December 29, 2011

Rita and Tony Sullins
Don Sul Inc.
187 North L Street
Livermore, CA 94550

Re: Transmittal Letter
Site Location: Arrow Rentals
187 North L Street, Livermore, CA 94550

Dear Mr. Wickham:

On behalf of Rita and Tony Sullins, Don Sul Inc., Geological Technics Inc. (GTI) prepared the Remedial Action Installation Report-Dual Phase Extraction Treatment, dated December 29, 2011 that was sent to your office via electronic delivery per Alameda County's guidelines.

I declare under penalty of law that the information and/or recommendations contained in the above referenced document or report is true and correct to the best of my knowledge.

Respectfully submitted,

Rita / Tony Sullins
Property Owner
Don Sul Inc.
187 North L Street
Livermore, CA 94550

Geological Technics Inc.

Remedial Action Installation Report

Dual Phase Extraction Treatment

Sullins (Arrow Rentals)
187 North "L" Street
Livermore, CA

Project No. 1262.2
December 29, 2011

Prepared for:
Tony & Rita Sullins
Arrow Rentals Service
187 North L St.
Livermore, CA 94550

Prepared by:
Geological Technics Inc.
1172 Kansas Ave.
Modesto, California 95354
(209) 522-4119
www.gtienv.com

Geological Technics Inc.

1172 Kansas Avenue
Modesto, California 95351
(209) 522-4119/Fax (209) 522-4227
www.gtienv.com

December 29, 2011

Project No.: 1262.2
Project Name: Sullins (Arrow Rentals)

Tony & Rita Sullins
Arrow Rentals Service
187 North L Street
Livermore, CA 94550

RE: Report: Installation Report: Dual Phase Extraction Treatment
Location: Sullins (Arrow Rentals), 187 North L Street, Livermore, CA

Dear Mr. & Ms. Sullins:

Geological Technics Inc. is pleased to present the following Remedial Action Installation Report detailing the installation of the Dual Phase Extraction (DPE) treatment system at the Sullins (Arrow Rentals) site. The remedial system installation followed the *Final Corrective Action Plan (CAP)* dated August 1st, 2007, which was approved by the Alameda County Environmental Health (ACEH) on August 17, 2007. The DPE treatment system was started up on November 15th, 2011.

If you have any questions or need additional information, please contact me. Thank you for this opportunity to serve your environmental needs.

Respectfully Submitted,

Raynold I. Kablanow, Ph.D.
Vice President

cc: Jerry Wickham - ACEH
Chris Davidson, City of Livermore
Matt Katen, Zone #7 Water Agency
Heidi Timken – Timken Johnson Hwang
Jennifer Sedlechek – Exxon Mobile Corp.

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Geological Technics Inc.

1172 Kansas Avenue
Modesto, California 95351
(209) 522-4119/Fax (209) 522-4227
www.gtienv.com

Remedial Action Installation Report

Dual Phase Extraction Treatment

Arrow Rentals
187 North L Street
Livermore, CA

Project No. 1262.2
December 29, 2011

1. INTRODUCTION

Gasoline range petroleum hydrocarbons associated with underground storage tank (UST) systems have been documented in soil and groundwater at the above site (sees Figures 1 and 2 for vicinity and site maps).

The Sites remedial work performed to date is summarized below:

- March 1994 - Dual Phase Extraction pilot test performed.
- October 2006 - Dual Phase Extraction pilot test performed.
- January 2007 - Corrective Action Plan (CAP) report submitted to ACEH.
- August 2007 - Final Corrective Action Plan report submitted to ACEH.
- August 2007 - ACEH directive approving Final CAP.
- December 2007 thru September 2011 - extension of Final Corrective Action Plan implementation and start-up of the Dual Phase Extraction (DPE) treatment system.
- May 2011 thru November 2011 - DPE treatment system and propane tank installation.
- November 15, 2011 - DPE treatment system start-up.

In a letter dated September 19th, 2011 Geological Technics Inc. (GTI) requested a final extension request due to permitting issues regarding the installation of the systems propane tank. An ACEH email September 20, 2011 granted GTI an extension, requesting that the DPE treatment system start-up be performed by November 15, 2011 with a subsequent Remedial Action Installation Report detailing the system start-up and installation by December 31st, 2011.

1.1. Operational Status

Both the thermal oxidizer (vapor treatment) and the air stripper (groundwater treatment) were started and operated on November 15th, 2011. The thermal oxidizer has operated 451 hours and the air stripper has operated approximately 30 hours during the 4th Quarter of 2011.

The initial start-up and operation of the DPE system has been limited to vapor phase extraction, except for startup testing for groundwater phase extraction. The sampling and inspection procedures have been completed for the Bay Area Air Quality Management District (BAAQMD) air permit and the thermal oxidizer is in full operation. The sampling and inspection procedures for the City of Livermore groundwater discharge permit is in progress and is expected to be completed in early January 2012. Once the groundwater discharge permit is issued, GTI can begin fully operating the air stripper and discharging treated groundwater to the sewer system.

2. REMEDIAL ACTION INSTALLATION

2.1. Dual Phase Extraction Equipment

The Dual Phase Extraction (DPE) treatment system, including a Thermal Oxidizer trailer and an Air Stripper skid, were modified for single-phase electrical use and installed into the sites remediation enclosure by Mako Industries of Pleasanton, CA. The underground and aboveground piping, sewer discharge piping, carbon tank assembly, utility installation and enclosure fencing was installed by Starbuck Construction of Pinedale, CA. An LEL sensor was installed to ensure that groundwater is fully treated prior to discharge into the sewer. A flow meter was installed in the sewer discharge line to record the volume of groundwater that was treated and discharged to the sewer. One (1) 500-gallon propane tank was installed by Amerigas to be used solely for the DPE treatment system.

The DPE treatment system includes the following components:

- Extraction wells for removing the soil vapor and groundwater.
- Conveyance piping to connect the treatment system to the wells, and from the water treatment system to the sanitary sewer.
- A thermal oxidizer to treat soil vapors.
- An air stripper to treat the extracted groundwater.

The general process for dual phase extraction is as follows:

- Extract vapors and water using a liquid ring vacuum pump.
- Separate the influent vapors and water in a portable vacuum tank.
- The contaminated vapor is then oxidized in a thermal oxidizer.
- The captured groundwater is transferred to the air stripper for the initial treatment.
- A granular activated carbon (GAC) system consisting of two (2) 2000-lbs units to polish the treated water from the air stripper prior to discharge to the sanitary sewer.

These components are discussed in greater detail in the following sections.

2.2. Extraction Wells

Geological Technics Inc. converted three (3) existing groundwater wells (W-1, W-1s and W-A) into groundwater and soil vapor extraction wells. Also one (1) existing vadose zone extraction well was also integrated into the Dual Phase Extraction (DPE) system (EW-1). Underground piping was installed to transmit groundwater and soil vapor from the four wells to the DPE system, as shown in Figure 3: Site Map of Remedial System. A manifold was installed to control which wells are being remediated.

The locations of these wells are shown in Figure 2: Site Map including Dual Phase Extraction System.

Well No.	Casing Dia.	Total Depth	Well Screen	Phase Extracted	GW Depth Range	Well Screen Submerged?
W-1	2"	56.5'	45.5'-55.5'	Groundwater	25' – 40' below grade surface	yes
W-1s	6"	45'	20'- 45'	Vapor		partially
EW-1	4"	25'	10'- 25'	Vapor		no
W-A	4"	63'	42'- 57.5'	Groundwater*		yes

The extraction well construction details are outlined in the table above and further details regarding the wells is provided in Table 1 of Appendix A. The locations of these wells are shown in Figure 2: Site Map including Dual Phase Extraction System.

*Note: W-A is has been modified to allow for the installation of air sparging and groundwater extraction equipment at a later date. Currently the well is used for extracting soil vapor since the well casing diameter is too large (4") to extract groundwater without a stinger.

Soil Vapor Extraction Wells

Soil vapor is extracted from wells W-1s and EW-1. Each well has been modified to extract soil vapors from the top of the well casing directly into the underground piping. W-1s is screened across the water table and addresses the contamination in the "smear zone" from 20 to 45 ft below grade surface (bgs). EW-1 is screened completely in the vadose zone and addresses the soil contamination from 10 to 25 ft bgs.

Groundwater Extraction Wells

Groundwater is extracted from well W-1. A one-inch corrugated tubing and PVC pipe stinger was installed in well W-1 to a depth of 47 feet below grade surface (bgs) and is screened up to 42 feet bgs. During the start-up operation of the DPE system, the water table was at a depth of 37 feet bgs. The depth of 47 feet bgs was chosen to target the top of the water table without dewatering the well.

2.3. Treatment Systems

Soil Vapor Treatment

A thermal oxidizer was installed to treat the extracted vapors prior to discharge to the atmosphere. A permit was obtained from the Bay Area Air Quality Management District (BAAQMD) for the operation of the unit. The thermal oxidizer is operated at a minimum temperature of 1400 degrees Fahrenheit and minimum abatement efficiency is maintained as required by the BAAQMD permit.

Groundwater Treatment

The extracted groundwater is treated using an air stripper followed by "polishing" in granular activated carbon.

Air Stripper

The extracted groundwater is stored in a tank after separation in the liquid ring pump. The water is pumped to an appropriately sized air stripper to remove volatile organic compounds. Air stripper's work by cascading the water downward over a series of stacked trays as air is simultaneously pumped up ward across the trays. This arrangement increases the surface area of the water stream and facilitates the volatilization of contaminants out of the water and into the vapor phase. The gasoline laden vapors are then routed back to the thermal oxidizer for treatment. Treated groundwater is routed from the base of the air stripper to the GAC system.

Granular Activated Carbon (GAC) System

The water effluent from the air stripper is then pumped through two carbon vessels (2000 lbs.) in series to remove any residual contaminants not removed by the air stripper (this is standard equipment and further elaboration is not necessary here). Upon leaving the second treatment tank, treated groundwater is discharged into the sewer. The volume of groundwater and the concentration of contaminants in the groundwater (if any) are monitored in route to the sewer discharge point.

2.4. Effluent Discharge

Soil Vapor Discharge

The soil vapor extracted by the DPE system is oxidized in the thermal oxidizer prior to discharge to the atmosphere. A permit and sampling requirements have been obtained from the Bay Area Air Quality Management District (BAAQMD) to ensure proper treatment efficiency. (Appendix C)

Groundwater Discharge

The treated groundwater exits the carbon vessels and then discharges to the City of Livermore municipal sewer system. This requires a waste discharge permit, associated sampling and the operation of an LEL sensor to ensure sufficient treatment of groundwater prior to discharge.

2.5. System Integration – Location

GTI installed the remediation compound and DPE system along the southern wall, south of the Sites main building, near the entrance of the Arrow Rentals facility. This location allowed for easy access to the modified extraction wells positioned in the impacted core area. Factors considered in this location are the fence gate that provides access to the facility, ample room for equipment, separation from the facility propane tank due to the thermal oxidizer ignition source, and access to utility lines. A security fence was installed to secure the treatment compound from vandalism.

2.6. CAP Contingency – Air Sparging

From the pilot test, GTI concluded that air sparging was a viable technology for the site. Therefore, when the DPE system efficiency decreases, GTI proposes to use air sparging technology to enhance the soil vapor extraction process. Well W-A is located approximately 15 feet up gradient of wells W-1 & W-1s. If air is injected into this well it will enhance the soil vapor extraction process and also supply oxygen to the aquifer to enhance bio-degradation. Oxygenated water in the vicinity of well W-A will flow down gradient toward wells W-1 and W-1s to enhance biodegradation in this area.

An additional trench has already been extended to the location of well W-A at the time the subsurface piping was installed for the DPE system. Piping was installed to facilitate both air sparging and groundwater extraction in well W-A at a later date if it proves necessary to augment the DPE system. Performing this action will prevent the need for a re-mobilization to cut new trenches and install piping at a later date.

3. SCHEDULING AND REPORTING

3.1. Reporting

Upon completing the groundwater discharge permitting with the City of Livermore (January 2012), the DPE treatment system can begin operating fully and discharging treated water to the sewer system. After a month of full operation, a radius of influence test will be performed. Depth-to-water measurements will be conducted during the operation of the DPE system to determine system drawdown.

Quarterly remedial effectiveness reports will be submitted documenting all monitoring, performance and maintenance activities that have taken place during that quarter. These reports will be included in the 1st and 2nd Semi-Annual groundwater monitoring reports (2nd

and 4th Quarters). A running total of the calculated volume of gasoline removed from the subsurface will be included. Recommendations will be made as to improving and/or modifying the DPE system, if needed.

The information gathered during all phases of work will be presented in appropriate reports, which will include a summary of the hydrogeology as well as the results of sample analyses. Ray Kablanow, a registered professional geologist, will supervise the project. Copies of the reports will be forwarded to the appropriate County and State regulatory agencies.

3.2. Sampling

The following samples have or will be collected to comply with system permitting and for the evaluation of the DPE treatment system performance.

Permit Sampling

Groundwater and soil vapor sampling will be conducted in order to satisfy all permitting requirements:

BAAQMD Air Permit

One (1) influent groundwater sample will be collected for each of the first three (3) days of operation of the air stripper, for a total of three (3) samples. These samples will be collected upon start-up of the air stripper following the issuance of the groundwater discharge permit. One (1) influent groundwater sample will be collected for each calendar month that the air stripper is operated. These samples will be collected upon start-up of the air stripper following the issuance of the groundwater discharge permit.

One (1) influent groundwater sample will be collected for each calendar month that the air stripper is operated. These samples will be collected upon start-up of the air stripper following the issuance of the groundwater discharge permit.

These groundwater samples will be delivered to BC Laboratories of Bakersfield, California (certification #1186) for analyses of:

- Benzene, Toluene, Ethyl Benzene, and Xylene (BTEX) by EPA method 8260B
- Total Petroleum Hydrocarbons as Gasoline (TPH-G) by EPA method 8260M

One (1) influent vapor sample and one (1) effluent vapor sample will be collected within the first ten (10) days of operation of the Thermal Oxidizer to ensure proper abatement efficiency. These samples have been collected and the results are provided in Appendix B. The groundwater samples collected on December 13th, 2011 were delivered to BC Laboratories of Bakersfield, California (certification #1186) for analyses of:

- Benzene, Toluene, Ethyl Benzene, and Xylene (BTEX) by EPA method 8260B
- Total Petroleum Hydrocarbons as Gasoline (TPH-G) by EPA method 8260M

City of Livermore Groundwater Discharge Permit

One (1) effluent groundwater sample was collected from the sewer discharge line following the granular activated carbon treatment system. This sample was collected to ensure the air stripper and carbon treatment is providing sufficient abatement. This sample has been collected and GTI is currently waiting on the results.

One (1) effluent (after second carbon tank) groundwater sample will be collected every three (3) months to ensure the air stripper and carbon treatment is providing sufficient abatement and to satisfy groundwater discharge permitting requirements.

These groundwater samples will be delivered to BC Laboratories of Bakersfield, California (certification #1186) for analyses of:

- Benzene, Toluene, Ethyl Benzene, and Xylene (BTEX) by EPA method 8260B
- Total Petroleum Hydrocarbons as Gasoline (TPH-G) by EPA method 8260B
- MTBE, DIPE, ETBE, TAME, TBA, 1,2 DCA, EDB by EPA method 8260B
- pH by EPA method 150.1
- Total Toxic Organics 40 CFR 413 by EPA methods 624 and 625

System Performance Sampling

Further groundwater and soil vapor sampling and monitoring will be conducted to determine the efficiency of the Dual Phase Extraction treatment system:

Soil Vapor

The influent and effluent ports will be sampled with a handheld Photo-Ionization Detector (PID) during each bi-monthly operation and maintenance event. One (1) influent vapor sample will be collected each month of system operation and sent to a California certified laboratory.

Groundwater

One (1) influent groundwater sample will be collected each month of system operation and sent to a California certified laboratory.

Monitoring Well Sampling

In addition to the treatment system monitoring, the following monitoring will be conducted specifically for the remedial action work:

- Wells W-1, W-1s, W-Bs, MW-4, 104 & 204, and MW-8, 108, & 208 will be sampled during the 1st and 3rd Quarters (July and January) and results will be submitted in the 2nd and 4th semi-annual groundwater monitoring and remedial effectiveness reports.
- These sampling events along with semi-annual groundwater monitoring will provide groundwater monitoring well data in the core of the groundwater plume.

*Note: Sampling conducted during the operation of the DPE treatment system is contingent on budgetary limits. Samples not required by permitting may be reduced or eliminated based on budgetary reasoning and sufficient notification will be provided to ACEH.

3.3. Schedule

Tentative schedule for tasks:

DPE System Start-up	November 2011
Complete groundwater discharge permitting	Early January 2012
Weekly operation and maintenance	January 2012
Bi-monthly operation and maintenance	February – November 2012
Radius-of-Influence testing	February 2011
1st Semi-Annual GWM and RE Report	April 2012
2nd Semi-Annual GWM and RE Report	October 2012

Operation, maintenance and monitoring will occur on a weekly basis for the first month of full system operation (January 2012) and on a bi-monthly basis following the first month. A log book detailing these events will be kept on-site at all times.

4. LIMITATIONS

This work plan was prepared in accordance with the generally accepted standard of care and practice in effect at the time Services were rendered. It should be recognized that definition and evaluation of environmental conditions is an inexact science and that the state or practice of environmental geology/hydrology is changing and evolving and that standards existing at the present time may change as knowledge increases and the state of the practice continues to improve. Further, that differing subsurface soil characteristics can be experienced within a small distance and therefore cannot be known in an absolute sense. All conclusions and recommendations are based on the available data and information.

The tasks proposed and completed during this project were reviewed and approved by the local regulatory agency for compliance with the law. No warranty, expressed or implied, is made.

5. SIGNATURES & CERTIFICATION

This report was prepared by:

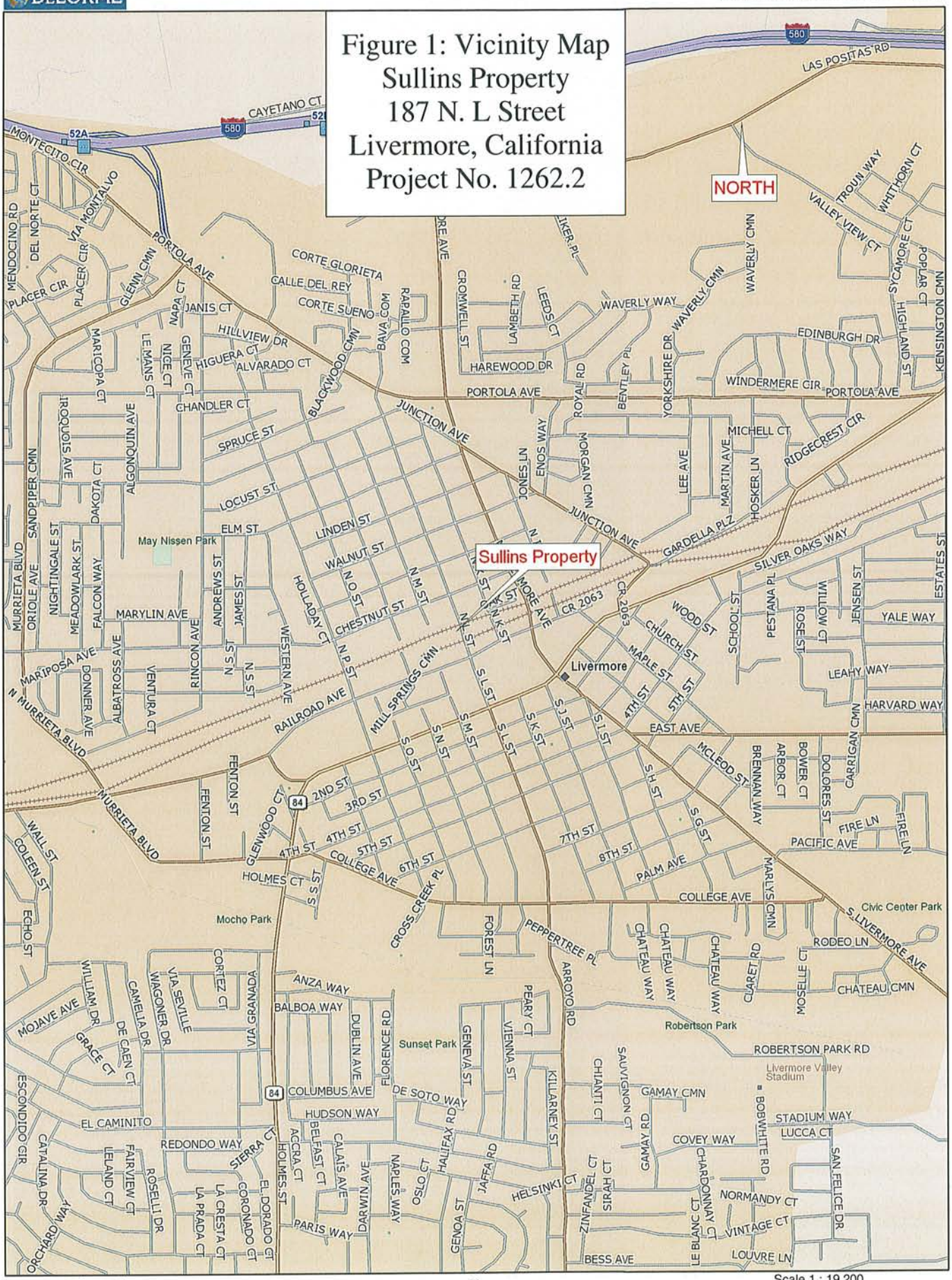
Andrew Dorn, B.S. Geology

This report was prepared under the direction of:

Raynold Kablanow II, Ph.D.
California Professional Geologist #5234
Certified Hydrogeologist #442

PROFESSIONAL GEOLOGIST
RAYNOLD I. KABLANOW
No. 5234
8-31-12
STATE OF CALIFORNIA

Figure 1: Vicinity Map
Sullins Property
187 N. L Street
Livermore, California
Project No. 1262.2



Data use subject to license.

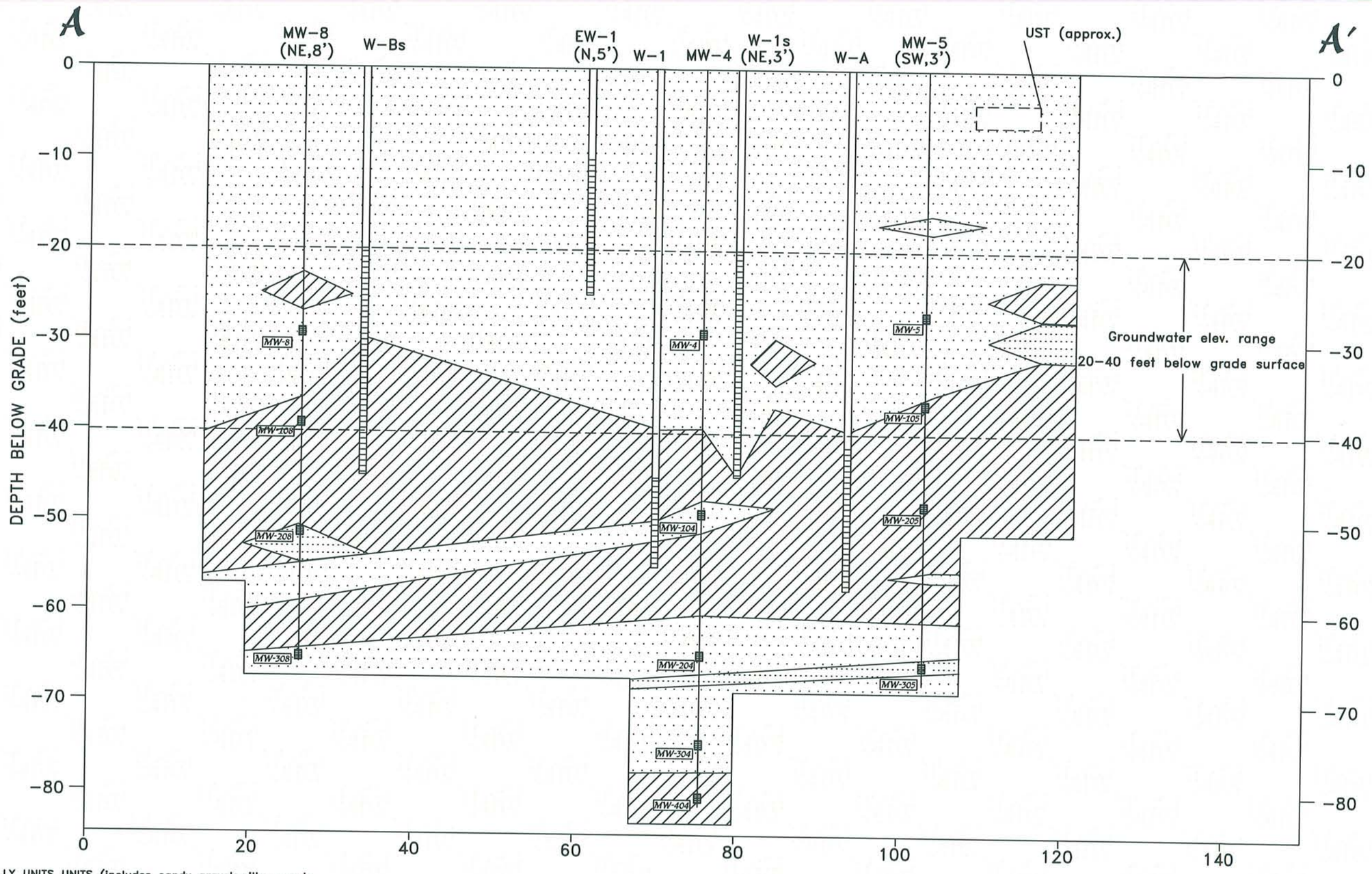
www.delorme.com

TN
MN (14.0°E)

Scale 1 : 19,200

1" = 1,600.0 ft

Data Zoom 13-4



LEGEND

GRAVELLY UNITS UNITS (includes sandy gravels,silty gravels, clayey gravels)

FINE GRAINED UNITS (includes silts and clays, gravelly clays)

SAND UNITS

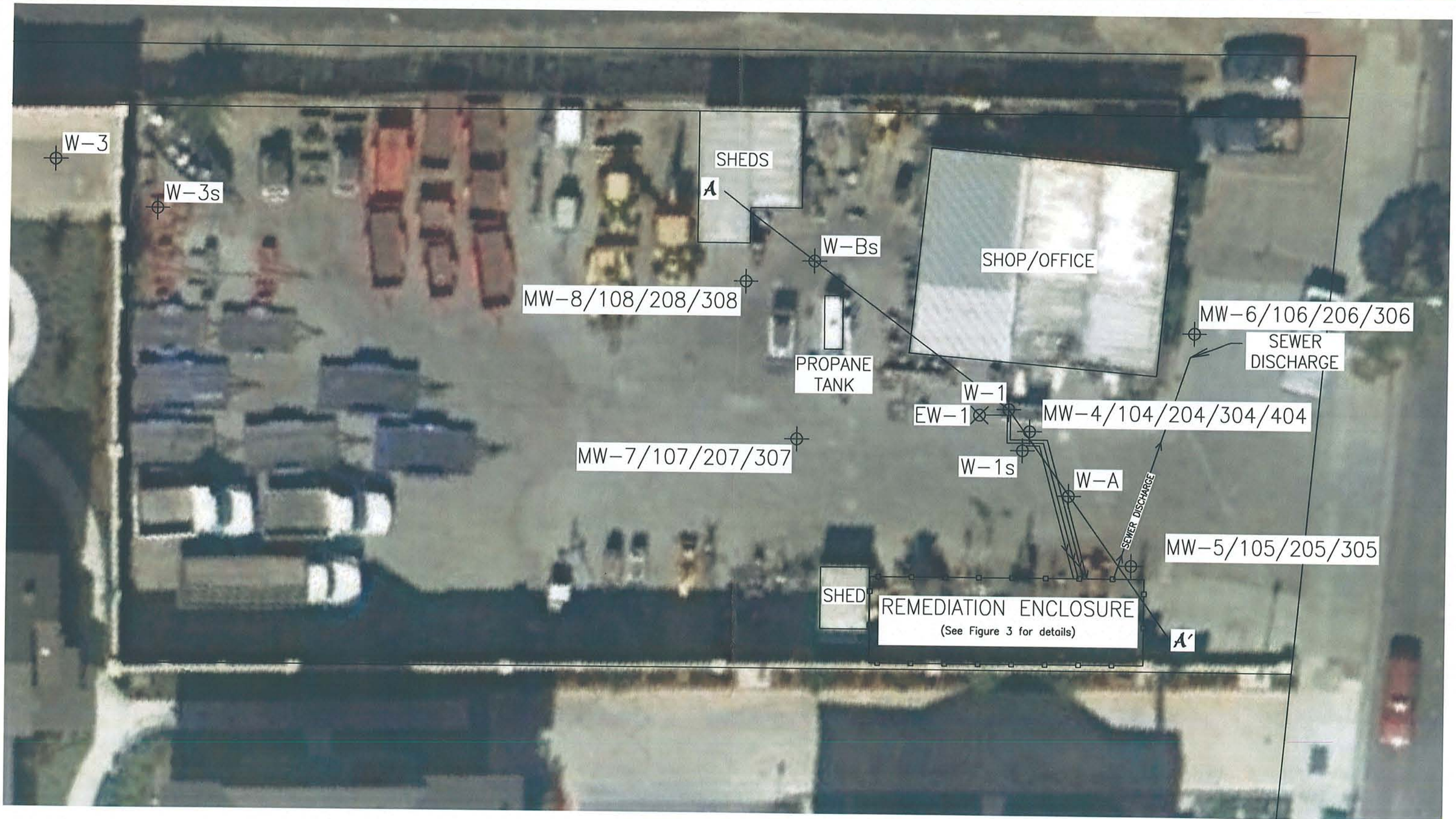
MW-108 (N,5') — CMT well screen section; Boring projection onto section (direction, distance)

By:	AD
Job No: 1262.2	Date: 12/31/11
Scale:	As indicated
File:	12622 Cross Section A–A'

Geological Technics, Inc.
1172 Kansas Avenue
Modesto, CA
95351
209.522.4119 (tel)
209.522.4227 (fax)

FIGURE 4: CROSS SECTION A – A'

ARROW RENTALS
187 NORTH L STREET
LIVERMORE, CA



LEGEND

- MONITORING WELL
- EXTRACTION WELL

N

0 5 10 15

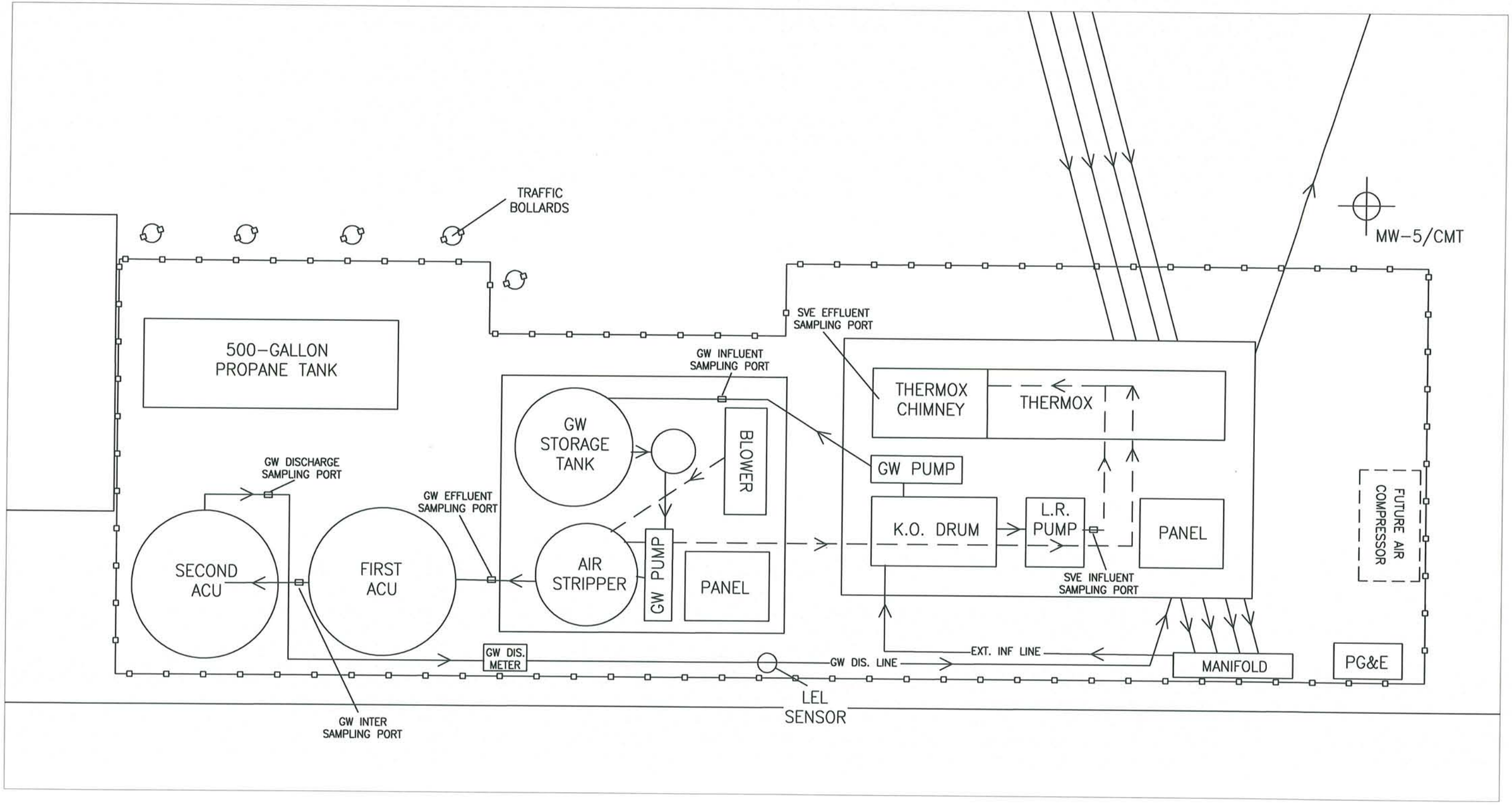
SCALE 1"=15'

By:	AD
Job No: 1262.2	Date: 12/31/11
Scale:	1"=15'
File:	12622 Site Map

Geological Technics, Inc.
1172 Kansas Avenue
Modesto, CA
95351
209.522.4119 (tel)
209.522.4227 (fax)

FIGURE 2: SITE MAP W/ REMEDIAL SYSTEM & CROSS SECTION A-A'

ARROW RENTALS
187 NORTH L STREET
LIVERMORE, CA



LEGEND

- MONITORING WELL
- EXTRACTION WELL
- GW PIPING
- SVE PIPING

N

0 1 2 3 4 5

SCALE 1"=5'

By:	AD
Job No:	1262.2 Date: 12/31/11
Scale:	1 inch = 5 feet
File:	12622 DPE Site Map

Geological Technics, Inc.
1172 Kansas Avenue
Modesto, CA
95351
209.522.4119 (tel)
209.522.4227 (fax)

FIGURE 3: SITE MAP OF REMEDIAL SYSTEM LAYOUT

ARROW RENTALS
187 NORTH L STREET
LIVERMORE, CA

Appendix A

Summary Tables

Table 1: Summary of Well Construction

Arrow Rentals
187 North L Street
Livermore, CA
Project No. 1262.2

Well/Boring Type	Well/Boring Number	Date Drilled	Total Depth (ft)	Boring Diameter (in)	Well Casing Diameter (in)	Casing Type	Slot Size (in)	Sand Type	Well Screen		Filter Pack		Annular Seal		Grout Seal	
									From	To	From	To	From	To	From	To
Monitoring	W-1	5/24/1985	56.5	8	2	PVC	0.010	#2/12	55.5	45.5	55.5	41.5	41.5	39	39	S
Monitoring	W-1s	3/10/1992	45	?	6	PVC	0.010	#2/12	45	20	45	17	17	15	15	S
Vapor Extraction	EW-1	10/2/2002	25	10	4	PVC	0.010	#2/12	25	10	25	9.5	9.5	7.5	7.5	S
Monitoring	W-A	7/11/1986	63	12	4	PVC	0.010	#2/12	57.5	42	63	40	40	36.5	36.5	S

Appendix B

Analytical Data

EXCELCHEM
Environmental Labs

1135 W Sunset Boulevard
Suite A
Rocklin, CA 95765
Phone# 916-543-4445
Fax# 916-543-4449

ELAP Certificate No. : 2119

16 December 2011

Geological Technics

Geological Technics

1172 Kansas Ave

Modesto, CA 95351

RE: Sullins

Work order number:1112097

Enclosed are the results of analyses for samples received by the laboratory on 12/09/11 10:00. All Quality Control results are within acceptable limits except where noted as a case narrative. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

_____

John Somers, Lab Director

Excelchem Environmental Labs

Geological Technics 1172 Kansas Ave Modesto, CA 95351	Project: Project Number: Project Manager:	Sullins 1262.2 Geological Technics	Date Reported: 12/16/11 16:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
INF SVE	1112097-01	Air	12/08/11 14:00	12/09/11 10:00
EFF SVE	1112097-02	Air	12/08/11 14:25	12/09/11 10:00

Excelchem Environmental Lab.

Laboratory Representative

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.

Excelchem Environmental Labs

Geological Technics	Project:	Sullins	
1172 Kansas Ave	Project Number:	1262.2	Date Reported:
Modesto, CA 95351	Project Manager:	Geological Technics	12/16/11 16:27

INF SVE
1112097-01 (Air)

Analyte	Result	Reporting Limit	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
Volatile Organic Compounds by GC/MS								
Gasoline Range Hydrocarbons	**2380**	50.0	mg/m³ Air	AUL0135	12/09/11	12/09/11	EPA 8260B	
Benzene	**7.1**	0.5	"	"	"	"	"	
Toluene	**5.6**	0.5	"	"	"	"	"	
Ethylbenzene	**2.9**	0.5	"	"	"	"	"	
m,p-Xylene	**11.7**	1.0	"	"	"	"	"	
o-Xylene	**3.8**	0.5	"	"	"	"	"	
Xylenes, total	**15.5**	1.0	"	"	"	"	"	
Surrogate: Dibromofluoromethane	*96.3 %*	% Recovery Limits		*70-130*			"	
Surrogate: Toluene-d8	*96.0 %*	% Recovery Limits		*70-130*			"	
Surrogate: 4-Bromofluorobenzene	*102 %*	% Recovery Limits		*70-130*			"	

Excelchem Environmental Lab.

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.

Laboratory Representative

Excelchem Environmental Labs

Geological Technics	Project:	Sullins	
1172 Kansas Ave	Project Number:	1262.2	Date Reported:
Modesto, CA 95351	Project Manager:	Geological Technics	12/16/11 16:27

EFF SVE

1112097-02 (Air)

Analyte	Result	Reporting Limit	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
Volatile Organic Compounds by GC/MS								
Gasoline Range Hydrocarbons	ND	20.0	mg/m³ Air	AUL0135	12/09/11	12/09/11	EPA 8260B	
Benzene	ND	0.2	"	"	"	"	"	
Toluene	ND	0.2	"	"	"	"	"	
Ethylbenzene	ND	0.2	"	"	"	"	"	
m,p-Xylene	ND	0.4	"	"	"	"	"	
o-Xylene	ND	0.2	"	"	"	"	"	
Xylenes, total	ND	0.4	"	"	"	"	"	
Surrogate: Dibromofluoromethane	*106 %*	% Recovery Limits		*70-130*			"	
Surrogate: Toluene-d8	*99.2 %*	% Recovery Limits		*70-130*			"	
Surrogate: 4-Bromofluorobenzene	*111 %*	% Recovery Limits		*70-130*			"	

Excelchem Environmental Lab.

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.

Laboratory Representative

Excelchem Environmental Labs

Geological Technics	Project:	Sullins	
1172 Kansas Ave	Project Number:	1262.2	Date Reported:
Modesto, CA 95351	Project Manager:	Geological Technics	12/16/11 16:27

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AUL0135 - EPA 8260B										
Blank (AUL0135-BLK1)				Prepared & Analyzed: 12/09/11						
Surrogate: Dibromofluoromethane	*12.6*		*ug/l*	*12.5*		*101*	*70-130*			
Surrogate: Toluene-d8	*12.7*		*"*	*12.5*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*13.6*		*"*	*12.5*		*109*	*70-130*			
Gasoline Range Hydrocarbons	ND	50.0	mg/m³ Air							
Benzene	ND	0.5	"							
Toluene	ND	0.5	"							
Ethylbenzene	ND	0.5	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.5	"							
Xylenes, total	ND	1.0	"							
LCS (AUL0135-BS1)				Prepared & Analyzed: 12/09/11						
Surrogate: Dibromofluoromethane	*11.9*		*ug/l*	*12.5*		*95.4*	*70-130*			
Surrogate: Toluene-d8	*12.3*		*"*	*12.5*		*98.5*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*13.0*		*"*	*12.5*		*104*	*70-130*			
Benzene	19.8	0.5	mg/m³ Air	20.0		99.1	20-120			
Toluene	19.2	0.5	"	20.0		96.0	20-120			
1,1-Dichloroethene	18.8	0.5	"	20.0		93.9	20-120			
Trichloroethene	18.7	0.5	"	20.0		93.7	20-120			
Chlorobenzene	19.5	0.5	"	20.0		97.4	20-120			
LCS Dup (AUL0135-BSD1)				Prepared & Analyzed: 12/09/11						
Surrogate: Dibromofluoromethane	*11.6*		*ug/l*	*12.5*		*93.1*	*70-130*			
Surrogate: Toluene-d8	*12.6*		*"*	*12.5*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*13.3*		*"*	*12.5*		*106*	*70-130*			
Benzene	20.3	0.5	mg/m³ Air	20.0		101	20-120	2.34	15	
Toluene	20.2	0.5	"	20.0		101	20-120	4.93	15	
1,1-Dichloroethene	18.3	0.5	"	20.0		91.7	20-120	2.37	15	
Trichloroethene	19.1	0.5	"	20.0		95.4	20-120	1.75	15	
Chlorobenzene	21.0	0.5	"	20.0		105	20-120	7.32	15	

Excelchem Environmental Lab.

Laboratory Representative

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.

Excelchem Environmental Labs

Geological Technics	Project:	Sullins	
1172 Kansas Ave	Project Number:	1262.2	Date Reported:
Modesto, CA 95351	Project Manager:	Geological Technics	12/16/11 16:27

Notes and Definitions

ND Analyte not detected at reporting limit.

NR Not reported

Excelchem Environmental Lab.

Laboratory Representative

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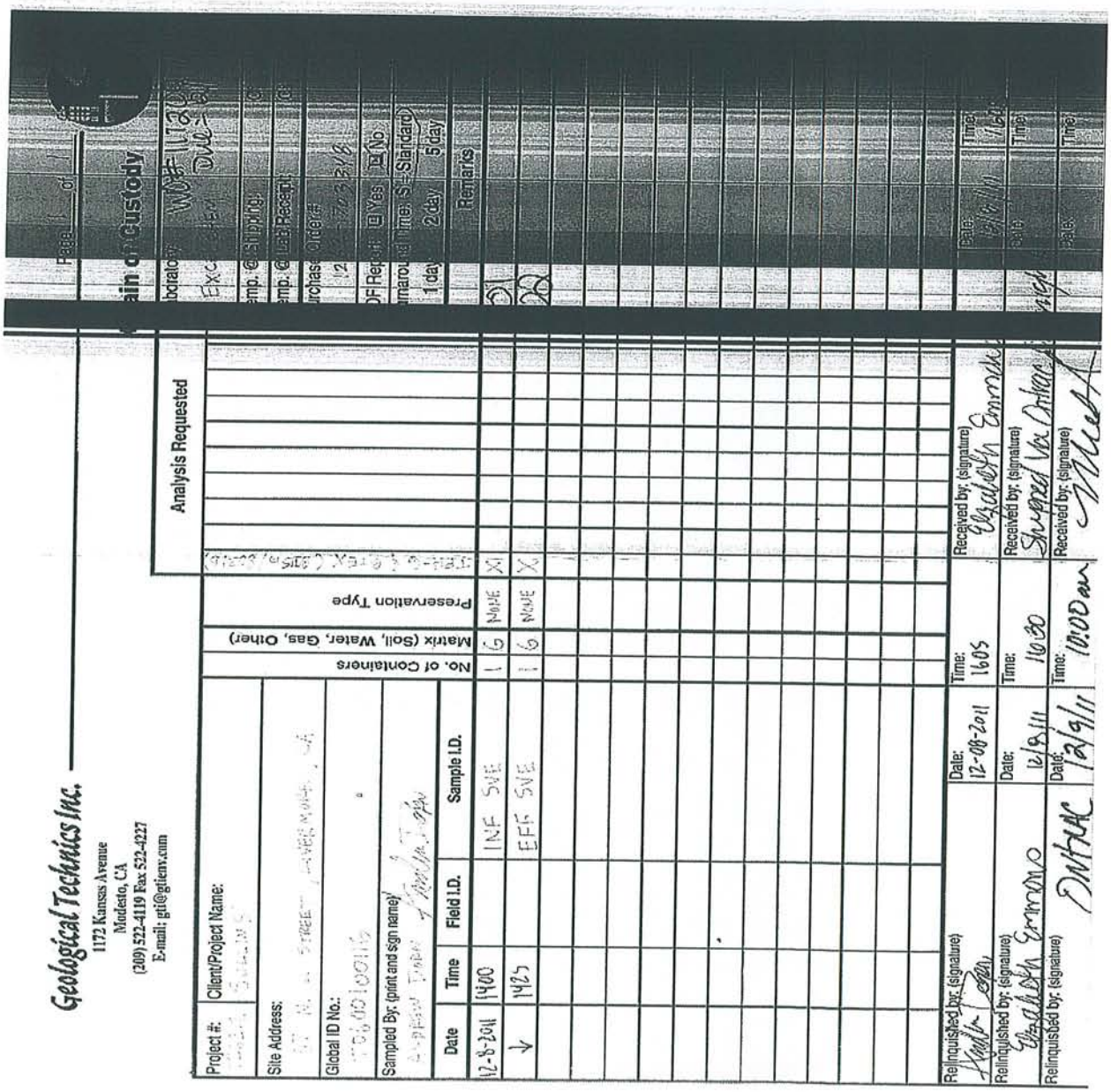
Excelchem Environmental Labs

Geological Technics 1172 Kansas Ave Modesto, CA 95351	Project: Project Number: Project Manager:	Sullins 1262.2 Geological Technics	Date Reported: 12/16/11 16:27



Geological Technics Inc.
1172 Kansas Avenue
Modesto, CA
(209) 522-4119 Fax 522-4227
E-mail: gti@gtienv.com

Chain of Custody

Project #: | Client/Project Name:
Site Address:
Global ID No.:
Sampled By: (print and sign name)

Date	Time	Field I.D.	Sample I.D.	No. of Containers	Matrix (Soil, Water, Gas, Other)	Preservation Type	Analysis Requested
12-8-2011	1400		INF SWE	1	G	None	X
↓	1425		EFF SWE	1	G	None	X

Relinquished by: (signature) — Date: 12-08-2011 — Time: 1605 — Received by: (signature)
Relinquished by: (signature) — Date: 12/8/11 — Time: 1630 — Received by: (signature)
Relinquished by: (signature) — Date: 12/9/11 — Time: 10:00 am — Received by: (signature)

Excelchem Environmental Lab.

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.

Laboratory Representative

Excelchem Environmental Labs

Geological Technics	Project:	Sullins	
1172 Kansas Ave	Project Number:	1262.2	Date Reported:
Modesto, CA 95351	Project Manager:	Geological Technics	12/16/11 16:27

Date Received: 12-9-11

Section 1 – Sample Arrival Info.

Temperature of Samples (°C): _____ Ice Chest Temperature(s) (°C): _____

Section 2 – Bottle/Analysis Info.

	Yes	No	N/A	Comments
Did all bottles arrive unbroken and intact?	X			
Did all bottle labels agree with COC?	X			
Were correct containers used for the tests requested?	X			
Were correct preservations used for the tests requested?			X	
Was a sufficient amount of sample sent for tests indicated?	X			
Were bubbles present in VOA Vials?: **(Volatile Methods Only)**			X	

Section 3 – Summa/Flow regulator Info.

Used Summa#:
Unused Summa#:
Cleaning Summa#:
Regulator#: Tedlar BAGS
Was there any visual damage to summa canisters or flow regulators? **Explain.**

Section 4 – COC Info.

	Completed Yes	Completed No	Info From Container		Completed Yes	Completed No	Comments
Was COC Received	X			Analysis Requested	X		
Date Sampled	X			Samples arrived within holding time	X		
Time Sampled	X			Any hold times less than 72 hrs	X		
Sample ID	X			Client Name	X		
Rush TAT		X		Address/Telephone #	X		

Section 5 – Comments / Discrepancies

Was Client notified of discrepancies: Yes No N/A Notified by:
Explanations / Comments:

Samples Labeled by: MG
Bin #s: —
COC Scanned/Attached by: MG
Sample labels reviewed by: _____

Filled Out by: _____ **Date:** 12-9-11 **Time:**

Excelchem Environmental Lab.

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.

Laboratory Representative

Appendix C

Bay Area Air Quality Authority To Construct Permit

Mail this part to the District.

BAAQMD
939 Ellis Street
San Francisco, CA 94109

Attention: Engineering Division

Mail this part to the District.

BAAQMD
939 Ellis Street
San Francisco, CA 94109

Attention: Engineering Division

Start-up Notification

Instructions: At least **seven days** before the scheduled initial operation contact your assigned Permit Engineer via email or complete and send this Start-up Notification to the District via fax or mail.

Engineer: Flora W Chan, Air Quality Engineer I
Tel: (415) 749-4630 **Fax:** (415) 749-4949
Email: fchan@baaqmd.gov

Plant No. 19257
Source No. S-1
Application No. 18736

The initial operation of this equipment is scheduled for 11/29/11 (month/day/year)

Print your first and last name Andrew Dorn / Ray Kablanow

Telephone No. (209) 522-4119

Start-up Notification

Instructions: At least **seven days** before the scheduled initial operation contact your assigned Permit Engineer via email or complete and send this Start-up Notification to the District via fax or mail.

Engineer: Flora W Chan, Air Quality Engineer I
Tel: (415) 749-4630 **Fax:** (415) 749-4949
Email: fchan@baaqmd.gov

Plant No. 19257
Source No. S-2
Application No. 18736

The initial operation of this equipment is scheduled for 11/29/11 (month/day/year)

Print your first and last name Andrew Dorn / Ray Kablanow

Telephone No. (209) 522-4119

Liz Emmons

From: Liz Emmons
Sent: Friday, November 18, 2011 9:05 AM
To: 'Flora Chan'
Cc: Jenny Weese; Andrew Dorn
Subject: Application #18736- 187 N L Street, Livermore, CA-Startup Notification

Good Morning,

We would like to notify you that the system is ready for startup, however when the inspector comes out we would like to have Andrew Dorn out there as well during inspection. Can you please call or email me to coordinate a date and time for the inspection?

Thank you,

Elizabeth Emmons
Executive Assistant
Geological Technics Inc.
1172 Kansas Avenue
Modesto, CA 95350
(209) 522-4119 ph
(209) 522-4227 fx
www.gtienv.com

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT
SINCE 1955

June 9, 2011

Arrow Rentals
1172 Kansas Avenue
Modesto, CA 95351

Attention: Tony & Rita Sullins

Application Number 18736
Plant Number: 19257
Equipment Location:
187 N L Street
Livermore, CA 94550

Dear Applicant:

SUBJECT: AUTHORITY TO CONSTRUCT RENEWAL

In accordance with Regulation 2-1-407, an Authority to Construct expires two years from the date of issuance unless the Authority to Construct has been renewed. The Authority to Construct issued to you on May 18, 2009 for the following equipment:

S-1 Soil Vapor Extraction System
S-2 Groundwater Treatment System

has been renewed. This Authority to Construct will now expire on May 17, 2013.

The equipment described above is subject to condition no. 24351.

Please include you application number with any correspondence with the District. The District's regulations may be viewed online at www.baaqmd.gov If you have any questions on this matter, please call **Flora W Chan, Air Quality Engineer I at (415) 749-4630.**

Very truly yours,

Jack P. Broadbent
Executive Officer/APCO

by
Engineering Division

SBL:FWC
Attachment: Condition no. 24351
H:\Engineering\PermitSystems\ACEX1

1. Precursor Organic Compound (POC) emissions from Sources S-1 and S-2 shall be abated by A-1, at least two (200lb minimum capacity) activated carbon vessels arrange in series during all periods of operation. Start-up and subsequent operation of each abatement device shall take place only after written notification of same has been received by the District's Engineering Division. Soil Vapor flow rate from S-1 shall not exceed 300 scfm. Groundwater flow rate into S-2 shall not exceed 25 gpm. In no event shall benzene emissions to the atmosphere exceed 0.018 pounds per day for sources S-1 and S-2. [basis: Reg. 8-47-301,2]

2. For each of the first three days of operation of the air stripper, at least one influent groundwater sample shall be collected and analyzed. At least one sample shall be collected and analyzed thereafter for each calendar month of operation. Samples shall be collected in accordance with the Regional Water Quality Control Board's analytical methods. [basis: Reg. 8-47-601]

3. During operation of the Activated Carbon Vessels, the operator of this source shall monitor with a photo-ionization detector (PID), flame-ionization detector (FID), or other method approved in writing by the District's Source Test Manager at the following locations:

   a. At the inlet to the second to last Carbon vessel in series.
   b. At the inlet to the last Carbon vessel in series.
   c. At the outlet of the Carbon vessel that is last in series prior to venting to the atmosphere.

   When using an FID to monitor breakthrough, readings may be taken with and without a Carbon filter tip fitted on the FID probe. Concentrations measured with the Carbon filter tip in place shall be considered methane for the purpose of these permit conditions.

4. These monitor readings shall be recorded in a monitoring log at the time they are taken. The monitoring results shall be used to estimate the frequency of Carbon change - out necessary to maintain compliance with conditions number 10 and 11, and shall be conducted on a daily basis. The operator of this source may propose for District review, based on actual measurements taken at the site during operation of the source, that the monitoring schedule be changed based on the decline in organic emissions and/or the demonstrated breakthrough

rates of the carbon vessels. Written approval by the District's Engineering Division must be received by the operator prior to a change to the monitoring schedule.

5. The second to last Carbon vessel shall be immediately changed out with unspent carbon upon breakthrough, defined as the detection at its outlet of the higher of the following:

   a. 10 % of the inlet stream concentration to the carbon bed.
   b. 10 ppmv (measured as hexane).

6. The last Carbon vessel shall be immediately changed out with unspent Carbon upon detection at its outlet of 10 ppmv (measured as hexane).

7. The operator of this source shall maintain the following information for each month of operation of the Activated Carbon Vessels:

   a. Hours and time of operation.
   b. Each emission test, analysis or monitoring results logged in for the day of operation they were taken.
   c. The number of Carbon vessels removed from service.
   d. Total throughput of soil vapor from source S-1 in Standard Cubic Feet.
   e. Total throughput of groundwater through Source S-2 in thousands of gallons.

   Such records shall be retained and made available for inspection by the District for two years following the date the data is recorded. [basis: Reg. 1-523]

8. Any non-compliance with these conditions shall be reported to the Compliance and Enforcement Division at the time that it is first discovered. The submittal shall detail the corrective action taken and shall include the data showing the exceedance as well as the time of occurrence.

9. The operator shall maintain a file containing all measurements, records and other data that are required to be collected pursuant to the various provisions of this conditional Authority to Construct/Permit to Operate. All measurements, records and data required to be maintained by the operator shall be retained for at least two years following the date the data is recorded. [basis: Reg. 1-523]

10. Upon final completion of the remediation project, the operator of Sources S-1 and S-2 shall notify the Engineering Division within two weeks of decommissioning the operation.

End of Conditions