ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
OFFICE OF THE DIRECTOR
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502
(510) 567-6777
FAX (510) 337-9135

REMEDIAL ACTION COMPLETION CERTIFICATION

August 7, 2014

Mr. Fred Delucchi
The California Army National Guard
9800 Goethe Road
Sacramento, CA 95826-9101
(sent via electronic mail to:
fred.a.delucchi.civ@mail.mil)

Mr. Paul Dixon
San Lorenzo Unified School District
15510 Usher Street
San Lorenzo, CA 94580
(sent via electronic mail to PDixon@slzusd.org)

Subject: Case Closure for Fuel Leak Case No. RO0003099 and GeoTracker Global ID T10000004346, California National Guard / San Lorenzo High School, 16501 Ashland Avenue, San Lorenzo, CA 94580

Dear Messrs. Delucchi and Dixon:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

Please be aware that claims for reimbursement of corrective action costs submitted to the Underground Storage Tank Cleanup Fund more than 365 days after the date of this letter or issuance or activation of the Fund's Letter of Commitment, whichever occurs later, will not be reimbursed unless one of the following exceptions applies:

- Claims are submitted pursuant to Section 25299.57, subdivision (k) (reopened UST case); or
- Submission within the timeframe was beyond the claimant's reasonable control, ongoing work is required for closure that will result in the submission of claims beyond that time period, or that under the circumstances of the case, it would be unreasonable or inequitable to impose the 365-day time period.

This notice is issued pursuant to subdivision (g) of Section 25296.10 of the Health and Safety Code. Please contact our office if you have any questions regarding this matter.

Sincerely,

Ariu Levi
Director

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

ENVIRONMENTAL HEALTH DEPARTMENT
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

August 7, 2014

Mr. Fred Delucchi
The California Army National Guard
9800 Goethe Road
Sacramento, CA 95826-9101
(sent via electronic mail to:
fred.a.delucchi.civ@mail.mil)

Mr. Paul Dixon
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Subject: Case Closure for Fuel Leak Case No. RO0003099 and GeoTracker Global ID T10000004346, California National Guard / San Lorenzo High School, 16501 Ashland Avenue, San Lorenzo, CA 94580

Dear Messrs. Delucchi and Dixon:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25296.10[g]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed. This case closure letter and the case closure summary can also be viewed on the State Water Resources Control Board's Geotracker website (http://geotracker.waterboards.ca.gov) and the Alameda County Environmental Health website (http://www.acgov.org/aceh/index.htm).

If you have any questions, please call Mark Detterman at (510) 567-6876. Thank you.

Sincerely,

Dilan Roe

Dilan Roe, P.E.
LOP and SCP Program Manager

Enclosures:
1. Remedial Action Completion Certification
2. Case Closure Summary

Cc w/enc.: Alameda County Public Works, Building Inspection Division, 399 Elmhurst Street, Room 141, Hayward, CA 94544

Susan Garner, EquoLogic Group, 15936 Barry Lane, Monte Sereno, CA 95030
(Sent via electronic mail to sgarner@equologicgroup.com)

Krzysztof Markowski, IR/MMR Program Manager, Military Department, 10620 Mather Road, Mather, CA 95655-4176; (Sent via electronic mail to krzysztof.m.markowski.nfg@mail.mil)

Dilan Roe, ACEH (Sent via electronic mail to dilan.roe@acgov.org)
Mark Detterman, ACEH, (sent via electronic mail to mark.detterman@acgov.org)
Geotracker, Case Electronic File

CASE CLOSURE SUMMARY
SITE CLEANUP PROGRAM

I. AGENCY INFORMATION

Date: August 7, 2014

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6876
Responsible Staff Person: Mark Detterman	Title: Senior Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: California Army National Guard / San Lorenzo School District		
Site Facility Address: 16501 Ashland Avenue, San Lorenzo, CA 94580		
RB Case No.: ----	STiD No. ----	LOP Case No.: RO0003099
GeoTracker ID: T10000004346		APN: 413-19-2-7
Current Land Use: School Site (Residential)		

Responsible Parties	Addresses	Phone Numbers
Paul Dixon	15510 Usher Street San Lorenzo, CA 94580	None Listed
Jim Musillani	The California Army National Guard Armory	None Listed

This Case Closure Summary along with the Case Closure Transmittal letter provides documentation of the case closure. This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions. Additional information on the case can be viewed in the online case file. The entire case file can be viewed over the Internet on the Alameda County Environmental Health (ACEH) website (http://www.acgov.org/aceh/lop/ust.htm) or the State of California Water Resources Control Board GeoTracker website (http://geotracker.waterboards.ca.gov). Not all historic documents for the fuel leak case may be available on GeoTracker. A more complete historic case file for this site is located on the ACEH website.

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Release from underground storage tank (UST) system and armory fill materials.
Primary constituents of concern: Diesel and asbestos.
Areas of site investigated for this case: Underground storage tank, wash rack, clarifier, and armory fill materials
Remediation attempted or completed: No remediation attempted

Number of monitoring wells installed: 0	Number of monitoring wells destroyed: 0	Number of monitoring wells remaining: 0
Highest Groundwater Depth Below Ground Surface: 12.5 feet bgs *	Lowest Depth: 12.5 feet bgs *	Flow Direction: Southwest **
Most Sensitive Current Groundwater Use: Potential drinking water source.		

* Only grab groundwater samples were collected in source area. Tank backfill water was encountered in granular backfill materials at approximately 7.5 feet bgs.

** Groundwater monitoring wells were not installed, gradient from adjacent site RO#0000498.

Summary of Production Wells in Vicinity: There are three water supply wells at the subject site. Two are classified as irrigation wells and are between 610 and 616 feet in total depth. A 194 foot well at the site is classified as domestic. The wells are located to the west of the release location at an approximate distance of 930 to 1,030 feet, but are not considered to be receptors based on the limited magnitude of the release, the substance released, the distance, and the depth of the screen intervals, and the depth of the sanitary seal of the water supply wells. There are four additional domestic water supply wells within approximately 950 to 1,050 feet of the site. Each is located upgradient of the site to the northeast. These four wells are not considered to be potential receptors due to the distance and the upgradient position of the wells, the limited magnitude of the release, the substance released, and the depth of the screen intervals, and the depth of the sanitary seal of the water supply wells relative to the site.	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest Surface Water Name: San Lorenzo Creek is approximately 1,180 feet south-southwest of the site.

LTCP GROUNDWATER SPECIFIC CRITERIA – PETROLEUM						
LTCP Groundwater Specific Scenario under which case was closed: Scenario 1						
Site Data			LTCP Scenario 1 Criteria (ppb)	LTCP Scenario 2 Criteria (ppb)	LTCP Scenario 3 Criteria (ppb)	LTCP Scenario 4 Criteria (ppb)
Plume Length	<100 feet		<100 feet	<250 feet	<250 feet	<1,000 feet
Free Product	No free product.		No free product	No free product	Removed to maximum extent practicable	No free product
Plume Stable or Decreasing	Stable		Stable or decreasing	Stable or decreasing	Stable or decreasing for minimum of 5 Years	Stable or decreasing
Distance to Nearest Water Supply Well	> 250 feet		>250 feet	>1,000 feet	>1,000 feet	>1,000 feet
Distance to Nearest Surface Water and Direction	1,180 feet crossgradient		>250 feet	>1,000 feet	>1,000 feet	>1,000 feet
Property Owner Willing to Accept a Land Use Restriction?	Not applicable for groundwater specific criteria.		Not applicable	Not applicable	Yes	Not applicable
GROUNDWATER CONCENTRATIONS						
Constituent	Historic Site Maximum (ppb)	Current Site Maximum (ppb)	LTCP Scenario 1 Criteria (ppb)	LTCP Scenario 2 Criteria (ppb)	LTCP Scenario 3 Criteria (ppb)	LTCP Scenario 4 Criteria (ppb)
Benzene	<0.5	<0.5	No criteria	3,000	No criteria	1,000
MTBE	<0.5	<0.5	No criteria	1,000	No criteria	1,000
Scenario 5: If the site does not meet scenarios 1 through 4, has a determination been made that under current and reasonably expected future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame?			----			

LTCP VAPOR SPECIFIC CRITERIA – PETROLEUM							
LTCP Vapor Specific Scenario under which case was closed: Scenario 3A							
Active Fueling Station	Active as of Not applicable						
Site Data		LTCP Scenario 1 Criteria	LTCP Scenario 2 Criteria	LTCP Scenario 3A Criteria	LTCP Scenario 3B Criteria	LTCP Scenario 3C Criteria	LTCP Scenario 4 Criteria
Unweathered NAPL	> 10 feet	LNAPL in groundwater	LNAPL in soil	No NAPL	No NAPL	No NAPL	No criteria
Thickness of Bioattenuation Zone Beneath Foundation	< 100 ppm	≥30 feet	≥30 feet	≥5 feet	≥10 feet	≥5 feet	≥5 feet
Total TPH in Bioattenuation Zone	< 0.5 ppb	<100 ppm	<100 ppm	<100 ppm	<100 ppm	<100 ppm	<100 ppm
Maximum Current Benzene Concentration in Groundwater	No oxygen data	No criteria	No criteria	<100 ppb	≥100 and <1,000 ppb	<1,000 ppb	No criteria
Oxygen Data within Bioattenuation Zone	----	No criteria	No criteria	No oxygen data or <4%	No oxygen data or <4%	≥4% at lower end of zone	≥4% at lower end of zone
Depth of soil vapor measurement beneath foundation	> 10 feet	No criteria	No criteria	No criteria	No criteria	No criteria	≥5 feet

SCENARIO 4 DIRECT MEASUREMENT OF SOIL VAPOR CONCENTRATIONS						
Site Soil Vapor Data			No Bioattenuation Zone		Bioattenuation Zone	
Constituent	Historic Maximum ($\mu g/m^3$)	Current Maximum ($\mu g/m^3$)	Residential	Commercial	Residential	Commercial
Benzene	----	----	<85	<280	<85,000	<280,000
Ethylbenzene	----	----	<1,100	<3,600	<1,100,000	<3,600,000
Naphthalene	----	----	<93	<310	<93,000	<310,000
If the site does not meet scenarios 1 through 4, does a site-specific risk assessment for the vapor intrusion pathway demonstrate that human health is protected?			----			
If the site does not meet scenarios 1 through 4, has a determination been made that petroleum vapors from soil or groundwater will have no significant risk of adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls?			----			

DIRECT CONTACT CRITERIA – NON-PETROLEUM (ASBESTOS)	
Are maximum soil concentrations within the upper 10 feet less than relevant screening criteria?	Yes
Has a determination been made that the potential for direct contact with site contamination in shallow soil (upper 10 feet) poses a low threat to human health and safety under the current land use?	Yes
Has a determination been made that the potential for direct contact with site contamination in shallow soil (upper 10 feet) poses a low threat to human health and safety if land use changes to a residential or other conservative land use in the future?	Yes

LTCP DIRECT CONTACT AND OUTDOOR AIR EXPOSURE CRITERIA – PETROLEUM						
LTCP Direct Contact and Outdoor Air Exposure Specific Scenario under which case was closed: Maximum concentrations of petroleum hydrocarbons are less than or equal to those in Table 1 below.						
Are maximum concentrations less than those in Table 1 below?				Yes		
Constituent		Residential		Commercial/Industrial		Utility Worker
		0 to 5 feet bgs (ppm)	Volatilization to outdoor air (5 to 10 feet bgs) ppm	0 to 5 feet bgs (ppm)	Volatilization to outdoor air (5 to 10 feet bgs) ppm	0 to 10 feet bgs (ppm)
Site Maximum	Benzene	<0.005	<0.005	<0.005	<0.005	<0.005
LTCP Criteria	Benzene	≤1.9	≤2.8	≤8.2	≤12	≤14
Site Maximum	Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005
LTCP Criteria	Ethylbenzene	≤21	≤32	≤89	≤134	≤314
Site Maximum	Naphthalene	----	----	----	----	----
LTCP Criteria	Naphthalene	≤9.7	≤9.7	≤45	≤45	≤219
Site Maximum	PAHs	----	----	----	----	----
LTCP Criteria	PAHs	≤0.063	NA	≤0.68	NA	≤4.5
If maximum concentrations are greater than those in Table 1, are they less than levels from a site-specific risk assessment?		----				
If maximum concentrations are greater than those in Table 1, has a determination been made that the concentrations of petroleum in soil will have no significant risk of adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls?		----				

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.
Site Management Requirements: The fuel leak case has been evaluated for closure consistent with the State Water Resource Control Board Low-Threat Underground Storage Tank Closure Policy (LTCP). Based on this evaluation, no site management requirements appear to be necessary. However, excavation or construction activities in areas of potential residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities. No site management requirements appear required in association with limited residual asbestos contamination.
Should corrective action be reviewed if land use changes? No

Was a deed restriction or deed notification filed? No	Date Recorded: ----

V. ADDITIONAL COMMENTS AND CONCLUSION

Additional Comments:

Although the UST held heating oil or diesel product, naphthalene was not an analyte in shallow soil samples. However, the highest concentration of Total Petroleum Hydrocarbons as diesel (TPHd) that is documented in the source area was 110 milligrams per kilogram (mg/kg) in the four-point composite stockpile sample. The *Leaking Underground Fuel Tank Guidance Manual* (State Water Resource Control Board, September 2012) states that the average and highest concentrations of naphthalene documented in fresh diesel product are 0.26 and 0.8%. Assuming dilution of one sub-composite sample of 440 mg/kg, by three sub-composite samples with non-detectable TPHd concentrations, the highest concentration of naphthalene that would be expected from this concentration of TPHd would be 3.52 mg/kg. The LTCP states that up to 9.7 mg/kg naphthalene will have no significant risk of adversely affecting human health at a residential site. The stockpile containing this concentration is documented to have been disposed of at an offsite location. ACEH concludes that there is very limited possibility of naphthalene concentrations over residential LTCP standard at the site at depth.

Asbestos is a solid mineral that was detected at limited concentrations below applicable goals (target analytical sensitivity of less than 0.0005%) in shallow fill material. Groundwater contamination is not a concern. Based on the analytical test results the inhalation of asbestos fibers is not a concern.

Conclusion:

Alameda County Environmental Health staff believe that the site meets the conditions for case closure under the State Water Resources Control Board Low-Threat Underground Storage Tank Closure Policy, and that the levels of residual asbestos contamination do not pose a significant threat to water resources, public health and safety, and the environment based upon the information available in our files to date. No further investigation or cleanup for the fuel leak case and residual asbestos contamination is necessary. ACEH staff recommend case closure

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Mark Detterman, P.G., C.E.G.	Title: Senior Hazardous Materials Specialist
Signature: Mark E.	Date: 8/7/2014
Approved by: Dilan Roe	Title: LOP and SCP Program Manager
Signature: Dilan Roe	Date: 8/7/2014

VII. REGIONAL BOARD AND PUBLIC NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
Regional Board Notification Date: 12/6/2013	
Public Notification Date: 12/6/2013	

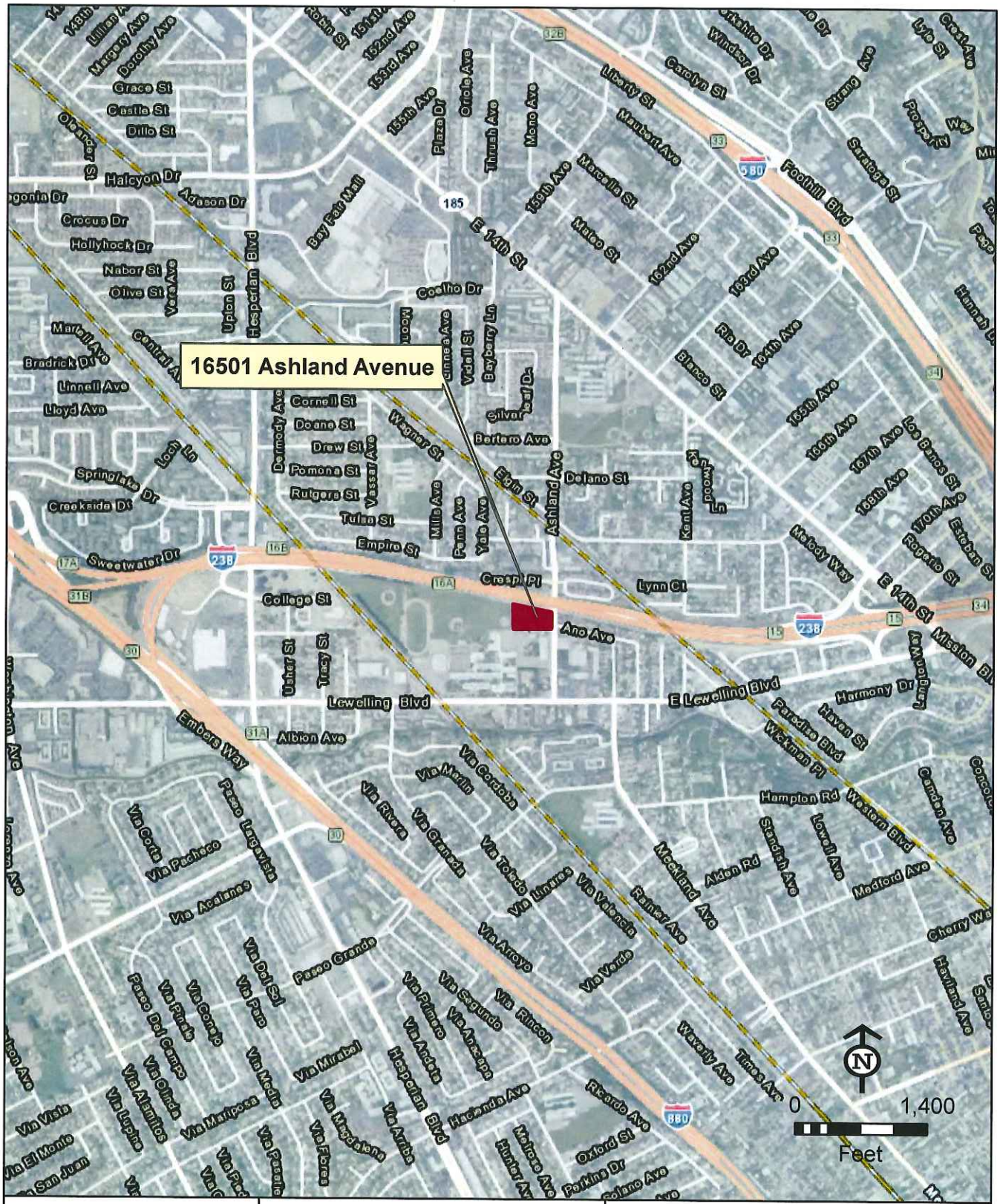
VIII. MONITORING WELL DESTRUCTION

Date Requested by ACEH: ----	Date of Well Destruction Report: ----	
All Monitoring Wells Destroyed: Yes	Number Destroyed: 0	Number Retained: 0
Reason Wells Retained: ----		
Additional requirements for submittal of groundwater data from retained wells: ----		
ACEH Concurrence - Signature: Mark E.		Date: 8/7/2014

Attachments:

1. Site Vicinity Map and Aerial Photo (2 pp)
2. Site Plan (2 pp)
3. Soil Analytical Data (13 pp)
4. Groundwater Analytical Data (2 pp)

ATTACHMENT 1



APPLIED WATER RESOURCES

Figure - 1

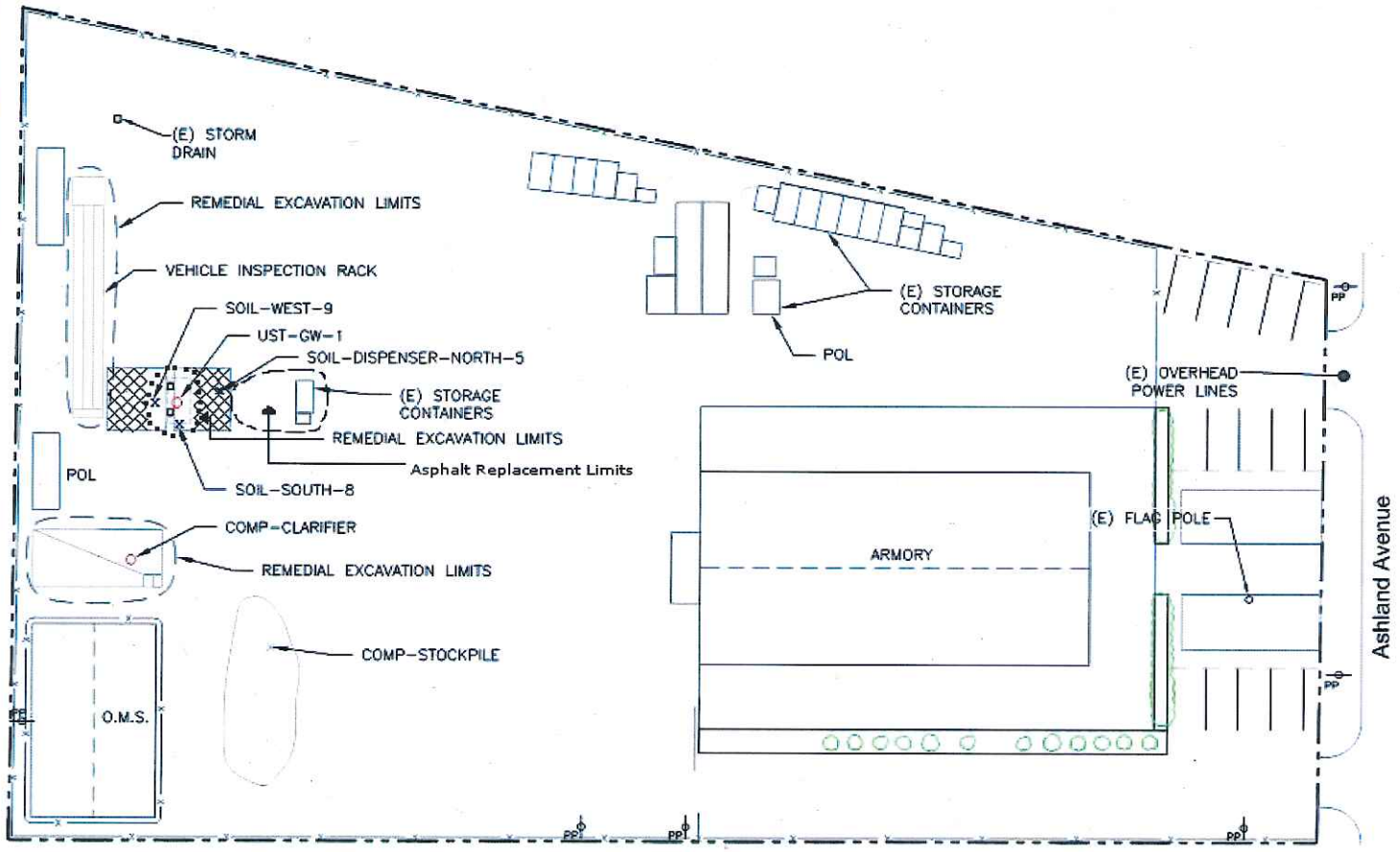
Location Map

San Lorenzo Armory
16501 Ashland Avenue San Lorenzo, CA

Created August 10th, 2012


Ashland Ave
Google
Imagery ©2014 Google, Map data ©2014 Google 100 ft

ATTACHMENT 2



General Site Legend:

- Property Boundary
- Vegetation
- Power Pole
- Soil Pile
- Groundwater Sample Location
- Soil Sample Location
- Excavation Limits
- Former Location of 5,000 gallon UST
- UST Excavation Limits
- Concrete Slab and Fuel Dispenser Excavation Limits

General Site Notes:

See Tables 1A and 1B for Analytical Results

N

0 40 80

APPROXIMATE SCALE IN FEET

DATE:	PROJECT NO.
01-11	30077

California Army National Guard Armory
San Lorenzo, CA

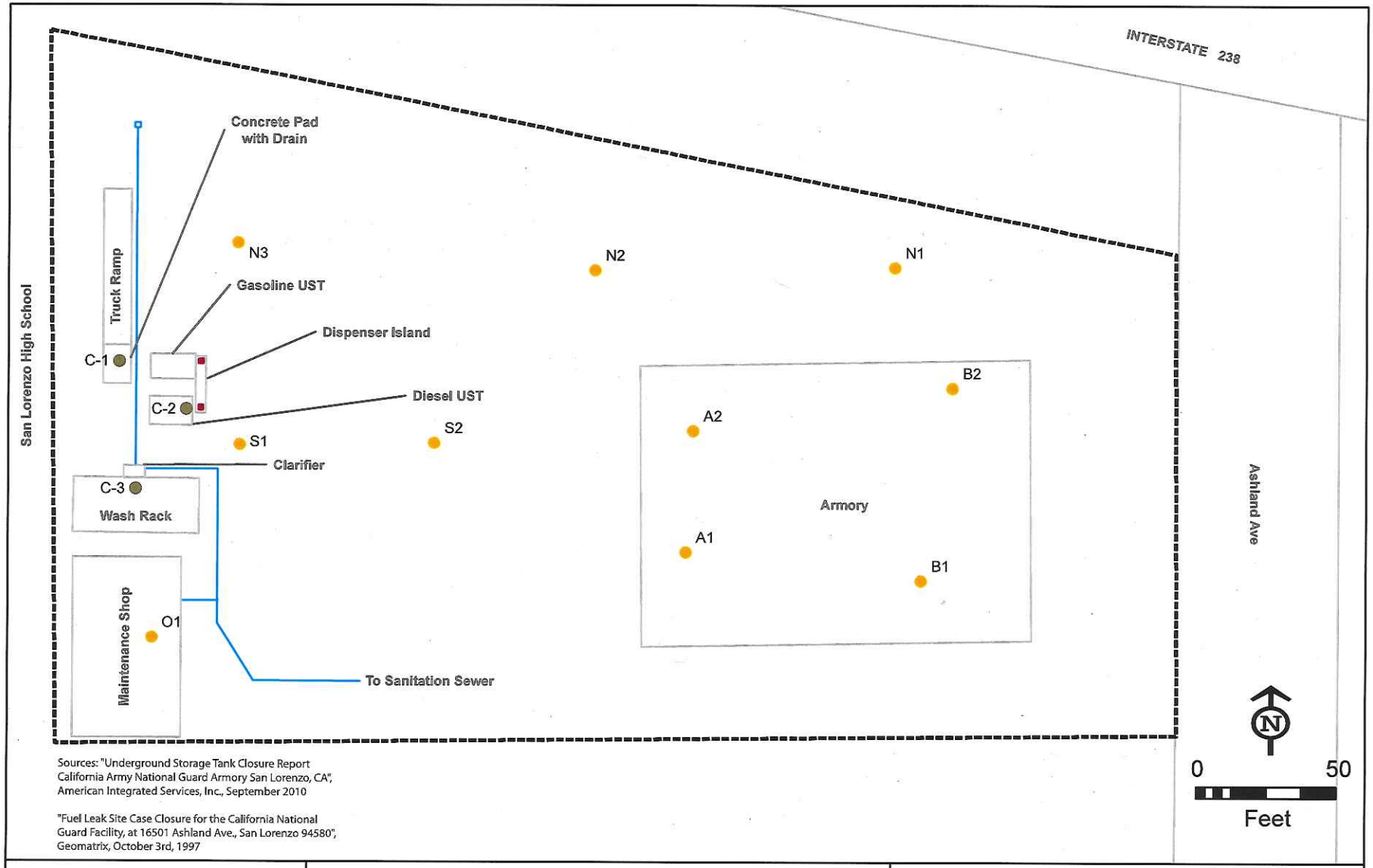
Confirmation Sampling Locations

San Lorenzo, CA

American Integrated Services, Inc.

FIGURE 3

FILE NAME: Z:\AIS\SAN LORENZO\SITEMAP\2011\SITEMAPS.0111\Fig 3 30077.0111.DWG



Sources: "Underground Storage Tank Closure Report California Army National Guard Armory San Lorenzo, CA", American Integrated Services, Inc., September 2010

"Fuel Leak Site Case Closure for the California National Guard Facility, at 16501 Ashland Ave., San Lorenzo 94580", Geomatrix, October 3rd, 1997

APPLIED WATER RESOURCES

Asbestos and Lead Sample
Boring
Existing Pipeline
Dispenser
Former Building Location
Storm Drain
Property Boundary

Figure - 2

Site Map and Boring Locations

San Lorenzo Armory
16501 Ashland Avenue San Lorenzo, CA

Created August 28th, 2012

ATTACHMENT 3

Table 1-A: Summary of Confirmation Samples - TPH and VOCs

California Army National Guard

San Lorenzo Armory

WATER

Sample ID	Date	EPA 8015B			EPA 8260B								
		TPHg C6-C12 (µg/L)	TPHd C10-C23 (µg/L)	TPHmo C18-C36 (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	TBA (µg/L)
Comp-Clarifier-1	6/23/2010	ND	290	800	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comp-Rin-1	6/23/2010	51,000	1,400,000	350,000	ND	65	120	760	ND	ND	ND	ND	ND
UST-GW-1	6/23/2010	--	820	--	ND	ND	0.62	6.1	ND	ND	ND	ND	ND

SOIL

Sample ID	Date	EPA 8015B			EPA 8260B								
		TPHg C6-C12 (mg/kg)	TPHd C10-C23 (mg/kg)	TPHo C18-C36 (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	ETBE (mg/kg)	DIPE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)
Soil-West-9	6/23/2010	--	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Soil-Dispenser-North-5	6/23/2010	--	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Soil-South-8	6/23/2010	--	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comp-Stkple	7/1/2010	--	110	--	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND:	Not detected above the reporting limit/method detection limit
TPHg:	Total Petroleum Hydrocarbons as gasoline
TPHd:	Total Petroleum Hydrocarbons as diesel
TPHmo:	Total Petroleum Hydrocarbons as motor oil
µg/L:	micrograms per Liter
mg/kg:	milligrams per kilogram
Comp-Clarifier-1:	Composite water sample collected from clarifiers
Comp-Rin-1:	Composite water sample collected from rinsate
Comp-Stkple:	Composite soil sample collected from the stockpiled soil
UST:	underground storage tank
GW:	groundwater
MTBE:	methyl-t-butyl ether
ETBE:	ethyl tert-butyl ether
DIPE:	diisopropyl ether
TAME:	tert-Amyl methyl ether
TBA:	t-Butyl alcohol

Table 1-B: Summary of Confirmation Results - Metals

California Army National Guard

San Lorenzo Armory

Sample ID	Date	EPA E200.8 for CAM/CCR 17 Metals (µg/L)																
		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Comp-Clarifier-1	6/23/2010	1.4	1.0	120	ND	5.5	4.4	1.1	30	31	ND	3.0	15	ND	ND	ND	3.4	620
Comp-Rin-1	6/23/2010	7.7	42	77	ND	39	490	220	780	480	0.13	1.6	1100	ND	0.41	ND	26	1400

ND:	Not detected above the reporting limit/method detection limit
µg/L:	micrograms per Liter
Comp-Clarifier-1:	Composite water sample collected from clarifiers
Comp-Rin-1:	Composite water sample collected from rinsate

Table 1
Soil Analytical Results for Petroleum, VOCs, and Metals
16501 Ashland Ave, San Lorenzo, California

Location ID	Date Sampled	Sample Depth (ft bgs)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	Isopropylbenzene	Propylbenzene	sec-Butylbenzene	n-Butylbenzene	Cadmium	Chromium	Lead	Nickel	Zinc
			mg/kg			µg/kg				mg/kg				
ESLs			**83**			--	--	--	--	**1.7**	--	**200**	**150**	**600**
C1	8/9/2012	10	1.1	7.9Y	<5	250	1,400	520	1,400	<0.27	46	5	51	49
C2	8/9/2012	--	No Recovery											
C3	8/9/2012	5	<0.17	<0.99	<5	<4	<4	<4	<4	0.28	44	5.2	46	48

Notes:

ESLs: Environmental Screening Levels are for a residential land use scenario with shallow soil contamination and ground water is considered a potential drinking water resource.

mg/kg: milligrams per kilogram

µg/kg: micrograms per kilogram

<: Concentration is below the reporting limit of the lab

--: not applicable

Table 3
Soil Analytical Results for Lead
16501 Ashland Ave, San Lorenzo, California

Location ID	Date Sampled	Sample Depth (ft bgs)	Lead
			mg/kg
DTSC Screening Guidance			**255**
A1	7/19/2012	2	22
A2	7/19/2012	2	19
B1	7/19/2012	0.5	22
B2	7/19/2012	0.5	21
N1	7/19/2012	0.5	22
N2	7/19/2012	2	21
N3	7/19/2012	0.5	35
S1	7/19/2012	2	34
S2	7/19/2012	2	30
OMS1	7/19/2012	0.5	24

Notes:
mg/kg: milligrams per kilogram

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	238706	Location:	SL Armory
Client:	Applied Water Resources	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	C1	Batch#:	189328
Lab ID:	238706-003	Sampled:	08/09/12
Matrix:	Water	Received:	08/09/12
Units:	ug/L	Analyzed:	08/10/12
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	238706	Location:	SL Armory
Client:	Applied Water Resources	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	C1	Batch#:	189328
Lab ID:	238706-003	Sampled:	08/09/12
Matrix:	Water	Received:	08/09/12
Units:	ug/L	Analyzed:	08/10/12
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	109	80-127
1,2-Dichloroethane-d4	96	69-148
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-121

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	238706	Location:	SL Armory
Client:	Applied Water Resources	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	C2	Batch#:	189328
Lab ID:	238706-001	Sampled:	08/09/12
Matrix:	Water	Received:	08/09/12
Units:	ug/L	Analyzed:	08/10/12
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	238706	Location:	SL Armory
Client:	Applied Water Resources	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	C2	Batch#:	189328
Lab ID:	238706-001	Sampled:	08/09/12
Matrix:	Water	Received:	08/09/12
Units:	ug/L	Analyzed:	08/10/12
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	111	80-127
1,2-Dichloroethane-d4	99	69-148
Toluene-d8	96	80-120
Bromofluorobenzene	99	80-121

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	238706	Location:	SL Armory
Client:	Applied Water Resources	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	C3	Batch#:	189328
Lab ID:	238706-002	Sampled:	08/09/12
Matrix:	Water	Received:	08/09/12
Units:	ug/L	Analyzed:	08/10/12
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	0.6	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	238706	Location:	SL Armory
Client:	Applied Water Resources	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	C3	Batch#:	189328
Lab ID:	238706-002	Sampled:	08/09/12
Matrix:	Water	Received:	08/09/12
Units:	ug/L	Analyzed:	08/10/12
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	1.1	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	0.7	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	111	80-127
1,2-Dichloroethane-d4	98	69-148
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-121

ND= Not Detected
RL= Reporting Limit

Accreditation Program (NVLAP) Certification #10148-3 and California Environmental Laboratory Accreditation Program (CAELAP) Certification #1620, certifies EMSL.

The soil inspection and analytical results indicate that no ACCM is present in the footprint B1 area, where previous and the current sampling was conducted. Therefore if any work is to be conducted at the site, there will be no health or safety concerns, in regards to the exposure to airborne asbestos fibers as these work tasks are being conducted at the site.

The location and results from this sampling are as follows: CARB 435 Level B

Sample ID#	Material	Location	Results
1650-1	6 inches deep Soil Clearance	SE Graded Area, -90 ft. East From Street Curb, East to West, 17 ft., South To North Center Hole	None Detected
1650-2	6 inches deep Soil Clearance	6ft. North of Center Hole	None Detected
1650-3	6 inches deep Soil Clearance	6 ft. East of Center Hole,	None Detected
1650-4	6 inches deep Soil Clearance	6ft. South of Center Hole	None Detected
1650-5	6 inches deep Soil Clearance	6ft. West of Center Hole	None Detected

The location and results from this sampling are as follows: CARB 435 Level E

Sample ID#	Material	Location	Results
1650-1	6 inches deep Soil Clearance	Area B1 - Center	None Detected
1650-2	6 inches deep Soil Clearance	Area B1- North of Center	None Detected

If you have any questions regarding this report or if we can be of further assistance, please contact our office.

Reviewed and submitted by:

Anthony M. De Arcos
Certified Asbestos Consultant
DOSH #92-0261

EMSL Analytical, Inc
2235 Polvorosa Ave , Suite 230, San Leandro, CA 94577
Phone/Fax: (510) 895-3675 / (510) 895-3680
http://www.EMSL.com sanleandrolab@emsl.com

EMSL Order:	091409032
CustomerID:	NAL51
CustomerPO:	
ProjectID:	

Attn: **Anthony DeArcos**
National Analytical Laboratories (NAL)
2201 Francisco Dr.
Ste. 140-261
El Dorado Hills, CA 95762

Phone:	(916) 361-0555
Fax:	(916) 361-0540
Received:	06/09/14 9:00 AM
Analysis Date:	6/18/2014
Collected:	6/6/2014

Project: **ARMORY FOOTPRINT: AREA B1, 5 HOLES 16501 ASHLAND AVE, SAN LORENZO CA**

Test Report: PLM Analysis of Bulk Samples for Asbestos via EPA 600/R-93/116 Method with CARB 435 Prep (Milling). Level B for 0.1% Target Analytical Sensitivity

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1650-1 *091409032-0001*	AREA B1, CENTER	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**
1650-2 *091409032-0002*	AREA B1, NORTH OF CENTER	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**
1650-3 *091409032-0003*	AREA B1, EAST OF CENTER	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**
1650-4 *091409032-0004*	AREA B1, SOUTH OF CENTER	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**
1650-5 *091409032-0005*	AREA B1, WEST OF CENTER	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	**None Detected**

Analyst(s)

Amber Albon (5)

Israel Gutierrez
or other approved signatory

Initial report from 06/18/2014 12:13:39

EMSL Analytical, Inc.
2235 Polvorosa Ave., Suite 230, San Leandro, CA 94577
Phone: (510) 895-3675 Fax: (510) 895-3680
Email: SanLeandroLab@emsl.com

Attn: *Anthony DeArcos*
National Analytical Laboratories
2201 Francisco Dr.
El Dorado Hills Ca. 95762
Phone: (916) 225-8669
Fax: (916) 361-0540

Customer ID: NAL51
Customer PO: Unavailable
Received: 6/9/14 9:00 AM
EMSL Order: 091409032
Analysis Date: 7/2/2014

Project: **Armory Footprint: Area B1, 5 Holes 16501 Ashland Ave. San Lorenzo Ca.**

Report Date: 7/7/2014

TEM CARB 435 Level: E (0.0005%)

Asbestos Analysis via Modified EPA 600/R-93/ 116 method Utilizing Analytical Electron Microscopy (Section 2.5.5.2) with CARB 435 Prep (Milling) in Soil

Client Sample ID / EMSL Sample ID	Location	Mineral Type(s)	# of Structures Detected	Analytical Sensitivity %	Asbestos Weight %	Comments
1650-1 / **0914090320001**	Area B1, Center	No Asbestos Detected		0.0005	< 0.0005	
1650-2 / **0914090320002**	Area B1, North Of Center	Chrysotile	1	0.0005	< 0.0005	

K. DUNBAR
Analyst

Approved Signatory

ATTACHMENT 4

Table 1-A: Summary of Confirmation Samples - TPH and VOCs

California Army National Guard

San Lorenzo Armory

WATER

Sample ID	Date	EPA 8015B			EPA 8260B								
		TPHg C6-C12 (µg/L)	TPHd C10-C23 (µg/L)	TPHmo C18-C36 (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	TBA (µg/L)
Comp-Clarifier-1	6/23/2010	ND	290	800	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comp-Rin-1	6/23/2010	51,000	1,400,000	350,000	ND	65	120	760	ND	ND	ND	ND	ND
UST-GW-1	6/23/2010	--	820	--	ND	ND	0.62	6.1	ND	ND	ND	ND	ND

SOIL

Sample ID	Date	EPA 8015B			EPA 8260B								
		TPHg C6-C12 (mg/kg)	TPHd C10-C23 (mg/kg)	TPHo C18-C36 (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	ETBE (mg/kg)	DIPE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)
Soil-West-9	6/23/2010	--	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Soil-Dispenser-North-5	6/23/2010	--	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Soil-South-8	6/23/2010	--	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Comp-Stkple	7/1/2010	--	110	--	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND:	Not detected above the reporting limit/method detection limit
TPHg:	Total Petroleum Hydrocarbons as gasoline
TPHd:	Total Petroleum Hydrocarbons as diesel
TPHmo:	Total Petroleum Hydrocarbons as motor oil
µg/L:	micrograms per Liter
mg/kg:	milligrams per kilogram
Comp-Clarifier-1:	Composite water sample collected from clarifiers
Comp-Rin-1:	Composite water sample collected from rinsate
Comp-Stkple:	Composite soil sample collected from the stockpiled soil
UST:	underground storage tank
GW:	groundwater
MTBE:	methyl-t-butyl ether
ETBE:	ethyl tert-butyl ether
DIPE:	diisopropyl ether
TAME:	tert-Amyl methyl ether
TBA:	t-Butyl alcohol

Table 2
Ground Water Analytical Results for Petroleum, VOCs, and Metals
16501 Ashland Ave, San Lorenzo, California

Location ID	Date Sampled	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	MTBE	Propylbenzene	1,3,5-Trimethylbenzene	Cadmium	Chromium	Lead	Nickel	Zinc
		µg/L										
ESLs		**100**	**100**	**100**	**5**	**--**	**--**	**0.25**	**50**	**2.5**	**8.2**	**81**
C1	8/9/2012	<50	<50	<300	<0.5	<0.5	<0.5	<5	<5	<5	9	<20
C2	8/9/2012	<50	<50	<300	<0.5	<0.5	<0.5	<5	<5	<5	7.4	<20
C3	8/9/2012	<50	<51	<310	0.6	1.1	0.7	<5	<5	<5	6.1	<20

Notes:

ESLs: Environmental Screening Levels are for a residential land use scenario with shallow soil contamination and ground water is considered a potential drinking water resource.

µg/L: micrograms per liter

<: Concentration is below the reporting limit of the lab

--: not applicable