's Yes No*
- Total number of containers received match COC Yes No*
- Proper containers received for analyses requested on COC Yes No*
- Proper preservative indicated on COC/containers for analyses requested Yes No* N/A

Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times. Yes No*

* Complete Non-Conformance Receiving Sheet if checked

Cooler/Sample Review - Initials and date BC 11/9/15

Comments:

WORK ORDER

T152793

Client: Gribi Associates
Project: Niles Canyon Railway

Project Manager: Katherine RunningCrane
Project Number: [none]

Report To:

Gribi Associates
 Jim Gribi
 1090 Adam Street, Suite K
 Benicia, CA 94510

Date Due: 11/16/15 15:00 (5 day TAT)

Received By: Brian Charon

Date Received: 11/07/15 11:15

Logged In By: Brian Charon

Date Logged In: 11/09/15 07:36

Samples Received at: **4.9°C**
 Custody Seals Yes Received On Ice Yes
 Containers Intact Yes
 COC/Labels Agree Yes
 Preservation Confir No

Analysis	Due	TAT	Expires	Comments
T152793-01 B-1-2.5 [Soil] Sampled 11/04/15 09:45 (GMT-08:00) Pacific Time (US &				
8015 CC (D/MO)	11/16/15 15:00	5	11/18/15 09:45	
8260 BTEX/OXY	11/16/15 15:00	5	11/18/15 09:45	+ GRO
8270C PAH SIM	11/16/15 15:00	5	11/18/15 09:45	+Naphthalene
T152793-02 B-1-5.5 [Soil] Sampled 11/04/15 10:00 (GMT-08:00) Pacific Time (US &				
8015 CC (D/MO)	11/16/15 15:00	5	11/18/15 10:00	
8260 BTEX/OXY	11/16/15 15:00	5	11/18/15 10:00	+ GRO
8270C PAH SIM	11/16/15 15:00	5	11/18/15 10:00	+Naphthalene

ATTACHMENT D
SOIL BORING PERMIT



ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9308

E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Niles Canyon Railways
6 Kilkare Road
Sunol, California

PERMIT NUMBER 2015063

WELL NUMBER _____

APN 096-0175-009-00

Coordinates Source _____ ft. Accuracy v _____ ft.
LAT: _____ N. LONG: _____ W.
APN 096-0175-009

PERMIT CONDITIONS

(Circled Permit Requirements Apply)

CLIENT

Name Pacific Locomotive Association dba Niles Canyon Railway
Address PO Box 515 Phone 650-704-1487
City Sunol, CA Zip 94586-0515

A. GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller.
3. Permit is void if project not begun within 90 days of approval date.
4. Notify Zone 7 at least 24 hours before the start of work.

APPLICANT

Name Jim Gribi, Gribi Associates
Email kgribi@gribiassociates.com Fax 707-748-7763
Address 1050 Adams Street, Suite K Phone 707-748-7743
City Benicia, CA Zip 94510

B. WATER SUPPLY WELLS

1. Minimum surface seal diameter is four inches greater than the well casing diameter and six inches for public wells.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
3. Grout placed by tremie.
4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
5. A sample port is required on the discharge pipe near the wellhead.

TYPE OF PROJECT:

Well Construction Geotechnical Investigation
Well Destruction Contamination Investigation
Cathodic Protection Other _____

PROPOSED WELL USE:

Domestic Irrigation _____
Municipal Remediation _____
Industrial Groundwater Monitoring _____
Dewatering Other _____

DRILLING METHOD:

Mud Rotary Air Rotary Hollow Stem Auger _____
Cable Tool Direct Push Other DP

DRILLING COMPANY Gregg Drilling

DRILLER'S LICENSE NO. 485165

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
3. Grout placed by tremie.

WELL SPECIFICATIONS:

Drill Hole Diameter _____ in. Maximum _____
Casing Diameter _____ in. Depth _____ ft.
Surface Seal Depth _____ ft. Number _____

D. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

SOIL BORINGS:

Number of Borings One (1) Maximum _____
Hole Diameter 2.5-inches in. Depth 12 feet ft.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

ESTIMATED STARTING DATE 05/18/2015

ESTIMATED COMPLETION DATE 05/18/2015

F. WELL DESTRUCTION. See attached.

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

G. SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after completion of permitted work the well installation report including all soil and water laboratory analysis results.

APPLICANT'S SIGNATURE _____

Date 05/08/2015

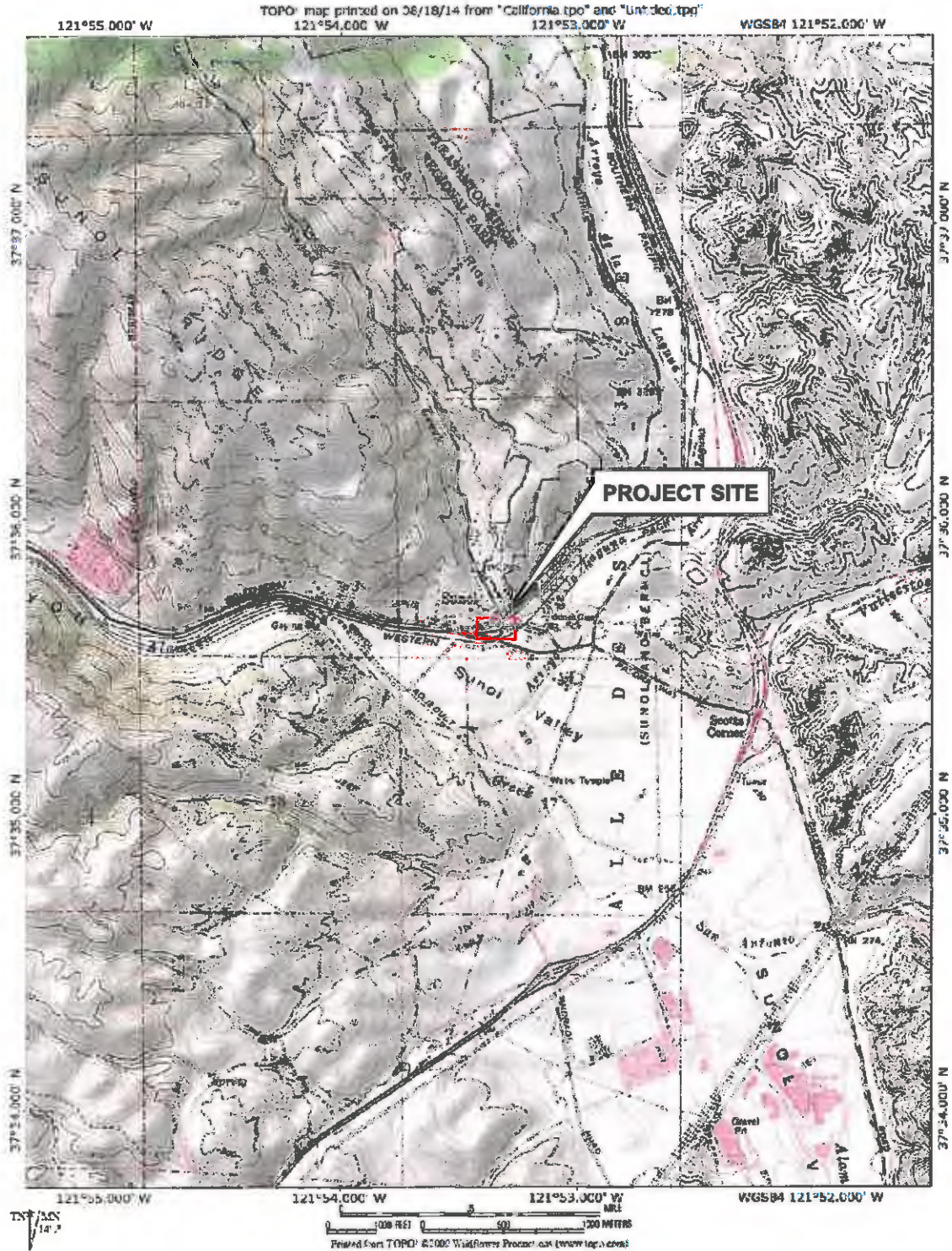
Approved _____

Wyman Hong

Date 6/4/15

ATTACH SITE PLAN OR SKETCH

Revised: May 17, 2011



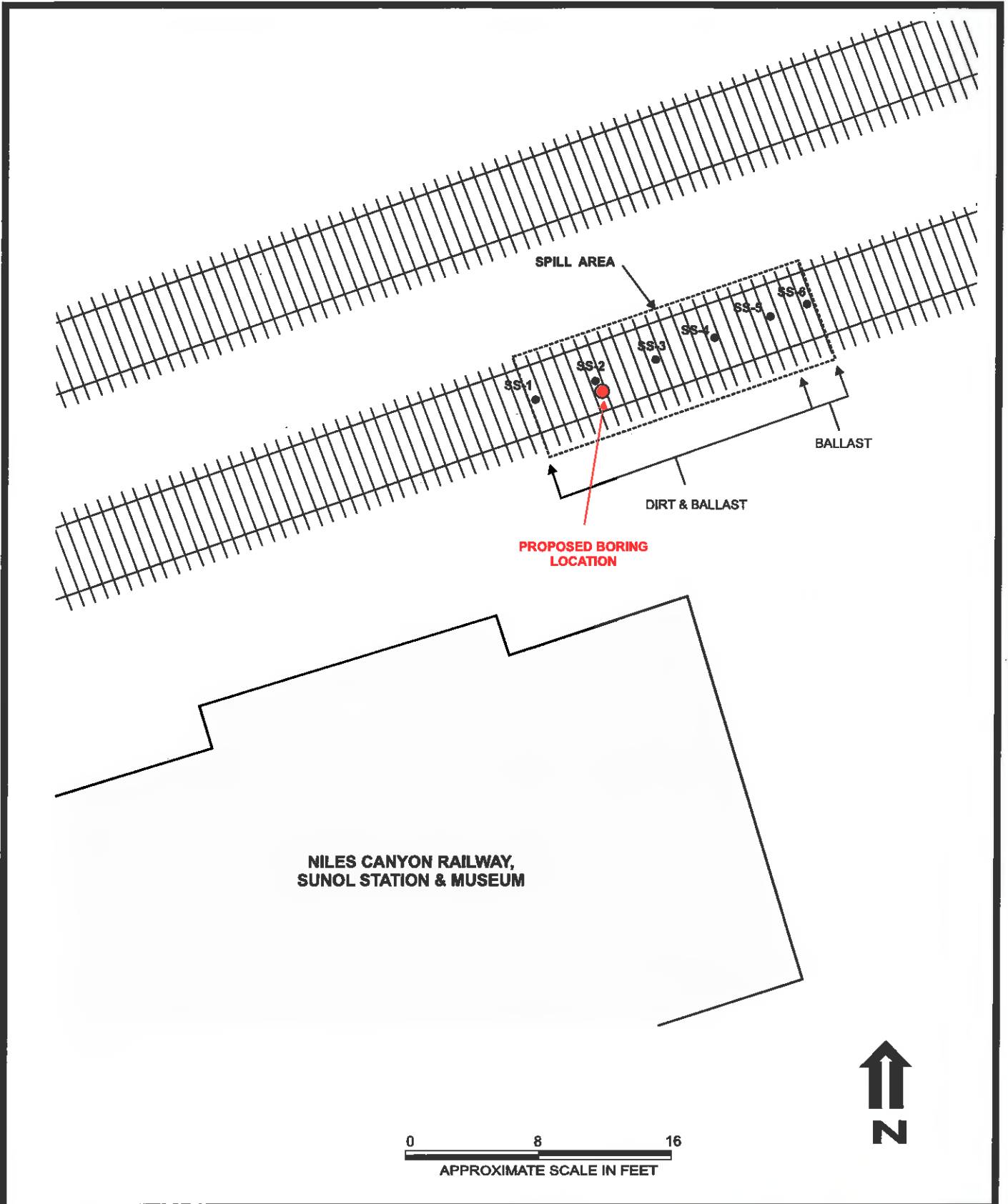
DESIGNED BY:	CHECKED BY: JG
DRAWN BY: RB	SCALE:
PROJECT NO:	

SITE VICINITY MAP

NILES CANYON RAILWAY
6 KILKARE ROAD
SUNOL, CALIFORNIA

DATE: 05/08/2015 FIGURE: 1





DESIGNED BY:	CHECKED BY:	SITE PLAN NILES CANYON RAILWAY 6 KILKARE ROAD SUNOL, CALIFORNIA	DATE: 05/08/2015	FIGURE: 2
DRAWN BY:	SCALE:			
PROJECT NO:				

ATTACHMENT A

SITE PHOTOS

ATTACHMENT B
SOIL DISPOSAL MANIFEST

ATTACHMENT C

**LABORATORY DATA REPORTS AND
CHAIN-OF-CUSTODY RECORDS**

ATTACHMENT D
SOIL BORING PERMIT