PROVERA ANALYTICAL LABORATORIES

Chain of Custody Form

Client Name: E2C Remediation

Project Name: LTLW

Client Address: 5300 Woodmere Dr. Suite 105 Bakersfield, CA

Project Manager: Phil Goalwin

Sampler Name: J. Irwin N. Jensen

Sample Matrix: [X] Air [ ] [ ]

Sample Date	Sample Time	Sample Description and Container Type	BTEX (EPA TO-15)	MTBE (EPA TO-15)	TPH Gasoline (EPA TO-3)	METHANE (EPA TO-3)	FULL VOC (EPA TO-15)	8010 Volatile list (EPA TO-15)	EDB	Naphthalene	Tetrafluoroethane			Comments
8-4-14	3:30	VES-EFF Summa					X							1408050Z -01

Sampling Event: monthly air sample **EDF Type:** GW Monitoring ____ Other X

Turnaround Time Requested: 24 Hour ____ 48 Hour ____ 5-Day ____ Standard X

Relinquished By:	Date: 8-4-14	Relinquished By:	Date:
Received By:	Date: 8-5-14	Received By:	Date:

ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	1024 Lake Tahoe Blvd., LW	Report Date:	7/11/2014
5300 Woodmere Dr. Suite 105		Monthly O&M	Analysis Type:	**EPA Method TO-15**
Bakersfield CA 93313	Project Mgr.	PHIL GOALWIN		

LAB ID: 14063004-01 Sample ID: **Effluent** Date Sampled: 6/26/2014

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	0.010	ppmV	7/8/2014	TO-15
Dichlorodifluoromethane (Freon 12)	ND	0.010	ppmV	7/8/2014	TO-15
1,2-Dichlorotetrafluoroethane(F-114)	ND	0.010	ppmV	7/8/2014	TO-15
Chloromethane	ND	0.010	ppmV	7/8/2014	TO-15
Vinyl Cloride	ND	0.010	ppmV	7/8/2014	TO-15
1,3 Butadiene	ND	0.010	ppmV	7/8/2014	TO-15
Bromomethane	ND	0.010	ppmV	7/8/2014	TO-15
Chloroethane	ND	0.010	ppmV	7/8/2014	TO-15
Trichlorofluoromethane (F 11)	ND	0.010	ppmV	7/8/2014	TO-15
Isopropyl alcohol	ND	0.010	ppmV	7/8/2014	TO-15
Freon 113	ND	0.010	ppmV	7/8/2014	TO-15
1,1 Dichloroethene	ND	0.010	ppmV	7/8/2014	TO-15
Acetone	ND	0.010	ppmV	7/8/2014	TO-15
Carbon Disulfide	ND	0.010	ppmV	7/8/2014	TO-15
Methylene Chloride	ND	0.010	ppmV	7/8/2014	TO-15
MTBE	ND	0.010	ppmV	7/8/2014	TO-15
trans-1,2 Dicloroethene	ND	0.010	ppmV	7/8/2014	TO-15
n-Hexane	ND	0.010	ppmV	7/8/2014	TO-15
Vinyl acetate	ND	0.010	ppmV	7/8/2014	TO-15
1,1-Dichloroethane	ND	0.010	ppmV	7/8/2014	TO-15
Methyl Ethyl Ketone	ND	0.010	ppmV	7/8/2014	TO-15
cis-1,2 Dichloroethene	ND	0.010	ppmV	7/8/2014	TO-15
Tetrahydrofuran	ND	0.010	ppmV	7/8/2014	TO-15
Chloroform	ND	0.010	ppmV	7/8/2014	TO-15
1,1,1-Tricloroethane	ND	0.010	ppmV	7/8/2014	TO-15
Cyclohexane	ND	0.010	ppmV	7/8/2014	TO-15
Carbon Tetrachloride	ND	0.010	ppmV	7/8/2014	TO-15
Ethyl Acetate	ND	0.010	ppmV	7/8/2014	TO-15
Benzene	ND	0.010	ppmV	7/8/2014	TO-15
1,2-Dichloroethane	ND	0.010	ppmV	7/8/2014	TO-15

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Analytical Laboratories, Inc.

E2C Remediation	Project:	1024 Lake Tahoe Blvd., LW	Report Date:	7/11/2014
5300 Woodmere Dr. Suite 105		Monthly O&M	Analysis Type:	**EPA Method TO-15**
Bakersfield CA 93313	Project Mgr.	PHIL GOALWIN		

LAB ID: 14063003-01 Sample ID: **Effluent** Date Sampled: 6/26/2014

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	0.010	ppmV	7/8/2014	TO-15
Trichloroethylene	ND	0.010	ppmV	7/8/2014	TO-15
1,2-Dichloropropane	ND	0.010	ppmV	7/8/2014	TO-15
1,4 Dioxane	ND	0.010	ppmV	7/8/2014	TO-15
Bromodichloromethane	ND	0.010	ppmV	7/8/2014	TO-15
cis-1,3 Dichloropropene	ND	0.010	ppmV	7/8/2014	TO-15
MIBK (Methyl Isobutyl Ketone)	ND	0.010	ppmV	7/8/2014	TO-15
Toluene	ND	0.010	ppmV	7/8/2014	TO-15
trans-1,3 Dichloropropene	ND	0.010	ppmV	7/8/2014	TO-15
1,1,2-Trichloroethane	ND	0.010	ppmV	7/8/2014	TO-15
MBK	ND	0.010	ppmV	7/8/2014	TO-15
Tetrachloroethylene	0.019	0.010	ppmV	7/8/2014	TO-15
Dibromochloromethane	ND	0.010	ppmV	7/8/2014	TO-15
1,2-Dibromoethane (1,2 EDB)	ND	0.010	ppmV	7/8/2014	TO-15
Chlorobenzene	ND	0.010	ppmV	7/8/2014	TO-15
Ethylbenzene	ND	0.010	ppmV	7/8/2014	TO-15
m,p-Xylene	ND	0.010	ppmV	7/8/2014	TO-15
o-Xylene	ND	0.010	ppmV	7/8/2014	TO-15
Styrene	ND	0.010	ppmV	7/8/2014	TO-15
Bromoform	ND	0.010	ppmV	7/8/2014	TO-15
1,1,2,2-Tetrachloroethane	ND	0.010	ppmV	7/8/2014	TO-15
4-Ethyltoluene	ND	0.010	ppmV	7/8/2014	TO-15
1,3,5-Trimethylbenzene	ND	0.010	ppmV	7/8/2014	TO-15
1,2,4-Trimethylbenzene	ND	0.010	ppmV	7/8/2014	TO-15
1,3-Dichlorobenzene	ND	0.010	ppmV	7/8/2014	TO-15
1,4-Dichlorobenzene	ND	0.010	ppmV	7/8/2014	TO-15
Benzyl chloride	ND	0.010	ppmV	7/8/2014	TO-15
1,2-Dichlorobenzene	ND	0.010	ppmV	7/8/2014	TO-15
1,2,4-Trichlorobenzene	ND	0.010	ppmV	7/8/2014	TO-15
Hexachloro-1,3-butadiene	ND	0.010	ppmV	7/8/2014	TO-15
Naphthalene	ND	0.010	ppmV	7/8/2014	TO-15

Roy Diaz

Senior Analytical Chemist: Roy Diaz

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E2C Remediation	Project:	1024 Lake Tahoe Blvd., LW	Report Date:	7/11/2014
5300 Woodmere Dr. Suite 105		Monthly O&M	Analysis Type:	**EPA Method TO-15**
Bakersfield CA 93313	Project Mgr.	PHIL GOALWIN		

LAB ID: 14063003-02 Sample ID: **Influent** Date Sampled: 6/26/2014

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	0.010	ppmV	7/8/2014	TO-15
Dichlorodifluoromethane (Freon 12)	ND	0.010	ppmV	7/8/2014	TO-15
1,2-Dichlorotetrafluoroethane(F-114)	ND	0.010	ppmV	7/8/2014	TO-15
Chloromethane	ND	0.010	ppmV	7/8/2014	TO-15
Vinyl Cloride	ND	0.010	ppmV	7/8/2014	TO-15
1,3 Butadiene	ND	0.010	ppmV	7/8/2014	TO-15
Bromomethane	ND	0.010	ppmV	7/8/2014	TO-15
Chloroethane	ND	0.010	ppmV	7/8/2014	TO-15
Trichlorofluoromethane (F 11)	ND	0.010	ppmV	7/8/2014	TO-15
Isopropyl alcohol	ND	0.010	ppmV	7/8/2014	TO-15
Freon 113	ND	0.010	ppmV	7/8/2014	TO-15
1,1 Dichloroethene	ND	0.010	ppmV	7/8/2014	TO-15
Acetone	0.014	0.010	ppmV	7/8/2014	TO-15
Carbon Disulfide	ND	0.010	ppmV	7/8/2014	TO-15
Methylene Chloride	ND	0.010	ppmV	7/8/2014	TO-15
MTBE	ND	0.010	ppmV	7/8/2014	TO-15
trans-1,2 Dicloroethene	ND	0.010	ppmV	7/8/2014	TO-15
n-Hexane	ND	0.010	ppmV	7/8/2014	TO-15
Vinyl acetate	ND	0.010	ppmV	7/8/2014	TO-15
1,1-Dichloroethane	ND	0.010	ppmV	7/8/2014	TO-15
Methyl Ethyl Ketone	ND	0.010	ppmV	7/8/2014	TO-15
cis-1,2 Dichloroethene	ND	0.010	ppmV	7/8/2014	TO-15
Tetrahydrofuran	ND	0.010	ppmV	7/8/2014	TO-15
Chloroform	ND	0.010	ppmV	7/8/2014	TO-15
1,1,1-Tricloroethane	ND	0.010	ppmV	7/8/2014	TO-15
Cyclohexane	ND	0.010	ppmV	7/8/2014	TO-15
Carbon Tetrachloride	ND	0.010	ppmV	7/8/2014	TO-15
Ethyl Acetate	ND	0.010	ppmV	7/8/2014	TO-15
Benzene	ND	0.010	ppmV	7/8/2014	TO-15
1,2-Dichloroethane	ND	0.010	ppmV	7/8/2014	TO-15

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E2C Remediation	Project:	1024 Lake Tahoe Blvd., LW	Report Date:	7/11/2014
5300 Woodmere Dr. Suite 105		Monthly O&M	Analysis Type:	**EPA Method TO-15**
Bakersfield CA 93313	Project Mgr.	PHIL GOALWIN		

LAB ID: 14063003-02 Sample ID: **Influent** Date Sampled: 6/26/2014

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	0.010	ppmV	7/8/2014	TO-15
Trichloroethylene	0.013	0.010	ppmV	7/8/2014	TO-15
1,2-Dichloropropane	ND	0.010	ppmV	7/8/2014	TO-15
1,4 Dioxane	ND	0.010	ppmV	7/8/2014	TO-15
Bromodichloromethane	ND	0.010	ppmV	7/8/2014	TO-15
cis-1,3 Dichloropropene	ND	0.010	ppmV	7/8/2014	TO-15
MIBK (Methyl Isobutyl Ketone)	ND	0.010	ppmV	7/8/2014	TO-15
Toluene	ND	0.010	ppmV	7/8/2014	TO-15
trans-1,3 Dichloropropene	ND	0.010	ppmV	7/8/2014	TO-15
1,1,2-Trichloroethane	ND	0.010	ppmV	7/8/2014	TO-15
MBK	ND	0.010	ppmV	7/8/2014	TO-15
Tetrachloroethylene	1.0	0.010	ppmV	7/8/2014	TO-15
Dibromochloromethane	ND	0.010	ppmV	7/8/2014	TO-15
1,2-Dibromoethane (1,2 EDB)	ND	0.010	ppmV	7/8/2014	TO-15
Chlorobenzene	ND	0.010	ppmV	7/8/2014	TO-15
Ethylbenzene	ND	0.010	ppmV	7/8/2014	TO-15
m,p-Xylene	ND	0.010	ppmV	7/8/2014	TO-15
o-Xylene	ND	0.010	ppmV	7/8/2014	TO-15
Styrene	ND	0.010	ppmV	7/8/2014	TO-15
Bromoform	ND	0.010	ppmV	7/8/2014	TO-15
1,1,2,2-Tetrachloroethane	ND	0.010	ppmV	7/8/2014	TO-15
4-Ethyltoluene	ND	0.010	ppmV	7/8/2014	TO-15
1,3,5-Trimethylbenzene	ND	0.010	ppmV	7/8/2014	TO-15
1,2,4-Trimethylbenzene	ND	0.010	ppmV	7/8/2014	TO-15
1,3-Dichlorobenzene	ND	0.010	ppmV	7/8/2014	TO-15
1,4-Dichlorobenzene	ND	0.010	ppmV	7/8/2014	TO-15
Benzyl chloride	ND	0.010	ppmV	7/8/2014	TO-15
1,2-Dichlorobenzene	ND	0.010	ppmV	7/8/2014	TO-15
1,2,4-Trichlorobenzene	ND	0.010	ppmV	7/8/2014	TO-15
Hexachloro-1,3-butadiene	ND	0.010	ppmV	7/8/2014	TO-15
Naphthalene	ND	0.010	ppmV	7/8/2014	TO-15

Roy Diaz

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E2C Remediation	Project:	**Lake Tahoe-Laundry Works**	Report Date:	7/11/2014
5300 Woodmere Dr. Suite 105		Monthly O&M Air Samples	Analysis Type:	**EPA Method TO-15**
Bakersfield CA 93313	Project Mgr.	PHIL GOALWIN		

LABORATORY CONTROL STANDARD

Analyte	Result	Units	Spike level	Method	Analysis Date	Percent Recovery
1,1 Dichloroethene	12.7	ppbV	12.5	TO-15	7/8/2014	101%
Benzene	12.2	ppbV	12.5	TO-15	7/8/2014	97%
Trichloroethylene	12.4	ppbV	12.5	TO-15	7/8/2014	99%
Toluene	12.3	ppbV	12.5	TO-15	7/8/2014	99%
Chlorobenzene	12.2	ppbV	12.5	TO-15	7/8/2014	98%

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PROVERA ANALYTICAL LABORATORIES

Chain of Custody Form

Client Name: E2C Remediation

Project Name: 1524 Lake Tahoe Blvd

Client Address: 1020 Winding Creek Road Ste.110 Roseville CA

Project Manager: Phil Goalwin

Sampler Name: G. Brandin / J. Tervin

Sample Matrix: ☒ Air ☐ ☐

Sample Date	Sample Time	Sample Description and Container Type	BTEX (EPA TO-15)	TPH Gasoline (TO-3)	MTBE (EPA TO-15)	METHANE (EPA TO-3)	FULL VOC (EPA TO-15)	8010 VOLATILE LIST (EPA TO-15)	EDB	Naphthalene	1,1-Difluoroethane		14063004 Summa #	Comments	
6-26-14	4:40	Effluent 1-Summa					X						83622	Final Vac = 1" Hg	-01
	4:50	Influent 1-Summa					X						5150	Final Vac = 1" Hg	-02

Sampling Event: Monthly O&M Sampling EDF Type: ______ Other ______

Turnaround Time Requested: 24 Hour ___ 48 Hour ___ 5-Day ___ Standard X

Relinquished By: [signature]	Date: 6-26-14	Relinquished By:	Date:
Received By: [signature]	Date: 6-30-14	Received By:	Date:

ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	5/29/2014
5300 Woodmere Dr. Suite 105		Monthly O&M	Analysis Type:	**EPA Method TO-15**
Bakersfield CA 93313	Project Mgr.	PHIL GOALWIN		

LAB ID: 14052202-01 Sample ID: **Effluent** Date Sampled: 5/9/2014

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	0.010	ppmV	4/18/2014	
Dichlorodifluoromethane (Freon 12)	ND	0.010	ppmV	4/18/2014	
1,2-Dichlorotetrafluoroethane(F-114)	ND	0.010	ppmV	4/18/2014	
Chloromethane	ND	0.010	ppmV	4/18/2014	
Vinyl Cloride	ND	0.010	ppmV	4/18/2014	
1,3 Butadiene	ND	0.010	ppmV	4/18/2014	
Bromomethane	ND	0.010	ppmV	4/18/2014	
Chloroethane	ND	0.010	ppmV	4/18/2014	
Trichlorofluoromethane (F 11)	ND	0.010	ppmV	4/18/2014	
Isopropyl alcohol	ND	0.010	ppmV	4/18/2014	
Freon 113	ND	0.010	ppmV	4/18/2014	
1,1 Dichloroethene	ND	0.010	ppmV	4/18/2014	
Acetone	ND	0.010	ppmV	4/18/2014	
Carbon Disulfide	ND	0.010	ppmV	4/18/2014	
Methylene Chloride	0.019	0.010	ppmV	4/18/2014	
MTBE	ND	0.010	ppmV	4/18/2014	
trans-1,2 Dicloroethene	ND	0.010	ppmV	4/18/2014	
n-Hexane	ND	0.010	ppmV	4/18/2014	
Vinyl acetate	ND	0.010	ppmV	4/18/2014	
1,1-Dichloroethane	ND	0.010	ppmV	4/18/2014	
Methyl Ethyl Ketone	ND	0.010	ppmV	4/18/2014	
cis-1,2 Dichloroethene	ND	0.010	ppmV	4/18/2014	
Tetrahydrofuran	ND	0.010	ppmV	4/18/2014	
Chloroform	ND	0.010	ppmV	4/18/2014	
1,1,1-Tricloroethane	ND	0.010	ppmV	4/18/2014	
Cyclohexane	ND	0.010	ppmV	4/18/2014	
Carbon Tetrachloride	ND	0.010	ppmV	4/18/2014	
Ethyl Acetate	ND	0.010	ppmV	4/18/2014	
Benzene	ND	0.010	ppmV	4/18/2014	
1,2-Dichloroethane	ND	0.010	ppmV	4/18/2014	

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	5/29/2014
5300 Woodmere Dr. Suite 105		Monthly O&M	Analysis Type:	**EPA Method TO-15**
Bakersfield CA 93313	Project Mgr.	PHIL GOALWIN		

LAB ID: 14052202-01 Sample ID: **Effluent** Date Sampled: 5/9/2014

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	0.010	ppmV	4/18/2014	
Trichloroethylene	ND	0.010	ppmV	4/18/2014	
1,2-Dichloropropane	ND	0.010	ppmV	4/18/2014	
1,4 Dioxane	ND	0.010	ppmV	4/18/2014	
Bromodichloromethane	ND	0.010	ppmV	4/18/2014	
cis-1,3 Dichloropropene	ND	0.010	ppmV	4/18/2014	
MIBK (Methyl Isobutyl Ketone)	ND	0.010	ppmV	4/18/2014	
Toluene	ND	0.010	ppmV	4/18/2014	
trans-1,3 Dichloropropene	ND	0.010	ppmV	4/18/2014	
1,1,2-Trichloroethane	ND	0.010	ppmV	4/18/2014	
MBK	ND	0.010	ppmV	4/18/2014	
Tetrachloroethylene	ND	0.010	ppmV	4/18/2014	
Dibromochloromethane	ND	0.010	ppmV	4/18/2014	
1,2-Dibromoethane (1,2 EDB)	ND	0.010	ppmV	4/18/2014	
Chlorobenzene	ND	0.010	ppmV	4/18/2014	
Ethylbenzene	ND	0.010	ppmV	4/18/2014	
m,p-Xylene	ND	0.010	ppmV	4/18/2014	
o-Xylene	ND	0.010	ppmV	4/18/2014	
Styrene	ND	0.010	ppmV	4/18/2014	
Bromoform	ND	0.010	ppmV	4/18/2014	
1,1,2,2-Tetrachloroethane	ND	0.010	ppmV	4/18/2014	
4-Ethyltoluene	ND	0.010	ppmV	4/18/2014	
1,3,5-Trimethylbenzene	ND	0.010	ppmV	4/18/2014	
1,2,4-Trimethylbenzene	ND	0.010	ppmV	4/18/2014	
1,3-Dichlorobenzene	ND	0.010	ppmV	4/18/2014	
1,4-Dichlorobenzene	ND	0.010	ppmV	4/18/2014	
Benzyl chloride	ND	0.010	ppmV	4/18/2014	
1,2-Dichlorobenzene	ND	0.010	ppmV	4/18/2014	
1,2,4-Trichlorobenzene	ND	0.010	ppmV	4/18/2014	
Hexachloro-1,3-butadiene	ND	0.010	ppmV	4/18/2014	
Naphthalene	ND	0.010	ppmV	4/18/2014	

Roy Diaz

Senior Analytical Chemist: Roy Diaz

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ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	5/29/2014
5300 Woodmere Dr. Suite 105		Monthly O&M	Analysis Type:	**EPA Method TO-15**
Bakersfield CA 93313	Project Mgr.	PHIL GOALWIN		

LAB ID: 14052202-02 Sample ID: **Influent** Date Sampled: 5/9/2014

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	0.010	ppmV	4/18/2014	
Dichlorodifluoromethane (Freon 12)	ND	0.010	ppmV	4/18/2014	
1,2-Dichlorotetrafluoroethane(F-114)	ND	0.010	ppmV	4/18/2014	
Chloromethane	ND	0.010	ppmV	4/18/2014	
Vinyl Cloride	ND	0.010	ppmV	4/18/2014	
1,3 Butadiene	ND	0.010	ppmV	4/18/2014	
Bromomethane	ND	0.010	ppmV	4/18/2014	
Chloroethane	ND	0.010	ppmV	4/18/2014	
Trichlorofluoromethane (F 11)	ND	0.010	ppmV	4/18/2014	
Isopropyl alcohol	ND	0.010	ppmV	4/18/2014	
Freon 113	ND	0.010	ppmV	4/18/2014	
1,1 Dichloroethene	ND	0.010	ppmV	4/18/2014	
Acetone	ND	0.010	ppmV	4/18/2014	
Carbon Disulfide	ND	0.010	ppmV	4/18/2014	
Methylene Chloride	ND	0.010	ppmV	4/18/2014	
MTBE	ND	0.010	ppmV	4/18/2014	
trans-1,2 Dicloroethene	ND	0.010	ppmV	4/18/2014	
n-Hexane	ND	0.010	ppmV	4/18/2014	
Vinyl acetate	ND	0.010	ppmV	4/18/2014	
1,1-Dichloroethane	ND	0.010	ppmV	4/18/2014	
Methyl Ethyl Ketone	ND	0.010	ppmV	4/18/2014	
cis-1,2 Dichloroethene	ND	0.010	ppmV	4/18/2014	
Tetrahydrofuran	ND	0.010	ppmV	4/18/2014	
Chloroform	ND	0.010	ppmV	4/18/2014	
1,1,1-Tricloroethane	ND	0.010	ppmV	4/18/2014	
Cyclohexane	ND	0.010	ppmV	4/18/2014	
Carbon Tetrachloride	ND	0.010	ppmV	4/18/2014	
Ethyl Acetate	ND	0.010	ppmV	4/18/2014	
Benzene	ND	0.010	ppmV	4/18/2014	
1,2-Dichloroethane	ND	0.010	ppmV	4/18/2014	

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ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	5/29/2014
5300 Woodmere Dr. Suite 105		Monthly O&M	Analysis Type:	**EPA Method TO-15**
Bakersfield CA 93313	Project Mgr.	PHIL GOALWIN		

LAB ID: 14052202-02 Sample ID: **Influent** Date Sampled: 5/9/2014

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	0.010	ppmV	4/18/2014	
Trichloroethylene	ND	0.010	ppmV	4/18/2014	
1,2-Dichloropropane	ND	0.010	ppmV	4/18/2014	
1,4 Dioxane	ND	0.010	ppmV	4/18/2014	
Bromodichloromethane	ND	0.010	ppmV	4/18/2014	
cis-1,3 Dichloropropene	ND	0.010	ppmV	4/18/2014	
MIBK (Methyl Isobutyl Ketone)	ND	0.010	ppmV	4/18/2014	
Toluene	ND	0.010	ppmV	4/18/2014	
trans-1,3 Dichloropropene	ND	0.010	ppmV	4/18/2014	
1,1,2-Trichloroethane	ND	0.010	ppmV	4/18/2014	
MBK	ND	0.010	ppmV	4/18/2014	
Tetrachloroethylene	0.54	0.010	ppmV	4/18/2014	
Dibromochloromethane	ND	0.010	ppmV	4/18/2014	
1,2-Dibromoethane (1,2 EDB)	ND	0.010	ppmV	4/18/2014	
Chlorobenzene	ND	0.010	ppmV	4/18/2014	
Ethylbenzene	ND	0.010	ppmV	4/18/2014	
m,p-Xylene	ND	0.010	ppmV	4/18/2014	
o-Xylene	ND	0.010	ppmV	4/18/2014	
Styrene	ND	0.010	ppmV	4/18/2014	
Bromoform	ND	0.010	ppmV	4/18/2014	
1,1,2,2-Tetrachloroethane	ND	0.010	ppmV	4/18/2014	
4-Ethyltoluene	ND	0.010	ppmV	4/18/2014	
1,3,5-Trimethylbenzene	ND	0.010	ppmV	4/18/2014	
1,2,4-Trimethylbenzene	ND	0.010	ppmV	4/18/2014	
1,3-Dichlorobenzene	ND	0.010	ppmV	4/18/2014	
1,4-Dichlorobenzene	ND	0.010	ppmV	4/18/2014	
Benzyl chloride	ND	0.010	ppmV	4/18/2014	
1,2-Dichlorobenzene	ND	0.010	ppmV	4/18/2014	
1,2,4-Trichlorobenzene	ND	0.010	ppmV	4/18/2014	
Hexachloro-1,3-butadiene	ND	0.010	ppmV	4/18/2014	
Naphthalene	ND	0.010	ppmV	4/18/2014	

Roy Diaz

Senior Analytical Chemist: Roy Diaz

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ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	2/29/2014
5300 Woodmere Dr. Suite 105		Monthly O&M	Analysis Type:	**EPA Method TO-15**
Bakersfield CA 93313	Project Mgr.	PHIL GOALWIN		

LABORATORY CONTROL STANDARD

Analyte	Result	Units	Spike level	Method	Analysis Date	Percent Recovery
1,1 Dichloroethene	10.2	ppbV	12.5	TO-15	5/21/2014	82%
Benzene	9.89	ppbV	12.5	TO-15	5/21/2014	79%
Trichloroethylene	9.56	ppbV	12.5	TO-15	5/21/2014	76%
Toluene	9.87	ppbV	12.5	TO-15	5/21/2014	79%
Chlorobenzene	10.1	ppbV	12.5	TO-15	5/21/2014	81%

Roy Diaz

Senior Analytical Chemist: Roy Diaz

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PROVERA ANALYTICAL LABORATORIES

Chain of Custody Form

Client Name: E2C Remediation

Project Name: 1024 LAKE TAHOE BLVD.

Client Address: 1020 Winding Creek Road Ste.110 Roseville CA

Project Manager: Phil Goalwin

Sampler Name: G. BRANDIN

Sample Matrix: [X] Air [ ] [ ]

Sample Date	Sample Time	Sample Description and Container Type	BTEX (EPA TO-15)	TPH Gasoline (TO-3)	MTBE (EPA TO-15)	METHANE (EPA TO-3)	FULL VOC (EPA TO-15)	8010 VOLATILE LIST (EPA TO-15)	EDB	Naphthalene	1,1-Difluoroethane		14052202 SUMMA #	Comments	
5-9-14	1:35	EFFLUENT 1-Summa					X						83794	Final Vac = 1" Hg	-01
	1:45	INFLUENT 1-Summa					X						83622	Final Vac = 1" Hg	-02

Sampling Event: MONTHLY O&M EDF Type: ________ Other ________

Turnaround Time Requested: 24 Hour ____ 48 Hour ____ 5-Day ____ Standard X

Relinquished By: [signature]	Date: 5-9-14	Relinquished By:	Date:
Received By: [signature]	Date: 5-15-14	Received By:	Date:

APPENDIX H

SVE/GASS Field Data Sheets

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BLVD., LAKE TAHOE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 4-10-14 TECHNICIAN: G. BRANDIN

ARRIVAL TIME: 11:00 Am DEPARTURE TIME: 12:35pm PROJECT #: 1950BK 25/31/35

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO: SHUT SYSTEM DOWN FOR CYCLING 2-WEEK'S OFF / 2-WEEKS ON

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	SEE CURVE	
OPERATING TIME	(hr:mm)	2995.1	2996.5 (TIME) 12:35pm
ELECTRICAL USAGE	(KWhr)	22,029 KWH	—
WELL FIELD VACUUM	("Hg)	.80" Hg	SYSTEM OFF
SYSTEM VACUUM	("Hg)	1.44" Hg	
Blower Temp	°F	188°F	
AIR COMPRESSOR DUTY CYCLE	(seconds)	Always ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	46 PSI	
AIR COMPRESSOR HOURS	(hr:mm)	39,506	39,507

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID	Calibrated: YES / NO Mini RAE	
INFLUENT (PRE-OXIDIZER)	(ppmv)	0.8 ppm	Mid = 0 ppm
EFLUENT (STACK)	(ppmv)	0 ppm	
VAPOR SAMPLED		INFLUENT: YES / NO	EFFLUENT: YES NO
		Serial # 83789	Serial # 83621

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AS-2 = 21 psi @ 4 scfm
CLEAN UP COMPOUND	✓		3 = 15 psi @ 11 scfm
			4 = 16.5 psi @ 12 scfm
AIR COMPRESSOR MOTOR BELT CHECKED	✓		9 = 18 psi @ 4 scfm
CLEAN AIR FILTER		✓	1 = 15 psi @ 10 scfm
INSPECT SPARGE WELLS		✓	8 = 17 psi @ 8 scfm
OTHER (specify)			7 = 18.5 psi @ 2 scfm
			AS-13 = 17.5 psi @ 2 scfm

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		✓	Pressure Readings:
AIR COMPRESSOR OIL CHANGED		✓	Blower to Carbon #1 = 3.25 psi
AIR COMPRESSOR MOTOR LUBED		✓	Mid = 0.85 psi
CONTROL PANEL INSPECTED/CLEANED	✓		Exhaust = .27 psi
OTHER (specify) * Service AC	Before	ReStart	* +/- 200 Gal of H2O in Tank

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BLVD., LAKE TAHOE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 4-25-14 TECHNICIAN: G. BRANDIN

ARRIVAL TIME: 2:30pm DEPARTURE TIME: 3:40pm PROJECT #: 1950BK 25/31/35

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO: SYSTEM WAS OFF FOR CYCLING

RUNNING UPON DEPARTURE? YES / NO IF NO: RESTARTED UNITS FOR 2 WEEKS of OPERATION —

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	N/A	SEE CURVE
OPERATING TIME	(hr:mm)	2996.5	2,997.6 (TIME) 3:30pm
ELECTRICAL USAGE	(KWhr)	—	22036 KWH
WELL FIELD VACUUM	("Hg)	SYSTEM OFF	.85" Hg
SYSTEM VACUUM	("Hg)		1.50" Hg
BLOWER TEMP	°F		187°F
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON / OFF	ALWAY'S ON OFF
AIR COMPRESSOR SETTING	(psi)		47 psi
AIR COMPRESSOR HOURS	(hr:mm)	39,507	39,508

PRESSURE READING'S — BLOWER → CARB 1 = 3.25 PSI / MID = .88 PSI / EXHAUST = .28 PSI

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO MINI RAE
INFLUENT (PRE-OXIDIZER)	(ppmv)	1.1 ppm	MID = 0 ppm
EFLUENT (STACK)	(ppmv)	0 ppm	
VAPOR SAMPLED	INFLUENT :	YES / NO	EFFLUENT : YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AS-2 = 22 psi @ 4 scfm
CLEAN UP COMPOUND		✓	3 = 18 psi @ 10 scfm
			4 = 16.5 psi @ 11.5 scfm
AIR COMPRESSOR MOTOR BELT CHECKED	✓		9 = 18.5 psi @ 4 scfm
CLEAN AIR FILTER	✓		1 = 17 psi @ 9 scfm
INSPECT SPARGE WELLS		✓	8 = 18 psi @ 8.5 scfm
OTHER (specify)			7 = 19 psi @ 2 scfm
			AS-13 = 18.5 @ 3 scfm

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED	✓		
AIR COMPRESSOR OIL CHANGED ADDED OIL —		✓	* TOOK DTW'S OF PIEZO'S
AIR COMPRESSOR MOTOR LUBED		✓	FOR PES SEE BACK —
CONTROL PANEL INSPECTED/CLEANED	✓		
OTHER (specify)			+/- 200 GAL OF H_2O in POLY TANK —

WELL I.D.	DTW
PZ-1 =	13.64
PZ-2 =	14.23
PZ-3 =	13.99
PZ-4 =	13.03

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BLVD., LAKE TAHOE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 4-4-14 TECHNICIAN: G. Brandon / N. Jonson

ARRIVAL TIME: 11:00 Am DEPARTURE TIME: 1:00 pm PROJECT #: 1950BK 25/31/35

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO: Power Outage w/ Recent Storm's — System ran for approx 258.6 HRS or 10.7 day's —

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	See Curve	See Curve
OPERATING TIME	(hr:mm)	2850.6	2852.2 (TIME) 1:00pm
ELECTRICAL USAGE	(KWhr)	—	21,991 KWH
WELL FIELD VACUUM	("Hg)	—	.78" Hg
SYSTEM VACUUM	("Hg)	System OFF	1.4" Hg
Blower Temp	°F		175 °F
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	Alway's ON OFF
AIR COMPRESSOR SETTING	(psi)		45 psi
AIR COMPRESSOR HOURS	(hr:mm)	39477	39480

No changes to the manifold —

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID	Calibrated: YES / NO	
INFLUENT (PRE-OXIDIZER)	(ppmv)	1.3 ppm	Mid - 0 ppm
EFLUENT (STACK)	(ppmv)	0 ppm	
VAPOR SAMPLED		INFLUENT: YES / NO	EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AS-2 = 22.5 psi @ 4 scfm
CLEAN UP COMPOUND	✓		3 = 15 psi @ 11 scfm
			4 = 16.5 psi @ 12 scfm
AIR COMPRESSOR MOTOR BELT CHECKED	✓		9 = 19 psi @ 4 scfm
CLEAN AIR FILTER	✓		1 = 15 psi @ 10 scfm
INSPECT SPARGE WELLS		✓	8 = 17.5 psi @ 8 scfm
OTHER (specify)			7 = 20 psi @ 2 scfm
			AS-13 = 18.5 psi @ 2 scfm

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		✓	Blower to Carbon #1 = 3.24 psi
AIR COMPRESSOR OIL CHANGED	Checked Level -	OK	Mid = 0.84 psi
AIR COMPRESSOR MOTOR LUBED	Service Soon —	✓	Exhaust - 0.25 psi
CONTROL PANEL INSPECTED/CLEANED	✓		
OTHER (specify)			+/- 200 Gal of H_2O in 1000 Gal Poly Tank

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BLVD., LAKE TAHOE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 5/1/14 TECHNICIAN: NICK JENSEN

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950BK 25/31/35

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO: POWER OUTAGE

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	SYSTEM OFF	SEE BLOWER CURVE
OPERATING TIME	(hr:mm)		3137.9 (TIME)
ELECTRICAL USAGE	(KWhr)		22082 KWH
WELL FIELD VACUUM	~~("Hg)~~		-10.2 INWC
SYSTEM VACUUM	~~("Hg)~~		-17.9 INWC
BLOWER TEMP	(F°)		170°
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	N/A	35 - 40 PSI
AIR COMPRESSOR HOURS	(hr:mm)		39538

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO
INFLUENT (PRE-OXIDIZER)	(ppmv)	N/A	INFLUENT = 5 PPM 20.4% MID = 0 PPM
EFLUENT (STACK)	(ppmv)		EFFLUENT = 0 PPM 20.8%
VAPOR SAMPLED	INFLUENT:	YES / NO	EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AIR SPARGE: AS-2 = 24 PSI / 4 CFM
CLEAN UP COMPOUND	X		AS-3 = 17 PSI / 11 CFM
			AS-4 = 18 PSI / 11 CFM
AIR COMPRESSOR MOTOR BELT CHECKED	X		AS-9 = 21 PSI / 4 CFM
CLEAN AIR FILTER	X		AS-1 = 17 PSI / 9 CFM
INSPECT SPARGE WELLS	X		AS-8 = 18 PSI / 7 CFM
OTHER (specify)			AS-7 = 21 PSI / 4 CFM
			AS-13 = 20 PSI / 4 CFM

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	
AIR COMPRESSOR OIL CHANGED		X	(APPROX 225 GALLONS H_2O IN TANK)
AIR COMPRESSOR MOTOR LUBED		X	
CONTROL PANEL INSPECTED/CLEANED	X		NO CHANGES MADE TO VAPOR MANIFOLD OR
OTHER (specify)			AIR SPARGE MANIFOLD

CARBON PRESSURE: BEFORE 1st CARBON = 3.3 PSI
BETWEEN CARBONS = 1.7 PSI
AFTER CARBON (EXHAUST) = 0.5 PSI

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BLVD., LAKE TAHOE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 5-22-14 TECHNICIAN: G. Brandin

ARRIVAL TIME: 11:00Am DEPARTURE TIME: 3:30pm PROJECT #: 1950BK 25/31/35

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO: System was shut down for cycling
2-Wells on / 2-Wells off -

RUNNING UPON DEPARTURE? YES / NO IF NO:
* Completed full service on AC unit & started system

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	—	See Blower Curve
OPERATING TIME	(hr:mm)	3331.5	3333.1 (TIME) 3:30pm
ELECTRICAL USAGE	(KWhr)	—	22,095 KWH
WELL FIELD VACUUM	("Hg)	System Off	1.50" Hg
SYSTEM VACUUM	("Hg)		2.15" Hg
			188°F
AIR COMPRESSOR DUTY CYCLE	(seconds)	~~ON OFF~~	Always ON OFF
AIR COMPRESSOR SETTING	(psi)		47 PSI
AIR COMPRESSOR HOURS	(hr:mm)	39,544	39,546

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO (Mini Rae)
INFLUENT (PRE-OXIDIZER)	(ppmv)	1.3ppm	MID = 0ppm
EFLUENT (STACK)	(ppmv)	0 ppm	
VAPOR SAMPLED	INFLUENT:	YES / NO	EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AS-2 = 22 psi @ 3 scfm
CLEAN UP COMPOUND	✓		3 = 16.5 psi @ 11 scfm
			4 = 18 psi @ 10 scfm
AIR COMPRESSOR MOTOR BELT CHECKED	✓		9 = 21.5 psi @ 4.5 scfm
CLEAN AIR FILTER	✓		1 = 16 psi @ 10.5 scfm
INSPECT SPARGE WELLS		✓	8 = 18 psi @ 10 scfm
OTHER (specify)			7 = 21.5 psi @ 2.5 scfm
			AS-13 = 20.5 psi @ 3 scfm

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED	✓		+/- 200-250 Gal of H_2O in Tank
AIR COMPRESSOR OIL CHANGED	✓		
AIR COMPRESSOR MOTOR LUBED	✓		No Changes to the Manifold —
CONTROL PANEL INSPECTED/CLEANED	✓		
OTHER (specify)			

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BLVD., LAKE TAHOE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 5-30-14 TECHNICIAN: G. BRANDIN

ARRIVAL TIME: 2:30pm DEPARTURE TIME: 4:30pm PROJECT #: 1950BK 25/31/35

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO: Unknown Shut down – Only 1 Hr of Operation on AC & 191 on Unit – Possibly Losing 1 Leg of Power Causing Unit to Stop But Hr. Meter Still Runs – Will

RUNNING UPON DEPARTURE? YES / NO IF NO:

Investigate Further & Discuss w/ Jack – Possible Thermal Protection Shut off May be the Cause –

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	—	See Curve
OPERATING TIME	(hr:mm)	3524.7	3526.1 (TIME) 4:30pm
ELECTRICAL USAGE	(KWhr)	—	22,101 KWH
WELL FIELD VACUUM	("Hg)	System Off	1.53" Hg
SYSTEM VACUUM	("Hg)		2.20" Hg
Blower Temp	°F		190 °F
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON / OFF	Always ON OFF
AIR COMPRESSOR SETTING	(psi)		47 PSI
AIR COMPRESSOR HOURS	(hr:mm)	39,547	39,548

VE-1,2,3,4,5,10,11,12,13 Shallow & Deep & All Horizontal wells are open 100%

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO Mini Rae
INFLUENT (PRE-OXIDIZER)	(ppmv)	0.6 ppm	Mid = 0 ppm
EFLUENT (STACK)	(ppmv)	0 ppm	
VAPOR SAMPLED		INFLUENT: YES / NO	EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AS-2 = 21.5 psi @ 3 scfm
CLEAN UP COMPOUND	✓		AS-3 = 16 psi @ 11 scfm
			AS-4 = 18 psi @ 10.5 scfm
AIR COMPRESSOR MOTOR BELT CHECKED	✓		AS-9 = 18.5 psi @ 4 scfm
CLEAN AIR FILTER		✓	AS-1 = 16.5 psi @ 9.5 scfm
INSPECT SPARGE WELLS		✓	AS-8 = 18 psi @ 9 scfm
OTHER (specify)			AS-7 = 19.5 psi @ 2 scfm
			AS-13 = 18.5 psi 3 scfm

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		✓	200-250 Gal of H_2O in Tank
AIR COMPRESSOR OIL CHANGED Checked – Level Good			
AIR COMPRESSOR MOTOR LUBED		✓	& No Change to the Manifold
CONTROL PANEL INSPECTED/CLEANED	✓		
OTHER (specify)			

P.E.S. DTW's

PZ-1 = 13.68
PZ-2 = 14.25
PZ-3 = 13.98
PZ-4 = 13.08

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BLVD., LAKE TAHOE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 5-6-14 TECHNICIAN: G. Brandin

ARRIVAL TIME: 12:30pm DEPARTURE TIME: 2:00pm PROJECT #: 1950BK 25/31/35

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO: Unknown - Power Outage

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	—	See Curve
OPERATING TIME	(hr:mm)	3258.1	3259.3 (TIME) 2:00pm
ELECTRICAL USAGE	(KWhr)	—	22084 KWH
WELL FIELD VACUUM	("Hg)	System Off	70
SYSTEM VACUUM	("Hg)		1.25" H2O
Blower Temp	°F		183°F
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON ~~OFF~~	Always ON OFF
AIR COMPRESSOR SETTING	(psi)		38 psi
AIR COMPRESSOR HOURS	(hr:mm)	39,539	39,540

VAPOR CONCENTRATIONS OVA Instrument used: PID / FID Calibrated: YES / NO Min Rate

INFLUENT (PRE-OXIDIZER)	(ppmv)	3.6 ppm	Min = 0 ppm
EFLUENT (STACK)	(ppmv)	0 ppm	
VAPOR SAMPLED	INFLUENT	YES / NO	EFFLUENT YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AS-2 = 20.5 psi @ 3 scfm
CLEAN UP COMPOUND	✓		AS-3 = 16 psi @ 11 scfm
			AS-4 = 17 psi @ 11 scfm
AIR COMPRESSOR MOTOR BELT CHECKED	✓		AS-9 = 18.5 psi @ 3 scfm
CLEAN AIR FILTER	✓		AS-1 = 16 psi @ 8.5 scfm
INSPECT SPARGE WELLS		✓	AS-8 = 17.5 psi @ 5 scfm
OTHER (specify)			AS-7 = 19 psi @ 3 scfm
			AS-12 = 18.5 psi @ 3 scfm

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		✓	+/- 250 gal of H2O in 1000 gal tank
AIR COMPRESSOR OIL CHANGED	Checked Level - oil	✓	
AIR COMPRESSOR MOTOR LUBED		✓	No Changes Made to the Manifold
CONTROL PANEL INSPECTED/CLEANED	✓		
OTHER (specify)			

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BLVD., LAKE TAHOE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 5-9-14 TECHNICIAN: G Brandin

ARRIVAL TIME: 1:15pm DEPARTURE TIME: 2:15 PROJECT #: 1950BK 25/31/35

SYSTEM RUNNING UPON ARRIVAL? YES NO IF NO: AC Has Shut Down - High Disc Temp - Perform Service Before Restarting in 2-Weeks-

RUNNING UPON DEPARTURE? YES NO IF NO: Shut System down for cycling - 2wks -

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	See Curve	See Curve
OPERATING TIME	(hr:mm)	3330.4	3331.5 (TIME) 2:15pm
ELECTRICAL USAGE	(KWhr)	———	22092 KWH
WELL FIELD VACUUM	("Hg)	1.75"Hg	System Off
SYSTEM VACUUM	("Hg)	2.30"Hg	
Blower Temp	°F	188°F	
AIR COMPRESSOR DUTY CYCLE	(seconds)	Always ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	39 PSI	
AIR COMPRESSOR HOURS	(hr:mm)	39,543	39,544

VAPOR CONCENTRATIONS	OVA Instrument used: PID FID		Calibrated: YES NO Mini Rae
INFLUENT (PRE-OXIDIZER)	(ppmv)	4.8 ppm	Mid = 0 ppm
EFLUENT (STACK)	(ppmv)	0 ppm	
VAPOR SAMPLED		INFLUENT: YES / NO	EFFLUENT: YES NO
		Serial # 83622	Serial # 83794

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AS-2 : 20 PSI @ 3 SCFM
CLEAN UP COMPOUND	✓		AS-3 = 16 PSI @ 10.5 SCFM
			AS-4 = 16.5 PSI @ 10.5 SCFM
AIR COMPRESSOR MOTOR BELT CHECKED	✓		AS-9 - 18 PSI @ 3.5 SCFM
CLEAN AIR FILTER	✓		AS-1 = 16 PSI @ 8.5 SCFM
INSPECT SPARGE WELLS		✓	AS-8 = 16.5 PSI @ 6 SCFM
OTHER (specify)			AS-7 = 18 PSI @ 3 SCFM
			AS-13 = 18 PSI @ 3 SCFM

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		✓	+/- 250 Gal in H2O Tank -
AIR COMPRESSOR OIL CHANGED Checked	Level - OK	✓	
AIR COMPRESSOR MOTOR LUBED		✓	No Changes to the Well Field -
CONTROL PANEL INSPECTED/CLEANED	✓		
OTHER (specify)			

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BLVD., LAKE TAHOE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 6-13-14 TECHNICIAN: G. Blandin

ARRIVAL TIME: 1:55 pm DEPARTURE TIME: 400 PROJECT #: 1950BK 25/31/35

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO: Pressure switch had been shutting the blower down adjusted setting last week - unclogged - system ran all week - issues w/ plumbing restrictions -

RUNNING UPON DEPARTURE? YES / NO IF NO: System running too hot - Blower @ 250 °F + shut down for repairs to plumbing - back pressure too much

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	See Curve	—
OPERATING TIME	(hr:mm)	3,857.7	3,859.6 (TIME) 400
ELECTRICAL USAGE	(KWhr)	—	22,391 KWH
WELL FIELD VACUUM	("Hg)	1.5" Hg	SYSTEM OFF
SYSTEM VACUUM	("Hg)	2.10" Hg	
Blower Temp	°F	250 + °F	
AIR COMPRESSOR DUTY CYCLE	(seconds)	Always ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	44 PSI	
AIR COMPRESSOR HOURS	(hr:mm)	39,716	39,718

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO Mini RAE
INFLUENT (PRE-OXIDIZER)	(ppmv)	1.8 ppm	MID = 0 ppm
EFLUENT (STACK)	(ppmv)	0 ppm	
VAPOR SAMPLED	INFLUENT:	YES / NO	EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AS-2 = 20 PSI @ 3.5 scfm
CLEAN UP COMPOUND	✓		AS-3 = 16 PSI @ 11 scfm
			AS-4 = 17.5 PSI @ 11 scfm
AIR COMPRESSOR MOTOR BELT CHECKED	✓		AS-9 = 18.5 PSI @ 3.5 scfm
CLEAN AIR FILTER	✓		AS-1 = 16 PSI @ 9 scfm
INSPECT SPARGE WELLS		✓	AS-8 = 18 PSI @ 8.5 scfm
OTHER (specify)			AS-7 = 19 PSI @ 2 scfm
			AS-13 = 17.5 PSI @ 3.5 scfm

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		✓	250 gal of H_2O in 1000 G poly tank
AIR COMPRESSOR OIL CHANGED	Checked level - OK		
AIR COMPRESSOR MOTOR LUBED		✓	
CONTROL PANEL INSPECTED/CLEANED	✓		
OTHER (specify)			

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BLVD., LAKE TAHOE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 6-26-14 TECHNICIAN: G. BRANDIN / J. IRWIN

ARRIVAL TIME: 10:30 Am DEPARTURE TIME: 5:00 pm PROJECT #: 1950BK 25/31/35

SYSTEM RUNNING UPON ARRIVAL? YES NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	SEE CURVE	SEE CURVE
OPERATING TIME	(hr:mm)	3859.6	(TIME) 5:00pm
ELECTRICAL USAGE	(KWhr)	—	22,394 KWH
WELL FIELD VACUUM	("Hg)	2.02" Hg	SYSTEM OFF
SYSTEM VACUUM	("Hg)	2.55" Hg	
BLOWER TEMP	°F	196°F	
AIR COMPRESSOR DUTY CYCLE	(seconds)	ALWAYS ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	44 PSI	
AIR COMPRESSOR HOURS	(hr:mm)	39,718	

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO MINIRAE
INFLUENT (PRE-OXIDIZER)	(ppmv)	1.9 ppm	MID = 0 ppm
EFLUENT (STACK)	(ppmv)	0 ppm	
VAPOR SAMPLED	INFLUENT:	YES / NO	EFFLUENT: YES NO
		SERIAL # 5150	SERIAL # 83622

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AS-2 = 20.5 psi @ 3 scfm
CLEAN UP COMPOUND		✓	AS-3 = 17 psi @ 11 scfm
			AS-4 = 18.5 psi @ 10 scfm
AIR COMPRESSOR MOTOR BELT CHECKED	✓		AS-9 = 19 psi @ 3.5 scfm
CLEAN AIR FILTER	✓		AS-1 = 17 psi @ 9 scfm
INSPECT SPARGE WELLS		✓	AS-8 = 16 psi @ 8 scfm
OTHER (specify)			AS-7 = 19 psi @ 7 scfm
			AS-13 = 18 psi @ 2 scfm

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		✓	+/- 250 GAL OF H_2O in 1000 GAL POLY TANK
AIR COMPRESSOR OIL CHANGED CHECKED LEVEL - OK			
AIR COMPRESSOR MOTOR LUBED		✓	
CONTROL PANEL INSPECTED/CLEANED	✓		
OTHER (specify)			

P.E.S. DTW's

PZ-1 = 14.03
PZ-2 = 14.21
PZ-3 = 14.73
PZ-4 = 13.22

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BLVD., LAKE TAHOE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 6-6-14 TECHNICIAN: G. BRANDIN

ARRIVAL TIME: 12:05pm DEPARTURE TIME: 3:00pm PROJECT #: 1950BK 25/31/35

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO: SEE ATTACHED NOTES

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	SEE CURVE	SEE CURVE
OPERATING TIME	(hr:mm)	3689.6	3691.1 (TIME) 3:00pm
ELECTRICAL USAGE	(KWhr)	—	22,106 KWH
WELL FIELD VACUUM	("Hg)	SYSTEM OFF	1.55" Hg
SYSTEM VACUUM	("Hg)		2.25" Hg
Blower Temp	°F		190°F
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	Always ON OFF
AIR COMPRESSOR SETTING	(psi)		45 PSI
AIR COMPRESSOR HOURS	(hr:mm)	39,549	39,550

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO Mini Rae
INFLUENT (PRE-OXIDIZER)	(ppmv)	3.1 ppm	0 ppm (Mid)
EFLUENT (STACK)	(ppmv)	0 ppm	
VAPOR SAMPLED	INFLUENT:	YES / NO	EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
	✓		AS-2 = 20.5 PSI @ 3 SCFM
CLEAN UP COMPOUND			3 = 16 PSI @ 11 SCFM
	✓		4 = 18 PSI @ 10.5 SCFM
AIR COMPRESSOR MOTOR BELT CHECKED			9 = 19 PSI @ 2.5 SCFM
CLEAN AIR FILTER	✓		1 = 16.5 PSI @ 9.5 SCFM
INSPECT SPARGE WELLS		✓	8 = 18 PSI @ 8.75 SCFM
OTHER (specify)			7 = 19.5 PSI @ 2 SCFM
			AS-13 = 18.5 PSI @ 3 SCFM

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		✓	200-250 GAL OF H_2O in TANK
AIR COMPRESSOR OIL CHANGED CHECKED LEVEL IS		OK	
AIR COMPRESSOR MOTOR LUBED		✓	* NO CHANGES TO THE MANIFOLD
CONTROL PANEL INSPECTED/CLEANED	✓		
OTHER (specify)			

CTW

E2C REMEDIATION
DAILY ACTIVITY NOTES

DATE: 6-6-14

COMMENTS:

UPON ARRIVAL SYSTEM WAS OFF NOTE!
VE UNIT HOUR MOTOR SHOWED

163.5 HRS OF RUN TIME

AC SHOWED ONLY 1 HOUR OF RUN
TIME - DISCUSSED W/ JACK
* TROUBLESHOOT BLOWER - (CIRCUIT)
POSSIBLE CAUSES:
A. THERMAL OVERLOAD -
B. PRESSURE SAFETY SWITCH

AMP LOAD ON BLOWER in up in
LIMITS 63/51/50 DURING OPERATION -
* PRESSURE SWITCH IS SET @ 3.5 PSI
SYSTEM RUNNING NEAR THE SET
POINT - 3.1 - 3.4 PSI @ (CARBON #1)

PROBABLE CAUSE IS THE 6" TO 3" REDUCTION
in PUMPING FROM BLOWER TO CARBON VESSEL

SOLUTION: ADJUSTED PRESSURE SWITCH
SETTING TO 5 PSI & WILL CONFIRM ON
NEXT WEEK O&M VISIT -
ALSO:
* DISCUSSED W/ JACK & WILL WIRE THE
HR MOTOR DIRECTLY TO THE BLOWER MOTOR
STARTER IN THE EVENT OF PRESSURE SWITCH
SHUTDOWN - THE HR. MOTOR WILL NOT LOG
OPERATING HOURS - AS OPPOSED TO BEING
WIRED DIRECTLY TO THE SWITCH CIRCUIT.

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BLVD., LAKE TAHOE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG

GENERAL MAINTENANCE LOG

DATE: 8-13-14 TECHNICIAN: J. Irwin

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950BK 25/31/35

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	Based	on blower curve
OPERATING TIME	(hr:mm)	4069.9	4071.2 (TIME)
ELECTRICAL USAGE	(KWhr)	22531	22549
WELL FIELD VACUUM	("Hg)	N/A	20.8" H_2O
SYSTEM VACUUM	("Hg)		27.7" H_2O
Blower Temp		50°F	155°F
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	N/A	30PSI
AIR COMPRESSOR HOURS	(hr:mm)	39840	39841

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO
INFLUENT (PRE-OXIDIZER)	(ppmv)	0ppm	20.2% O2
EFLUENT (STACK)	(ppmv)	0ppm	20.2% O2
VAPOR SAMPLED	INFLUENT	YES / NO	EFFLUENT : YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AS-7-21psi-1scfm (all other AS wells OFF)
CLEAN UP COMPOUND	X		AS-3-16psi-10.5scfm
			AS-4-17psi-9.5scfm
AIR COMPRESSOR MOTOR BELT CHECKED		X	AS-9-19.5psi-1scfm
CLEAN AIR FILTER		X	AS-1-15psi-9scfm
INSPECT SPARGE WELLS	X		AS-8-17.5psi-6.5scfm
OTHER (specify)		X	AS-7-19.5psi-1scfm
			AS-13-19psi-1scfm

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	10-D, 10-S, 11-D, 11-S, 12-D, 13-S, 13-D, 20-D, 1-S, 2-S,
AIR COMPRESSOR OIL CHANGED		X	12-S, 20-S, 3-S, H-3, H-2, H-4, 3-D, H-1, 1-D, H-6,
AIR COMPRESSOR MOTOR LUBED		X	2-D, 4-S, H-5, 5-D, 5-S, 4-D are 100% on
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)		X	all others are off

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BLVD., LAKE TAHOE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG

GENERAL MAINTENANCE LOG

DATE: 8-4-14 TECHNICIAN: J. Irwin/N. Jensen

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950BK 25/31/35

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	based on blower curve	
OPERATING TIME	(hr:mm)	3859.5	3861.1 (TIME)
ELECTRICAL USAGE	(KWhr)	22387	22395
WELL FIELD VACUUM	("Hg)		25.5" H_2O
SYSTEM VACUUM	("Hg)		33.7" H_2O
AIR COMPRESSOR DUTY CYCLE	(seconds)	~~ON~~ OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)		70 psi
AIR COMPRESSOR HOURS	(hr:mm)		39719

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO
INFLUENT (PRE-OXIDIZER)	(ppmv)	0ppm	17.7% O2
EFLUENT (STACK)	(ppmv)		
VAPOR SAMPLED	INFLUENT :	YES NO	EFFLUENT : YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			replumbed system to bypass
CLEAN UP COMPOUND	X		carbons directly to atmosphere
AIR COMPRESSOR MOTOR BELT CHECKED		X	pressure washed compound
CLEAN AIR FILTER		X	
INSPECT SPARGE WELLS	X		
OTHER (specify)			

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	
AIR COMPRESSOR OIL CHANGED		X	
AIR COMPRESSOR MOTOR LUBED		X	
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)		X	

APPENDIX I

CRWQCB Approval Letter for SVE/GASS Cyclic Operations

April 9, 2014

Seven Springs Limited Partnership
First Commercial Properties
5530 Birdcage Street, Suite 220
Citrus Heights, CA 95610

Fox Capitol Management Corporation
4582 S. Ulster Street Parkway, Suite 1100
Denver, CO 80237

ACCEPTANCE OF PROPOSAL FOR REMEDIATION OPERATION CHANGE, FORMER LAKE TAHOE LAUNDRY WORKS, 1024 LAKE TAHOE BOULEVARD, SOUTH LAKE TAHOE, EL DORADO COUNTY

This letter accepts the proposal to change remediation system operation at the Lake Tahoe Laundry Works property in South Lake Tahoe.

Background

On March 17, 2014, the Water Board received an electronic message from your consultant, E2C Remediation, containing preliminary results of groundwater sampling in first quarter 2014. The results showed PCE concentrations in groundwater at levels less than 10 ppb in all monitoring well locations sampled. Based on these low concentrations, E2C requested to operate the remediation system at a reduced level, cycling it for two weeks on and two weeks off, during second quarter 2014.

Remediation Operation Change

As stated in an April 7, 2014 electronic message from Lisa Dernbach of this office to Tim Hasler of E2C Remediation, the Water Board accepts the proposal to change operation of the on-site remediation system. This acceptance is in effect as long as PCE concentrations do not rebound in groundwater or soil vapor by increasing one order of magnitude above concentrations detected in first quarter 2014. If PCE concentrations should rebound in second quarter 2014 or any subsequent quarter, the remediation system will need to return to full scale operation within 14 days of detection.

You may contact Lisa Dernbach at (530) 542-5424 if you have any questions.

Lauri Kemper

LAURI KEMPER, P.E.
ASSISTANT EXECUTIVE OFFICER

cc: PCE Interested Party Mail List

LSD/adw/T: LTLW remediatn acceptance 4-14
Send to file: SLIC, El Dorado Co., T6S043

APPENDIX J

Hexavalent Chrome Data Summary Table

TABLE 9
SUMMARY OF HEXAVALENT CHROMIUM ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Sample Date	Hexavalent Chromium (ug/L)
LW-MW-1S	12/20/12	nd<10
	4/22/13	**8.0**
	5/2/13	nd<1.0
	9/19/13	nd<1.0
LW-MW-2S	12/20/12	nd<10
	4/22/13	nd<1.0
	5/2/13	nm
	9/19/13	nd<1.0
LW-MW-5S	9/19/13	nd<1.0

Notes:

nd< = Not detected at, or above, the Method Reporting Limit (MRL), which is indicated by the value

APPENDIX K

Request for EDCAQMD Permitting Exemption
And
EDCAQMD Approval Letter

EL DORADO COUNTY
AIR QUALITY MANAGEMENT DISTRICT

AIR POLLUTION PERMIT EXEMPTION

Business:	**Lake Tahoe Laundry Works**
Emission Unit(s):	**Soil and Groundwater Remediation Operation**
Equipment Location:	**Lake Tahoe Laundry Works 1024 Lake Tahoe Blvd. South Lake Tahoe, CA**

CERTIFICATION: This is to certify that, effective **August 1, 2014**, the Soil and Groundwater Remediation Operation as specified below is exempt from permitting based on the following:

Operations subject to El Dorado County Air Quality Management District (AQMD) Rule 501, General Permit Requirements are generally issued an Authority to Construct followed by a Permit to Operate. However, soil and groundwater remediation operations that emit less than 2 pounds in any 24 hour period of any pollutants without the benefit of air pollution control devices are exempt from this requirement. (Rule 501.1.N)

Soil and groundwater remediation may occur at the above address with VOC emissions **not to exceed a total of 1.9 pounds per day**, and subject to the following conditions:

- The District shall be notified and an Authority to Construct application and fees must be submitted within 14 days of the finding by E2C Remediation that total VOC emissions exceed 1.9 pounds per day;
- All soil and groundwater remediation operations shall be compliant with District Rules; and,
- All records of sampling during and after the operation's closure are to be kept, and these records shall be made available to the District upon request.

Compliant with the conditions of this exemption, a permit to operate is not required for this operation and the Granular Activated Carbon Adsorption emissions capture system may be removed.

This exemption is based on the following project description:

Project Description: The applicant, E2C Remediation proposes to perform soil and groundwater remediation not to exceed VOC emissions of 1.9 pounds per day at the above location.

The APCO has determined that the proposed soil and groundwater remediation operation, *only as described above,* is exempt from an Air Pollution Permit to Operate from the AQMD. This exemption does not expire unless revoked by AQMD.

Approved: ______________________ Date: 7/29/14
(Dave Johnston, Air Pollution Control Officer)

I certify that I understand this exemption applies only to the soil and groundwater remediation operation at 1024 Lake Tahoe Blvd. in South Lake Tahoe. By signing this Certification below, I acknowledge that this exemption will remain in effect until:

(1) The above named equipment is modified, replaced, substituted or added to; or,
(2) I expand the operation or into another business category that requires an air permit.

Please note that with the addition of other equipment or operations to the site that would on their own require a permit from the District, the soil and groundwater remediation operation's emissions will also be reevaluated as part of the New Source Review Potential to Emit determination.

EXEMPTION CERTIFICATIONS ARE NOT TRANSFERABLE.

(After signing below, send or fax copy to District, and post original at place of business)

Applicant Name: ______________________ Title: ______________________
(Please print)

Signature: ______________________ Date: ______________

E$_2$C Remediation
Environmental Engineering, Consulting and Remediation, Inc.

July 24, 2014

Ms. Lisa Peterson
County of El Dorado AQMD
330 Fair Lane
Placerville, CA 95667

SUBJECT:

Request for Exemption To Permitting
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Dear Ms. Peterson:

Pursuant to your request, E$_2$C respectfully requests an Exemption to Permitting from El Dorado County Air Quality Management District for the above-captioned site (Site). This request is based on remedial system operational data through April 24, 2014 that indicate the remedial system VOC system extraction removal rate has been less than 2 pounds per day (lbs/day) since February 2011 (based on laboratory-derived influent concentration data).

Please note that a typographic error was found in Table 1 of the First Quarter 2014 Remediation Systems Report, dated May 8, 2014. That error was at the bottom of the table where the monthly mass removal rates were summarized. This same error was also found in the Fourth Quarter 2013 Groundwater Monitoring Report and Current Site Remediation Status Report, dated March 19, 2014. This error has been corrected and the table updated to include data collected since issuance of those reports. A copy is attached, as well as a copy of historical influent data, also showing the recent laboratory-derived data collected since January 2014. The correction and updates will be reflected in subsequent status reports. I am also emailing a copy of the table so you can see the calculation formulas.

Sincerely,
E$_2$C Remediation

PROFESSIONAL GEOLOGIST
WILLIAM A. LAWSON
Exp. 8/31/14
No. 7171
STATE OF CALIFORNIA

William A. Lawson, P.G. #7171
Director of Technical Operations

Attachments: Table 1 and Table 2

cc: Ms. Lisa Dernbach, C.H.G.
Senior Engineering Geologist
CRWQCB – Lahontan Region, South Lake Tahoe Office
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

TABLE 1
SUMMARY OF SVE/GASS OPERATIONAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Operational Status on Arrival	Cumulative Calendar Days	Hour Meter Reading	Cumulative Operating Hours	Inlet Flow (scfm)	Vacuum (in-Hg) System	Vacuum (in-Hg) Wellfield	Influent Oxygen Content (%)	Field Vapor Total VOCs Influent (ppmV)	Field Vapor Total VOCs Effluent (ppmV)	Lab Vapor Influent (ppmV) PCE	Lab Vapor Influent (ppmV) TCE**	Lab Vapor Influent (ppmV) cis-1,2-DCE	Lab Vapor Influent (ppmV) Other VOCs	VOCs Extracted (lbs/hr) PCE	VOCs Extracted (lbs/hr) TCE**	VOCs Extracted (lbs/hr) cis-1,2-DCE	VOCs Extracted (lbs/hr) Total	Cumulative VOCs Extracted (lbs)	Removal Rates (lbs/day)
4/8/10	off	0	202.0	0	500	3.75	2.75	20.6	140	0	0.681	0.031	0.041	ND	0.009	0.00032	0.00031	0.010	0.000	0.000
4/9/10	off	1	205.0	3.0	500	4.15	2.75	20.6	130	0	1.950	0.045	0.048	ND	0.026	0.00047	0.00037	0.026	0.054	0.432
4/16/10	off	8	369.4	167.4	500	3.50	3.50	20.2	110	0									3.419	0.491
4/29/10	off	21	678.9	476.9	500	3.70	3.70	20.1	80	0									7.917	0.349
5/6/10	on	28	841.0	639.0	500	4.50	4.50	20.9	25	0									10.27	0.349
5/12/10	on	34	978.7	776.7	500	3.50	3.50	20.9	90	0									12.27	0.349
6/1/10	off	54	1,462	1,260	500	3.70	3.70	20.9	90	0									19.30	0.349
6/15/10	on	68	1,834	1,632	500	3.30	3.30	20.8	65	0									24.71	0.349
6/24/10	on	77	2,006	1,804	500	3.45	3.45	20.9	45	0	0.204	ND	ND	ND	0.003	0.000	0.000	0.003	26.19	0.207
7/2/10	on	85	2,199	1,997	500	3.30	3.30	20.8	170	0									30.90	0.585
7/15/10	off	98	2514.0	2,312	500	2.50	2.50	20.8	130	0	6.61	0.281	ND	ND	0.087	0.00292	0.000	0.000	38.16	0.553
7/22/10	off	105	2680.0	2,478	500	3.00	3.00	20.7	120	0									43.00	0.700
7/28/10	off	111	2681.0	2,479	500	3.26	3.26	20.7	160	0									43.06	1.400
8/5/10	on	119	2850.0	2,648	500	3.15	3.15	nm	120	0									52.91	1.400
8/5/10	on	119	2853.0	2,651	500	3.14	3.14	nm	210	0									53.09	1.400
8/11/10	on	125	3020.0	2,818	500	3.15	3.15	20.9	170	0	2.04	0.031	ND	ND	0.027	0.00032	0.00000	0.027	60.2	1.025
8/18/10	on	132	3187.0	2,985	500	3.46	3.46	20.9	170	0	9.14	0.096	0.047	ND	0.120	0.00100	0.00036	0.121	72.6	1.779
8/25/10	on	139	3355.0	3,153	500	2.46	2.46	nm	180	0	11.4	1.83	4.32	ND	0.149	0.01901	0.03311	0.202	99.7	3.873
9/3/10	on	148	3568.3	3,366	500	2.80	2.80	20.7	195	10									143.5	4.929
9/8/10	on	153	3694.4	3,492	500	2.80	2.80	20.7	85	0									169.9	5.022
9/15/10	on	160	3863.0	3,661	500	5.16	5.16	20.1	60	0									205.2	5.022
9/15/10	on	160	3866.0	3,664	500	5.16	5.16	20.1	120	0	16.4	0.154	0.046	0.266	0.215	0.00160	0.00035	0.217	205.8	5.114
9/23/10	off	168	4051.5	3,850	500	4.15	4.15	20.9	190	0									243.2	4.841
9/28/10	on	173	4169.9	3,968	500	3.99	4.00	20.1	130	0									265.3	4.475
10/6/10	off	181	4362.4	4,160	500	4.98	4.98	20.1	75	0	11.8	0.104	0.033	0.112	0.155	0.00108	0.00025	0.156	298.3	4.110
10/13/10	on	188	4532.7	4,331	500	5.71	5.71	20.8	135	0									319.7	3.021
10/22/10	on	197	4746.8	4,545	500	5.00	5.00	20.9	190	0									340.2	2.297
10/28/10	off	203	4889.2	4,687	500	4.95	4.95	20.1	180	0									353.8	2.297
11/4/10	on	210	5056.4	4,854	500	4.83	4.83	nm	110	0									369.8	2.297
11/11/10	on	217	5255.8	5,054	500	5.22	5.22	20.1	230	0	2.7	ND	ND	ND	0.035	0.000	0.000	0.035	382.9	1.573
11/23/10	off	229	5684.7	5,483	0	nm	nm	nm	0	0									390.5	0.425
12/1/10	off	237	5684.7	5,483	500	2.60	2.60	nm	200	0									390.5	
12/7/10	on	243	5826.3	5,624	500	3.24	3.24	20.1	190	0									395.0	0.768
12/16/10	on	252	6043.2	5,841	500	nm	nm	nm	180	0	2.18	0.39	ND	ND	0.029	0.00405	0.000	0.033	402.0	0.775
1/4/11	off	271	6463.5	6,262	500	2.89	nm	20.1	80	0									427.4	1.452
1/14/11	off	281	6707.8	6,506	500	2.00	nm	20.9	55	0									449.0	2.120
1/21/11	on	288	6873.9	6,672	500	2.00	2.00	20.8	60	0	11.30	0.228	0.028	0.241	0.148	0.00237	0.00021	0.151	468.9	2.869
1/27/11	on	294	7018.5	6,817	500	2.50	nm	20.9	45	0									485.6	2.774
2/2/11	on	300	7158.7	6,957	500	3.03	3.03	20.9	45	0									496.9	1.931
2/11/11	on	309	7375.1	7,173	500	2.80	2.80	20.9	25	0									514.3	1.931
2/21/11	off	319	7616.5	7,415	500	2.80	2.80	20.4	30	0									533.7	1.931
3/4/11	off	330	7879.0	7,677	500	3.00	3.00	20.8	75	0									554.8	1.931
3/11/11	on	337	8048.6	7,847	500	4.45	4.45	20.9	220	0									568.5	1.931
3/26/11	off	352	8456.8	8,255	500	5.00	5.00	19.8	200	0									601.3	1.931
4/6/11	off	363	8674.5	8,473	500	5.90	nm	nm	0	0									618.8	1.931
4/12/11	off	369	8675.5	8,474	500	1.95	1.95	20.8	60	0									618.9	1.931
5/11/11	off	398	9322.6	9,121	500	nm	nm	nm	nm	nm									671.0	1.931
5/18/11	on	405	9488.9	9,287	500	1.75	1.75	20.8	60	0	0.795	ND	ND	0.049	0.010	0.000	0.000	0.010	678.5	1.091
5/24/11	on	411	9632.8	9,431	500	4.10	4.10	nm	20	0									681.6	0.520
6/1/11	on	419	9823.0	9,621	500	3.50	3.50	20.8	10	0									687.9	0.790

TABLE 1
SUMMARY OF SVE/GASS OPERATIONAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Operational Status	Cumulative Calendar	Hour Meter	Cumulative Operating	Inlet Flow	Vacuum System	Vacuum Wellfield	Influent Oxygen Content	Field Vapor Total VOCs Influent	Field Vapor Total VOCs Effluent	Lab Vapor Influent PCE	Lab Vapor Influent TCE**	Lab Vapor Influent cis-1,2-DCE	Lab Vapor Influent Other VOCs	VOCs Extracted PCE	VOCs Extracted TCE**	VOCs Extracted cis-1,2-DCE	VOCs Extracted Total	Cumulative VOCs Extracted	Removal Rates
	on Arrival	**Days**	**Reading**	**Hours**	**(scfm)**	**(in-Hg)**		**(%)**	**(ppmV)**	**(ppmV)**	**(ppmV)**				**(lbs/hr)**				**(lbs)**	**(lbs/day)**
6/9/11	on	427	10012.3	9,810	500	4.00	4.00	20.8	20	0									694.1	0.790
6/14/11	on	432	10134.7	9,933	500	5.30	5.30	nm	5	0	4.23	ND	ND	1.181	0.055	0.000	0.000	0.055	699.6	1.061
6/21/11	on	439	10303.2	10,101	500	5.50	5.50	nm	2.8	0									706.7	1.024
6/27/11	on	445	10446.1	10,244	500	4.80	4.80	nm	0	0									711.0	0.718
7/5/11	no	453	10637.1	10,435	500	5.50	5.50	nm	5.0	0									716.7	0.718
7/12/11	no	460	10803.4	10,601	0	0.00	0.00		0	0									719.2	0.359
7/13/11	no	461	10803.9	10,602	500	3.00	3.00	20.1	260	10									719.2	0.359
7/18/11	no	466	10949.5	10,748	500	3.00	3.00	20.8	160	10	0.332	ND	ND	0.419	0.0044	0.000	0.000	0.004	721.7	0.411
7/27/11	yes	475	11164.6	10,963	500	3.00	3.00	20.9	205	5									722.4	0.081
8/11/11	yes	490	11526.4	11,324	500	4.75	4.75	20.6	120	0									723.3	0.057
8/18/11	no	497	11692.8	11,491	500	4.60	4.60	nm	3										723.7	0.057
8/26/11	yes	505	11883.2	11,681	500	2.30	2.30	20.6	103	0									724.1	0.057
8/31/11	no	510	12005.0	11,803	500	3.80	3.80	nm	11	4	0.028	ND	ND	0.013	0.00037	0.000	0.000	0.0004	724.3	0.033
9/7/11	no	517	12170.7	11,969	500	3.75	3.75	nm	5	1									725.9	0.239
9/15/11	no	525	12362.0	12,160	500	3.70	3.70	nm	4	0.5									729.7	0.468
9/22/11	yes	532	12531.8	12,330	500	4.50	4.50	nm	3	6									733.0	0.468
9/29/11	yes	539	12703.5	12,502	500	4.60	4.60	nm	285	0									736.3	0.468
10/5/11	no	545	12838.8	12,637	0	0.00	0.00	0.0	67	0									737.7	0.234
10/6/11	no	546	12839.3	12,637	500	nm	nm	nm	160	0									737.7	0.234
10/13/11	yes	553	13010.1	12,808	500	3.00	3.00	nm	18.6	0	2.95	0.19	ND	0.0197	0.039	0.00194	0.000	0.041	742.8	0.722
10/18/11	yes	558	13130.1	12,928	500	5.00	5.00	20.9	45	0									747.0	0.846
10/26/11	yes	566	13324.3	13,122	500	3.00	3.00	20.6	60	0									752.8	0.717
11/30/11	no	601	13324.3	13,122	500	4.00	4.00	20.3	50	0									752.8	
12/9/11	no	610	13535.1	13,333	500	3.50	3.50	20.8	140	0	1.61	0.024	ND	29.60	0.021	0.00025	0.000	0.021	758.5	0.649
12/15/11	yes	616	13681.1	13,479	500	3.50	3.50	20.8	160	0									761.4	0.463
12/21/11	yes	622	13825.5	13,624	500	3.00	3.00	20.8	85	0									763.8	0.398
1/4/12	yes	636	14165.5	13,964	500	2.15	nm	20.9	75	5.5	0.997	ND	ND	ND	0.013	0.000	0.000	0.013	768.7	0.348
1/12/12	yes	644	14353.0	14,151	500	3.15	3.15	20.9	60	0									771.3	0.333
1/17/12	no	649	14471.7	14,270	500	3.60	3.60	20.8	85	0									772.6	0.264
1/25/12	no	657	14667.2	14,465	500	4.10	4.10	20.9	90	0									773.7	0.132
2/3/12	no	666	14881.7	14,680	500	4.23	4.23	20.8	70	0									775.1	0.164
2/9/12	no	672	15024.4	14,822	500	4.00	4.00	nm	50	0	1.24	0.012	ND	ND	0.016	0.000	0.000	0.016	777.0	0.315
2/17/12	no	680	15215.9	15,014	0	0.00	0.00	0.0	0	0									778.6	0.195
3/8/12	no	700	15215.9	15,014	0	0.00	0.00	0.0	0	0									778.6	

TABLE 1
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Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Operational Status on Arrival	Cumulative Calendar Days	Hour Meter Reading	Cumulative Operating Hours	Inlet Flow (scfm)	Vacuum System (in-Hg)	Vacuum Wellfield (in-Hg)	Influent Oxygen Content (%)	Field Vapor Total VOCs Influent (ppmV)	Field Vapor Total VOCs Effluent (ppmV)	Lab Vapor Influent PCE (ppmV)	Lab Vapor Influent TCE** (ppmV)	Lab Vapor Influent cis-1,2-DCE (ppmV)	Lab Vapor Influent Other VOCs (ppmV)	VOCs Extracted PCE (lbs/hr)	VOCs Extracted TCE** (lbs/hr)	VOCs Extracted cis-1,2-DCE (lbs/hr)	VOCs Extracted Total (lbs/hr)	Cumulative VOCs Extracted (lbs)	Removal Rates (lbs/day)
3/29/12	no	721	15215.9	15,014	500	0.00	0.00	0.0	0	0									778.6	
4/18/12	no	741	15216.0	15,014	500	3.50	3.50	nm	4	0									778.6	0.390
4/26/12	no	749	15407.3	15,205	0	0.00	0.00	0.0	0	0									780.1	0.195
5/1/12	yes	754	15525.6	15,324	500	3.50	2.50	nm	10	0									781.1	0.195
5/8/12	yes	761	15693.3	15,491	500	3.50	2.50	nm	10	0									783.8	0.390
5/14/12	yes	767	15839.8	15,638	500	3.45	2.50	nm	18	0	1.24	ND	ND	0.056	0.016	0.000	0.000	0.016	786.2	0.390
5/23/12	yes	776	16053.1	15,851	500	3.95	3.00	nm	20-23	0									790.6	0.502
5/30/12	yes	783	16220.0	16,018	500	3.00	3.00	nm	15.3	0									794.9	0.613
6/8/12	no	792	16438.7	16,237	500	3.95	3.00	nm	14.3	0									800.5	0.613
6/14/12	yes	798	16582.0	16,380	500	0.00	0.00	0.0	0	0									804.2	0.613
6/21/12	no	805	16584.2	16,382	500	3.50	2.75	nm	30	0									804.2	0.613
6/27/12	yes	811	16723.0	16,521	500	4.0	3.25	20.9	35	0	2.66	ND	ND	0.03	0.035	0.000	0.000	0.035	808.4	0.725
7/20/12	no	834	17275.9	17,074	500	4.5	4.00	20.8	35	0									825.2	0.731
7/26/12	no	840	17424.0	17,222	500	4.0	3.25	nm	22	0	1.31	0.013	ND	ND	0.017	0.000	0.000	0.017	828.4	0.518
8/1/12	yes	846	17564.2	17,362	500	4.0	3.40	nm	18.3	0									830.4	0.344
8/8/12	yes	853	17736.3	17,534	500	3.3	2.60	nm	20.6	0									832.4	0.275
8/16/12	no	861	17925.7	17,724	500	4.0	3.25	nm	21	0									834.6	0.275
8/21/12	yes	866	18043.6	17,842	500	3.7	3.00	nm	18.2	0	0.441	ND	ND	ND	0.006	0.000	0.000	0.006	835.6	0.207
8/28/12	yes	873	18212.9	18,011	500	4.5	5.20	20.8	40.0	0									836.3	0.104
9/7/12	no	883	18452.3	18,250	0	0.0	0.00	0.0	0.0	0									836.7	0.035
9/13/12	no	889	18452.3	18,250	500	5.5	4.15	nm	28.6	0	ND	ND	ND	ND	0.000	0.000	0.000	0.000	836.7	
9/18/12	yes	894	18714.5	18,513	500	4.5	3.75	nm	14.1	0									836.8	0.011
9/28/12	yes	904	18949.8	18,748	500	4.1	3.40	nm	13.6	0									837.0	0.023
10/3/12	yes	909	19072.9	18,871	500	4.75	3.95	nm	18.6	0									837.2	0.023
10/12/12	no	918	19074.2	18,872	500	2.80	3.15	nm	13.1	0									837.2	0.023
10/17/12	yes	923	19191.5	18,990	500	2.32	1.86	20.3	20	0									837.3	0.023
10/23/12	yes	929	19335.9	19,134	500	3.75	2.50	20.8	65	0									837.4	0.023
10/31/12	yes	937	19527.3	19,325	500	2.45	2.00	nm	25	0	0.145	ND	ND	0.233	0.002	0.000	0.000	0.002	837.7	0.034
11/6/12	yes	943	19673.6	19,472	500	2.75	2.30	20.8	40	0									837.9	0.034
11/19/12	yes	956	19985.0	19,783	500	2.80	2.35	nm	14.4	0									838.2	0.023
11/30/12	no	967	20248.3	20,046	500	4.90	4.33	nm	5.0	0	ND	ND	ND	ND	0.000	0.000	0.000	0.000	838.3	0.011
11/5/13	off	967	36969.0	20,046	500	3.71	2.98	nm	149.5	1.6									838.3	
11/15/13	on	977	37209.0	20,286	500	2.75	2.25	nm	13.6	0.3									838.9	0.061
11/22/13	on	984	170.7	20,457	500	2.80	2.25	nm	6.3	1.1	0.39	ND	ND	1.7	0.005	0.000	0.000	0.005	839.6	0.092
11/26/13	on	988	266.3	20,553	500	2.80	2.25	nm	6.1	0.4									840.1	0.131
12/4/13	on	996	459.9	20,746	500	2.95	2.50	nm	5.8	0									841.2	0.138
12/10/13	on	1,002	599.9	20,886	500	2.80	2.25	nm	4.6	0.1	0.49	ND	ND	0.09	0.006	0.000	0.000	0.006	842.1	0.146
12/19/13	on	1,011	812.3	21,099	500	2.95	2.50	nm	5.1	0									843.3	0.137
12/27/13	off	1,019	1006.4	21,293	500	2.96	2.50	nm	5.3	0									844.2	0.120
1/3/14	on	1,026	1173.1	21,459	500	2.90	2.30	nm	4.3	0									845.1	0.120
1/7/14	on	1,030	1267.9	21,554	500	2.90	2.30	nm	3.9	0	0.27	ND	ND	ND	0.004	0.000	0.000	0.004	845.5	0.102
1/14/14	on	1,037	1434.8	21,721	500	2.90	2.30	nm	5.4	0									845.9	0.064
1/20/14	on	1,043	1577.8	21,864	500	3.20	2.60	nm	0.7	0									846.2	0.042
1/28/14	off	1,051	1767.7	22,054	500	1.87	1.48	nm	3.6	0									846.5	0.042
1/31/14	off	1,054	1834.9	22,121	500	1.88	1.49	nm	4.6	0									846.6	0.042
2/4/14	on	1,058	1927.1	22,213	500	2.21	1.74	nm	2.4	0									846.8	0.042
2/14/14	on	1,068	2165.5	22,452	500	3.65	3.11	nm	5.0	0									847.2	0.042
2/18/14	off	1,072	2166.9	22,453	500	1.54	1.07	nm	5.0	0									847.2	0.042
2/26/14	on	1,080	2354.3	22,641	500	2.75	2.30	nm	0.0	0									847.5	0.042
2/28/14	off	1,082	2356.6	22,643				nm			ND	ND	ND	0.025	0.000	0.000	0.000	0.000	847.5	0.021

TABLE 1
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Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Operational Status **on Arrival**	Cumulative Calendar **Days**	Hour Meter **Reading**	Cumulative Operating **Hours**	Inlet Flow **(scfm)**	Vacuum (in-Hg)		Influent Oxygen Content **(%)**	Field Vapor Total VOCs		Lab Vapor Influent (ppmV)				VOCs Extracted (lbs/hr)				Cumulative VOCs Extracted **(lbs)**	Removal Rates **(lbs/day)**
						System	Wellfield		Influent **(ppmV)**	Effluent **(ppmV)**	PCE	TCE**	cis-1,2-DCE	Other VOCs	PCE	TCE**	cis-1,2-DCE	Total		
3/6/14	on	1,088	2495.7	22,782	500	2.60	2.00	nm	2.4	0									847.5	0.000
3/20/14	off	1,102	2497.4	22,784	500	1.25	0.70	nm	0.0	0									847.5	0.000
3/24/14	off	1,106	2592.0	22,878	500	1.20	0.65	nm	1.2	0	ND	ND	ND	0.048	0.000	0.000	0.000	0.000	847.5	0.000
4/4/14	off	1,117	2852.2	23,139	500	1.40	0.78	nm	1.3	0									847.6	0.006
4/10/14	on	1,123	2996.5	23,283	500	1.44	0.80	nm	0.8	0	0.022			0.011	0.000	0.00	0.00	0.000	847.7	0.009
4/25/14	off	1,138	2997.6	23,284	500	1.50	0.85	nm	1.1	0									847.7	0.008

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Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Operational Status on Arrival	Cumulative Calendar Days	Hour Meter Reading	Cumulative Operating Hours	Inlet Flow (scfm)	Vacuum System (in-Hg)	Vacuum Wellfield (in-Hg)	Influent Oxygen Content (%)	Field Vapor Total VOCs Influent (ppmV)	Field Vapor Total VOCs Effluent (ppmV)	Lab Vapor Influent PCE (ppmV)	Lab Vapor Influent TCE** (ppmV)	Lab Vapor Influent cis-1,2-DCE (ppmV)	Lab Vapor Influent Other VOCs (ppmV)	VOCs Extracted PCE (lbs/hr)	VOCs Extracted TCE** (lbs/hr)	VOCs Extracted cis-1,2-DCE (lbs/hr)	VOCs Extracted Total (lbs/hr)	Cumulative VOCs Extracted (lbs)	Removal Rates (lbs/day)

Notes: **System shut down for ozone sparging on 11/30/12; system restarted on 11/5/13 per CRWQCB directive, dated 11/1/13**

On 11/5/13, the hour meter was not functioning and therefore the air compressor hour meter was used from 11/5/13 to 11/15/13; on 11/15/13, a new hour meter was installed

Average Mass Removal Rates	(lbs/day)
Nov-13	0.100
Dec-13	0.130
Jan-14	0.065
Feb-14	0.033
Mar-14	0.003
Apr-14	0.007
Average	0.056

The formula for calculating the potential influent to the First Carbon Unit is:

lbs/day = Effluent Mass to 1`st Carbon (ppmV) (laboratory-derived) x 10-6 x Influent Flow Rate (scfm) x 1 lb-mole/379.5 ft3 x 165.82 (lb/lb-mole) (VOC mass) x 60 (min/hour) x 24 hours/day

-- = Data not available / not recorded
cis-1,2-DCE = cis-1,2-Dichloroethene
in-Hg = Inches of Mercury
lbs/day = Pounds per day
lbs/hr = Pounds per hour
nm = Not measured
ND = Not detected at or above the method detection limit
PCE = Tetrachloroethene
ppmV = Parts per million by volume
scfm = Standard cubic feet per minute
SVE/GASS = Soil Vapor Extraction / Groundwater Air Sparge Syst
TCE = Trichloroethene
VOCs = Volatile Organic Compounds (primarily tetrachloroethylene and trichloroethylene)
Volatile Organic Compounds Removal Rate (lbs/hr) = Influent (ppmV) x 10-6 x Influent Flow Rate (scfm) x 1 lb-mole/379.5 ft3 x 165.82 (lb/lb-mole) x 60 (min/hour)

** = TCE mass removed includes 1,1,1-Trichloroethane, as their atomic weights are similar
For mass removal calculations (lb/lb-mole) - PCE mass weight = 165.82, TCE = 131.39 and cis-1,2-DCE = 96.95

8/5/10 - Extensive wellfield optimization conducted
9/23/10 - System off on arrival due to power outages
11/23/10 - System off on arrival due to power outages
12/1/10 - System off on arrival due to high water
1/4/11 - System off on arrival; power outage; also repaired knockout pot
4/6/11 - System off on arrival due to high water and would not start; off on departure
4/12/11 - System restarted
5/11/11 - System off on arrival due to high water
7/12/11 - System off on arrival; high water
7/13/11 - Remove water and restart system
7/18/11 - System off on arrival due to power outage
8/31/11 - System off on arrival due to power outage
9/7/11 - System off on arrival due to power outage
9/15/11 - System off on arrival due to power outage
10/5/11 - System off on arrival due to full water tank
10/6/11 - Water tank emptied and system restarted
10/26/11 - System shut off due to carbon back pressure
11/30/11 - Carbon changeout, restart system
12/9/11 - System off on arrival due to power outage

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Date Monitored	Operational Status **on Arrival**	Cumulative Calendar **Days**	Hour Meter **Reading**	Cumulative Operating **Hours**	Inlet Flow **(scfm)**	Vacuum **(in-Hg)**		Influent Oxygen Content **(%)**	Field Vapor Total VOCs		Lab Vapor Influent **(ppmV)**				VOCs Extracted **(lbs/hr)**				Cumulative VOCs Extracted **(lbs)**	Removal Rates **(lbs/day)**
						System	Wellfield		Influent **(ppmV)**	Effluent **(ppmV)**	PCE	TCE**	cis-1,2-DCE	Other VOCs	PCE	TCE**	cis-1,2-DCE	Total		

1/17/12 - System off on arrival due to power outage
1/25/12 - System off on arrival due to power outage
2/3/12 - System off on arrival due to power outage
2/9/12 - System off on arrival due to power outage
2/17/12 - System off on arrival due to high water
3/5/12 - Snow conditions finally were conducive to remove water; also, attempted to fix an oil leak, which was a broken seal; seal was back-ordered
3/8/12 - Attempted to repair seal; however, wrong parts were delivered
3/29/12 - Attempted to replace the broken seal; however, the part failed; had to order a new one (back-ordered)
4/18/12- Fix seal on compressor; change compressor and blower oil
4/26/12- High water upon arrival (system off); system off on departure; tech to empty water and restart system
5/1/12- Added air sparge to water and opened dilution air to drop VAC and collect vapors
5/8/12- Changed AS manifold and closed off wells at east end of field near compound
5/14/12- Shut off AS-14,15,16 to focus near MW-1S
5/23/12- Reduced dilution air; raised VAC from 2.35 to 3 in-Hg
6/8/12 - System off on arrival due to high water
6/14/12- turned system off..all PVC going to carbon and inbetween carbons melted from high temp.
6/21/12- replaced plumbing for carbon; added pressure switch between blower and carbon; added vent and therm.
6/27/12- installed fan over compressor exhaust
7/20/12 - System off on arrival due to power outage
7/26/12 - System off on arrival due to power outage; installed fan and additional vents to reduce heat inside building
8/16/12 - System off on arrival due to power outage
9/7/12 - System off on arrival due to high water
9/10/12 - Water removed for recycling
9/13/12 - System restarted
10/3/12 - System on on arrival, performed maintenance and recorded operational parameters; left system off on departure as carbon vessels needed re-plumbing
10/12/12 - Arrived and re-plumed carbon vessels; started system, recorded parameters; system running on departure
11/30/12 - System off on arrival due to power outage; restarted, recorded operational parameters, then shut down during storm period to not extract large volume of water during storms
12/18/12 - Installed and plumbed ozone unit to wells AS-1, AS-2, AS-3, AS-9, AS-7, AS-8 and AS-13; attempted to start; fuse problems requiring parts; ozone unit off on departure
12/10/13 - System shut-off for sampling and repairs to 4" pvc pipe (hairline crack at couple); restarted system before departure from site
12/27/13 - System off on arrival, possibly from a power outage; operating normally upon system startup; hour meter reading shows that system was only down for several hours before arrival to site
1/14/2014 - Re-plumb carbon vessels and added carbon to vessel #1; pumped carbob vessel #2 to remoe dust from vessel
1/28/14 - System off on arrival, possibly from a power outage; operating normally upon system startup; hour meter reading shows that system was only down for one hour before arrival to site
1/31/14 - System off on arrival, possibly from a power outage; operating normally upon system startup; hour meter reading shows that system was only down for several hours before arrival to site
2/18/14 - System off on arrival due to power outage
2/26/14 - System shut down for repairs to carbon vessel piping
2/28/14 - System restarted after repairs to carbon vessel piping
3/6/14 - System shutdown for repairs to carbon vessel piping
3/20/14 - System restarted after repairs to carbon vessel piping
3/24/14 - System off on arrival, possibly from a power outage; operating normally upon system startup; hour meter reading shows that system was only down for several hours before arrival to site

TABLE 2
SUMMARY OF HISTORICAL INTERIM REMEDIAL SYSTEM VAPOR LABORATORY ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample Point	Sample Date	PCE	TCE	cis-1,2-DCE	Trans-1,2-DCE	Other VOCs
		ppmV				
Influent	4/8/10	**0.680**	**0.031**	**0.041**	nd<0.01	nd<0.01
	4/9/10 - Test 9	**0.268**	**0.02**	**0.027**	nd<0.01	nd<0.01
	4/9/10	**1.950**	**0.045**	**0.048**	nd<0.01	nd<0.01
	6/24/10	**0.204**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	7/15/10	**6.61**	**0.281**	nd<2.00	nd<2.00	nd<2.00
	8/11/10	**2.04**	**0.031**	nd<0.025	nd<0.025	nd<0.025
	8/18/10	**9.14**	**0.096**	**0.047**	nd<0.041	nd<0.041
	8/25/10	**11.4**	**1.83**	**4.32**	nd<0.041	nd<0.041
	9/15/10	**16.4**	**0.154**	**0.046**	nd<0.041	**0.266**
	10/6/10	**11.8**	**0.104**	**0.033**	nd<0.041	**0.112**
	11/11/10	**2.7**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	12/16/10	**2.18**	**0.39**	nd<0.01	nd<0.01	nd<0.01
	1/21/11	**11.30**	**0.228**	**0.028**	nd<0.025	**0.241**
	5/18/11	**0.795**	nd<0.01	nd<0.01	nd<0.01	**0.049**
	6/14/11	**4.23**	nd<0.027	nd<0.027	nd<0.027	**1.181**
	7/18/11	**0.332**	nd<0.01	nd<0.01	nd<0.01	**0.419**
	8/31/11	**0.028**	nd<0.01	nd<0.01	nd<0.01	**0.015**
	10/13/11	**2.95**	**0.187**	nd<0.01	nd<0.01	**0.0197**
	12/9/11	**1.61**	**0.024**	nd<0.01	nd<0.01	**29.6**
	1/4/12	**0.997**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	2/9/12	**1.24**	**0.0124**	nd<0.01	nd<0.01	nd<0.01
	5/14/12	**1.24**	nd<0.01	nd<0.01	nd<0.01	**0.056**
	6/27/12	**2.66**	nd<0.01	nd<0.01	nd<0.01	**0.03**
	7/26/12	**1.31**	**0.013**	nd<0.01	nd<0.01	nd<0.01
	8/21/12	**0.441**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	9/13/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	10/31/12	**0.145**	nd<0.01	nd<0.01	nd<0.01	**0.233**
	11/30/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	11/22/13	**0.39**	nd<0.010	nd<0.010	nd<0.010	**1.7**
	12/10/13	**0.49**	nd<0.010	nd<0.010	nd<0.010	**0.09**
	1/7/14	**0.27**	nd<0.010	nd<0.010	nd<0.010	nd<0.010
	2/28/14	nd<0.010	nd<0.010	nd<0.010	nd<0.010	**0.025**
	3/20/14	nd<0.010	nd<0.010	nd<0.010	nd<0.010	**0.048**
Operational Average		**3.303**	**0.230**	**0.574**	**0.000**	**2.130**

TABLE 2
SUMMARY OF HISTORICAL INTERIM REMEDIAL SYSTEM VAPOR LABORATORY ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample Point	Sample Date	PCE	TCE	cis-1,2-DCE	Trans-1,2-DCE	Other VOCs
		ppmV				
Mid-Fluent	4/9/10	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	6/24/10	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	7/15/10	nd<2.00	nd<2.00	nd<2.00	nd<2.00	nd<2.00
	8/18/10	**2.23**	**0.027**	**0.19**	nd<0.02	**0.29**
	8/25/10	**3.98**	**0.272**	**0.161**	nd<0.02	**0.276**
	9/15/10	**3.29**	**0.133**	**0.097**	nd<0.02	**0.139**
	10/6/10	**1.5**	**0.034**	nd<2.00	nd<2.00	**0.032**
	11/11/10	**2.52**	nd<2.00	nd<2.00	nd<2.00	**0.024**
	1/21/11	**1.35**	nd<0.025	nd<0.025	nd<0.025	nd<0.025
	5/18/11	**1.00**	nd<0.01	nd<0.01	nd<0.01	**0.026**
	6/14/11	**2.00**	**0.109**	**0.128**	nd<0.029	**0.626**
	7/18/11	nd<0.01	nd<0.01	nd<0.01	nd<0.01	**0.195**
	8/31/11	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	10/13/11	**0.142**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	12/9/11	**1.61**	**0.024**	nd<0.01	nd<0.01	nd<0.01
	1/4/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	8/21/12	**0.297**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
Operational Average		**1.811**	**0.100**	**0.144**	**0.000**	**1.513**

TABLE 2
SUMMARY OF HISTORICAL INTERIM REMEDIAL SYSTEM VAPOR LABORATORY ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample Point	Sample Date	PCE	TCE	cis-1,2-DCE	Trans-1,2-DCE	Other VOCs
		ppmV				
Effluent	4/9/10	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	6/24/10	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	7/15/10	nd<2.00	nd<2.00	nd<2.00	nd<2.00	nd<2.00
	8/11/10	nd<0.023	nd<0.023	nd<0.023	nd<0.023	nd<0.023
	8/18/10	nd<0.01	nd<0.01	**0.192**	nd<0.01	nd<0.01
	8/25/10	nd<0.01	nd<0.01	**0.175**	nd<0.01	nd<0.01
	9/15/10	nd<0.01	nd<0.01	**0.221**	nd<0.01	nd<0.01
	10/6/10	**0.206**	nd<0.01	**0.024**	nd<0.01	nd<0.01
	11/11/10	**2.93**	**0.263**	nd<2.00	nd<0.01	**0.286**
	12/16/10	**0.948**	**0.067**	nd<2.00	nd<0.01	nd<0.01
	1/21/11	**3.68**	**0.233**	**0.081**	nd<0.027	**0.249**
	5/18/11	**0.106**	nd<0.01	nd<0.01	nd<0.01	**0.152**
	6/14/11	nd<0.029	nd<0.029	nd<0.029	nd<0.029	nd<0.029
	7/18/11	**0.187**	nd<0.01	nd<0.01	nd<0.01	**0.176**
	8/31/11	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	10/13/11	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	12/9/11	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	1/4/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	2/9/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	5/14/12	**0.633**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	6/27/12	**0.04**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	7/26/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	8/21/12	**0.287**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	9/13/12	**0.346**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	10/31/12	**0.117**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	11/30/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	11/22/13	nd<0.010	nd<0.010	nd<0.010	nd<0.010	nd<0.010
	12/10/13	**0.13**	nd<0.010	nd<0.010	nd<0.010	nd<0.010
	1/7/14	nd<0.010	nd<0.010	nd<0.010	nd<0.010	nd<0.010
	2/28/14	nd<0.010	nd<0.010	nd<0.010	nd<0.010	**0.128**
	3/20/14	nd<0.010	nd<0.010	nd<0.010	nd<0.010	**1.50**
Operational Average		**0.801**	**0.188**	**0.139**	**0.00**	**0.415**

TABLE 2
SUMMARY OF HISTORICAL INTERIM REMEDIAL SYSTEM VAPOR LABORATORY ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample Point	Sample Date	PCE	TCE	cis-1,2-DCE	Trans-1,2-DCE	Other VOCs
		ppmV				

Notes:

cis-1,2-DCE = cis-1,2-Dichloroethene
na = Not applicable
nd< = Not detected at or above the detection limit, which is indicated by value
PCE = Tetrachloroethene (a.k.a. perchloroethene)
ppmV = parts per million by volume
TCE = Trichloroethene
Trans-1,2-DCE = Trans-1,2-dichloroethene

1/27/11 - Vapor samples collected; however, during lab analyses instrument malfunctioned; no results
2/21/11 - Vapor samples collected; however, during lab analyses instrument malfunctioned; no results
10/26/11-11/30/11 - carbon changeout

EXHIBIT NN

Environmental
Engineering,
Consulting &
Remediation, Inc.

June 23, 2015

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Denver, CO 80202

Mr. William F. Tarantino, Partner
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SUBJECT: First Quarter 2015 Groundwater Monitoring Report and Current Site Remediation Status Report

Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Dear Mssrs. Reisch and Tarantino:

Pursuant to your request, please find attached the above-captioned Groundwater Monitoring Report (QMR) and Remediation Status Report (RSR). The document was prepared to comply with the Final Remedial Action Plan, which was approved by the State of California Regional Water Quality Control Board – Lahontan Region, South Lake Tahoe Branch (CRWQCB) letter dated August 2, 2013.

If you have any questions, or comments, please call the undersigned, or Phil Goalwin, at 916-782-8700.

Sincerely,
E_2C Remediation

PROFESSIONAL GEOLOGIST
WILLIAM A. LAWSON
Exp. 8/31/16
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William A. Lawson, P.G. #7171
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Mr. Levi Ford
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FIRST QUARTER 2015 GROUNDWATER MONITORING REPORT
AND
CURRENT SITE REMEDIATION STATUS REPORT

Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

June 23, 2015
Project Number: 1950BK26

Prepared For:

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EXECUTIVE SUMMARY

This report documents groundwater and shallow soil vapor monitoring activities conducted at the Lake Tahoe Laundry Works (LTLW) facility located at 1024 Lake Tahoe Boulevard in South Lake Tahoe, California (Site) for the First Quarter 2015, and provides a discussion of remedial actions conducted through March2015.

Groundwater Elevation Monitoring

Based on the March 2015 groundwater elevation data, groundwater elevations in on-site groundwater monitoring wells increased in average elevation by approximately 0.43-foot from the Fourth Quarter 2014 to the First Quarter 2015. The direction of groundwater flow was generally north-northwesterly to northerly, which was consistent with previous monitoring results.

Groundwater Chemical Conditions Monitoring

Tetrachloroethene (PCE) concentrations in on-site groundwater (dissolved-phase) in March 2015 were very low with concentrations ranging from non-detect (below 0.50 micrograms per liter (µg/L) to 2.7 µg/L. Concentrations of trichloroethene (TCE) and cis-1,2-dichloroethene (cis-1,2-DCE) in on-site groundwater were non-detect (less than 0.50 µg/L) in all wells.

Shallow Soil Vapor Monitoring

In the First Quarter 2015, Volatile Organic Compound (VOC) concentrations in soil vapor decreased significantly across the Site.

Residual PCE Mass in Soil-Vapor

An estimate of residual PCE mass in vapor in the vadose zone, at the time of the March 2015 monitoring event, was calculated at 0.00119 pound (lb). See Section 4.1 for discussion and calculations.

Residual PCE Mass in Groundwater

Using the most recent March 2015 data, for First Quarter 2015, there were no wells containing PCE at concentrations of 5 µg/L, or greater. Residual dissolved-phase PCE mass (calculated using the area of impacted mass greater than 5 µg/l) was zero.

Discussion of Remediation Data

Based on laboratory-derived vapor influent concentrations and incremental running time, approximately 891.75 pounds (lbs) of VOC mass were removed via remediation system operations using the soil vapor extraction/groundwater air sparging system (SVE/GASS) from system startup on April 9, 2010 to March 31, 2015. For the period of January 1, 2015 through March 31, 2015, mass removal rates continued to show a decreasing trend (0.069 lb/day on January 16, 2015 to 0.025 lb/day on March 31, 2015).

Conclusions

Based on the monitoring data collected to date, the following conclusions can be made:

- Since restart of the SVE/GASS August 4, 2014, dissolved-phase VOC concentrations in groundwater have been reduced. In March 2015, PCE was detected at a maximum concentration of 2.7 μg/L at well LW-MW-13S;
- Since restart of the remediation system on August 4, 2014, shallow soil vapor concentrations have been significantly reduced, such that in March 2015 there was only 0.00119 lb of residual soil vapor mass;
- Since re-start of the remediation system on August 4, 2014, influent concentrations to the system have been very low to non-detect. Laboratory-reported concentrations in January 2015 and March 2015 were very low, equating to removal rates of 0.062 lb/day and 0.025 lb/day, respectively;
- Dissolved-phase concentrations in site monitoring wells have been reduced to less than the 5 μg/L PCE concentration criteria set by the CRWQCB (in their April 9, 2014 letter) for calculating residual PCE mass in groundwater; and
- As groundwater at LW-MW-11S could not be sampled in March 2015, SVE/GASS operations should continue until a full set of groundwater analytical data can be obtained.

Recommendations

Based on the above conclusions, E_2C recommends the following:

- Continue full-time continuous SVE/GASS operation; and
- Continue groundwater monitoring and status reporting on a quarterly basis.

Discussion of Future Activities

Activities in the Second Quarter 2015 will consist of groundwater monitoring in June 2015 with continued full-time SVE/GASS operation. Based on the results of the Second Quarter 2015 monitoring and the SVE/GASS operations, the data will be evaluated and further recommendation will be made, as warranted.

1.0 INTRODUCTION

On behalf of Seven Springs Limited Partnership and Fox Capital Management, E_2C Remediation (E_2C) is submitting this report documenting groundwater and soil vapor monitoring activities conducted through the First Quarter 2015 and remedial activities conducted through March 31, 2015 at the Lake Tahoe Laundry Works (LTLW) facility located at 1024 Lake Tahoe Boulevard in South Lake Tahoe, California (Site). All work documented in this report was conducted in accordance with the Remedial Action Plan (RAP) and the California Regional Water Quality Control Board (CRWQCB) letters, dated November 1, 2013 and April 9, 2014, respectively.

1.1 Site Description

The Site is located approximately 9,000 feet south of Lake Tahoe in the City of South Lake Tahoe, El Dorado County (see Figure 1). The Site is situated in the northwest corner of the South Y Shopping Center, along Lake Tahoe Boulevard between U.S. Highway 50 and Tata Lane and is cross-corner from the dead-end intersection of Glorene Avenue with Lake Tahoe Boulevard (see Figure 2).

1.2 Previous Investigations

Based on a review of previous investigations, it appeared that shallow soils (vadose zone) beneath the Site and shallow groundwater beneath and immediately adjacent to the Site had been impacted by low to moderate concentrations of volatile organic compounds (VOCs), principally tetrachloroethene (PCE) and trichloroethene (TCE) (a.k.a. trichloroethylene). From October 2003 through November 2005, PES Environmental, Inc. (PES) conducted soil and shallow groundwater investigation work (PES, 2003, 2004, 2005 and PES 2006). In August and September 2008, E_2C Remediation (E_2C) conducted a site investigation to further evaluate vadose zone and groundwater conditions beneath and adjacent to the Site. The findings of the 2008 investigation were presented in the *Site Investigation Report of Findings* (E_2C, 2008).

In accordance with the CRWQCB approved IRAWP, an Interim Remedial Action system using Soil Vapor Extraction combined with Groundwater Air Sparging (SVE/GASS) was installed at the Site. On April 6, 2010 the SVE/GASS commenced operation with the start of the 60-day system pilot test. Operation of the SVE/GASS Pilot Test was documented in the report, *Interim Remedial System Installation/Pilot Testing Report of Findings and Draft Remedial Action Plan for Vadose Zone Soil and Shallow Groundwater Cleanup, Lake Tahoe Laundry Works, 1024 Lake Tahoe Boulevard, South Lake Tahoe, California*' (IRSI/PTROF/DRAP) (E_2C, 2010).

Pursuant to the approved *Interim Remedial Action Workplan for SZA Groundwater Investigation, SZA Groundwater Monitoring, Interim Remedial Action Vadose Zone Soil and Shallow Groundwater Cleanup* (IRAWP) (E_2C, 2009a) and Addendum to IRAWP, the system was left operational pending review, approval and implementation of the IRSI/PTROF/DRAP. On October 31, 2012, E_2C recommended that the SVE/GASS be shut-down and 'pulsed' ozone sparging commence. That recommendation was approved by the CRWQCB by letter, dated December 3, 2012. On August 2, 2013, the CRWQCB approved the Draft RAP, formally placing the Site into the Remediation Phase.

In a directive from the CRWQCB, dated November 1, 2013, Investigative Order No. R6T-

2013-0090 required that the SVE/GASS be re-started at the Site as PCE concentrations in groundwater increased to greater than 50 μg/L from the First Quarter 2013 to the Second Quarter 2013. According to the Draft RAP approved by the CRWQCB on August 2, 2013, the operation of 'pulsed' ozone sparging was intended for polishing of low concentrations (less than 50 μg/L) of chlorinated hydrocarbons in groundwater. As PCE concentrations at the Site in the Second Quarter 2013 exceeded 50 μg/L, the SVE/GASS was re-started on November 5, 2013.

1.3 Interim Remedial System Operations

The SVE/GASS operated almost continuously since the end of the Pilot Test period to shut-down on November 30, 2012 (see Table 6 for system operational data). The Site was visited generally on a weekly basis to record system operating parameters and to measure VOC concentrations in vapor influent, mid-fluent and effluent. Vapor samples were collected periodically for laboratory analyses. Extraction rates from the SVE wells were adjusted during each visit to improve removal of subsurface contaminants (see Table 7 for SVE wellfield configurations). Specific well-head configurations up to November 2012 were documented in the status report, dated March 11, 2013. The results of the vapor extraction wellhead focusing were effective, as indicated by continued reduction of dissolved-phase VOCs into the First Quarter 2013, well after shut-down of the remediation system on November 30, 2012 (see Graphs 2-13).

The SVE/GASS was shut-down due to system influent concentrations of 'zero' on November 30, 2012. In December 2012, after approval by the CRWQCB, E_2C mobilized an ozone sparging unit to the Site and began plumbing the unit to select AS wells. On December 20, 2012, E_2C collected water samples from LW-MW-1S and LW-MW-2S to evaluate baseline hexavalent chromium concentrations, which was reported as not detectable at, or above, the laboratory method reporting limit (MRL). On January 10, 2013, plumbing of the ozone system was completed and the system was started; however, based on initial operating observations, the system was found to need repairs (replacement of compressor seals) prior to commencing longer-term operations. On January 31, 2013, the repairs were made and the system was re-started.

Pulsed ozone sparging was conducted from January 31, 2013 through February 5, 2013. On May 9, 2013, an attempt was made to conduct the second phase of 'pulsed' ozone sparging; however, it was found that parts within the ozone unit had malfunctioned and required repairs. The unit was removed from the site and transported to the repair facility in San Luis Obispo. On August 6, 2013, the unit was re-mobilized to the site and re-started. On November 5, 2013, the ozone sparging system was shut down and removed from the Site as SVE/GASS operations were re-started.

In accordance with the approved ozone sparging Workplan, groundwater samples collected from wells LW-MW-1S, LW-MW-2S and LW-MW-5S were analyzed for hexavalent chromium during the quarterly monitoring events for which ozone sparging occurred. Groundwater samples were not analyzed for hexavalent chromium in the First Quarter 2014 as ozone sparging operations were discontinued on November 5, 2013.

1.4 SVE/GASS Restart

As directed by the CRWQCB, the SVE/GASS was re-started on November 5, 2013. The Permit to Operate (PTO) for the remedial system was renewed through the El Dorado County Air Quality Management District (EDCAQMD) on November 5, 2013, prior to system startup. In accordance with the directive from the CRWQCB on November 1, 2013, E_2C submitted a letter to the CRWQCB on November 12, 2013 confirming SVE/GASS startup at the Site. Investigative Order R6T-2013-0090 also requires that the CRWQCB be notified if operation of the SVE/GASS at the Site ceases for seven (7) days or more. Additionally, per the November 1, 2013 directive, another SVE/GASS will be mobilized to the Site and put into operation if the current system is unable to operate within a period of two (2) weeks. See Section 3.2 below for current system operation status.

2.0 FIRST QUARTER 2015 GROUNDWATER MONITORING

Soil vapor and groundwater monitoring for the First Quarter 2015 monitoring event consisted of collection of shallow soil vapor samples from VP wells, measuring depths to groundwater in accessible groundwater monitoring wells, and collecting groundwater samples for chemical analysis from the accessible monitoring wells.

2.1 Groundwater Elevation Monitoring

On March 26, 2015, depths to groundwater were measured at all on-site monitoring wells, except LW-MW-11S, as well as the far off-site monitoring well OS-1. The steel well box at LW-MW-11S was found to be heavily damaged and removal of the lid would have allowed for a potential safety hazard as that well is located in a high traffic area. The entire wellbox required replacement, which was done on June 3, 2015.

During this monitoring event, depths to water were measured from a mark located at the top of each well casing (generally the north side) using a Solinst water level meter and were recorded to the nearest 0.01 foot (see Appendix A for field data sheets). Depths to groundwater from the site wells were used to calculate the groundwater elevation at each well. Groundwater elevation data were further utilized for generation of a groundwater gradient plot.

2.1.1 On-Site Groundwater Gradient

On March 26, 2015, depths to water ranged from 12.63 feet below top of casing (BTOC) (LW-MW-5S) to 17.05 feet BTOC (LW-MW-2S) (see Table 1 for a summary of depth to groundwater data and Table 2 for summary of historical depth to groundwater data). Groundwater elevations decreased in five (5) of the on-site wells and increased in three (3) of the on-site wells, which indicated an average increase of 0.43 feet since December 2015 in the on-site area (see Table 2 and Graph 1). Depth to groundwater data were used to calculate the shallow groundwater zone (SZA) elevations across the Site (see Figure 3). Note: The groundwater elevation calculated for LW-MW-9 was not honored (NH) in the gradient contour plot because elevations at this location were two (2) feet higher than surrounding wells and is considered anomalous. Based on the groundwater elevation data from this monitoring event, the on-site groundwater flow was interpreted as north-northwesterly to northerly at a gradient of 0.022 foot of elevation drop per foot of horizontal distance (ft/ft)

2.2 Groundwater Sampling

Groundwater purging and sampling was conducted using low-flow purging and sampling methods, except at OS-1, which was purged and sampled using the hand-bailing method. In the low-flow method, groundwater was extracted from the well at a very low rate, approximately 200 to 250 milliliters per minute (mL/min), and drawdown of the water table was stabilized. Water was recovered from the more hydrogeologically conductive areas of the water-bearing zone around the well screen, and monitored with water quality sensors for stability to determine chemical change from well water to formation water. Once stabilization occurred, a sample was collected with the assurance of representative formation water and the least amount of geochemical disruption to the sample.

During purging, groundwater parameters of temperature, pH, and conductivity were measured as water was purged from a well. Once the parameters stabilized, groundwater in the monitoring well casing was considered representative of formation groundwater and a sample was collected (see Appendix A for copies of field data sheets).

After purging, the low-flow method was also used to fill sample containers, except at OS-1 where a clean disposable bailer was used. Samples were collected into laboratory supplied glassware consisting of three (3) 40-milliliter volatile organic analysis (VOA) vials. Each VOA was sealed using a tight fitting Teflon®-lined screw cap. Care was taken so that no headspace or bubbles were present in the VOA vials. All samples were labeled and documented on a Chain-of-Custody record immediately after sealing and placed into a cooler with ice for transport to the analytical laboratory.

2.2.1 Chemical Analysis of Groundwater Samples

Groundwater samples were analyzed at ProVera Analytical Laboratories, Inc. of Roseville, California (State DHS ELAP-Certification #2606) (ProVera) for the following constituents of concern (COCs) by the appropriate EPA Method (see Appendix B for a copy of the analytical laboratory report):

- Volatile Organic Compounds (VOCs), including PCE, TCE and associated PCE and TCE degradation products, using EPA Method 8260b; and
- The Method Reporting Limit (MRL) for all VOCs in all samples was 0.50 μg/L, except for tertiary-butyl alcohol with an MRL of 5 μg/L.

2.2.2 Summary of Groundwater Analytical Results

The reported results are summarized as follows (see Table 1 for summary of current data and Table 3 for summary of historical data):

Site Wells

- PCE was reported at all but two (2) wells (LW-MW-9S and LW-MW-10SR) at concentrations ranging from 0.7 μg/L (LW-MW-12) to 2.7 μg/L (LW-MW-13S) (see Figure 4);
- TCE was reported as not detectable at, or above the MRL (non-detect) at all wells (see Figure 5);
- Cis-1,2-DCE was reported as non-detect at all wells (see Figure 6);
- Chloroform was reported at one (1) well at a concentration of 1.2 μg/L (LW-MW-13S);

- Bromodichloromethane was reported as non-detect at all wells; and
- All other VOCs were reported as non-detect.

Off-Site Well OS-1

- PCE was reported at a concentration of 64 µg/L in the groundwater sample collected from well OS-1;
- TCE was reported at a concentration of 1.4 µg/L; and
- All other VOCs were reported as non-detect.

2.2.3 Quality Control Samples

The duplicate sample from LW-MW-5S was reported to contain concentrations of VOCs that were within acceptable ranges as compared to the primary sample from that well. The laboratory control samples all had recoveries within acceptable ranges. These results indicate that the analytical data are usable and are of adequate quality and reproducibility to satisfy data validity requirements.

2.2.4 Electronic Submittal of Data to GeoTracker Database

Groundwater monitoring data (elevation and laboratory) have been uploaded to the State GeoTracker database. A copy of this report has also been uploaded (see Appendix C for copies of recent upload confirmation reports). Any upload not documented in this status report will be documented in the next status report.

2.3 Shallow Soil-Vapor Sampling

Shallow soil-vapor samples were collected in accordance with soil-gas monitoring procedures outlined in Appendix E of the IRAWP (copy included as Appendix E).

Prior to this event, VP wells VP-5 and VP-6 were replaced, thus vapor samples were collected from the two (2) replacement wells this event.

2.3.1 Summary of Shallow Soil-Vapor Data

Analytical data for shallow soil vapor samples are summarized below and are presented with historical data in Tables 4A and 4B (see Appendix F for a copy of the soil vapor laboratory report):

- PCE was reported at all VP wells at concentrations ranging from 1.1 parts per billion by volume (ppbV) (0.015 micrograms per cubic meter [µg/m^3]) at VP-4 to 520 ppbV (3,526 µg/m^3) at VP-9 (see Figure 7A and 7B); and
- TCE was reported at all VP wells, except VP-3 and VP-4. Detected concentrations ranged from 0.054 ppbV to 6.6 ppbV(see Table 4A);
- Cis-1,2-DCE was reported as non-detect in all VP wells, except VP-2 and VP-5 where it was detected at concentrations of 15 ppbV and 50 ppbV, respectively; and
- All other VOCs were reported as non-detect in all samples analyzed (see Tables 4A and 4B), except at VP-5, VP-6, VP-8, VP-9, and VP-10, where minor concentrations of gasoline constituents were reported (see Table 6B).

2.4 Discussion of Monitoring Data

Groundwater Elevation Monitoring

Based on the March 26, 2015, groundwater elevation data in the on-site monitoring wells, groundwater increased in average elevation by approximately 0.43 foot from December 2014 to March 2015 (see Graph 1), and the direction of flow generally was, on average, north-northwesterly to northerly. The interpreted average flow direction and approximate gradient were similar to those interpreted in previous quarters.

Groundwater Chemical Conditions Monitoring

The highest reported PCE concentration in site groundwater (dissolved-phase) this quarter was at LW-MW-13S at a concentration of 2.7 μg/L.

A dissolved-phase PCE concentration of 64 μg/L was reported at OS-1. The PCE concentration fluctuations at OS-1 appear to be independent of fluctuations observed in groundwater at the on-site monitoring wells.

Shallow Soil Vapor Monitoring

VOC concentrations at the shallow soil vapor wells decreased significantly from December 2014 to March 2015. This is the result of continuous operation of the site remediation system, which has been modified to operate without carbon scrubbing.

3.0 CURRENT SITE REMEDIATION STATUS

Prior to November 1, 2013, site cleanup was conducted under the Interim Remedial Action Plan (IRAP). On November 1, 2013, the Remedial Action Plan (RAP) was approved by the CRWQCB. Since that date, site cleanup has been conducted in accordance with the approved RAP.

3.1 SVE/GASS Cyclic Operations

As PCE concentrations were less than 10 μg/L in all groundwater samples in the First Quarter 2014, E_2C proposed to the CRWQCB on March 17, 2014 that cyclical SVE/GASS operating periods commence. Ms. Lisa Dernbach of the CRWQCB approved the proposal via electronic message on April 7, 2014. Therefore, the SVE/GASS was shut off on April 10, 2014 to begin the approved cycling plan (2 weeks off/2 weeks on). On April 25, 2014, the SVE/GASS was re-started and cycling commenced. In August 2014, cycling was suspended and full-time, operation commenced.

3.1.1 SVE/GASS Cycling Influent Concentrations

During the cycling period, system influent vapor concentrations, as measured in the field with a PID, ranged from 0.0 parts per million by volume (ppmV) to 5.0 ppmV. Laboratory-derived PCE concentrations in influent vapor samples collected in April, May and June 2014 were low, 1.0 ppmV, or less (see Table 8).

3.2 Current SVE/GASS Operations

With the exception of downtime for maintenance and repairs, and several power outages at the Site which caused the system to remain off until re-start during the next weekly O&M visit, the SVE/GASS operated continuously from November 5, 2013 through April 10, 2014. For the period after April 10, 2014, the system continued to experience shut-down problems after numerous restarts and repairs to the piping system. Finally, it was determined that back-pressure from the carbon units back to the extraction unit was causing overheating of the piping, resulting in failure of pipe integrity, thus resulting in automatic shut-down of the system to prevent damage to the unit. This back-pressure was the result of fines build-up in the carbon due to break-down of the carbon granules. These fines caused flow through the carbon vessels to be restricted. These restrictions caused pressure to build and heat to be generated. Based on this, E_2C commenced an evaluation to assess corrective measures, including replacement of equipment and/or piping. The evaluation found that influent concentrations to the carbon were too low for effective carbon use. Additionally, the evaluation determined that the influent had never exceeded concentrations that would cause exception to the EDCAQMD PTO Item 14 condition of not exceeding “9.9 lb/day” of VOC emissions to the atmosphere. Additionally, data indicated that influent concentrations since June 14, 2011 would have yielded less than 1 lb/day of total VOC emissions into the atmosphere had the carbon units been taken out of line. Therefore, the EDCAQMD was contacted and a Request for Permitting Exemption, dated July 24, 2014, was prepared to bypass the carbon units and allow emission directly to atmosphere. On July 30, 2014, the EDCAQMD approved the Request. On August 4, 2014, the system was restarted in full-time operation mode.

As the PCE concentration at LW-MW-1S increased more than an order of magnitude from the First to Second Quarters 2014, E_2C personnel were scheduled and visited the site to re-start the remedial system for full-time operation. On August 4, 2014, the carbon units were taken out of service and the system was restarted with emission of extracted vapors directly to atmosphere. With re-plumbing of the system to discharge directly to atmosphere, there is now only one vapor sampling port and that is the influent port. The vapor sample collected at that port for laboratory analysis indicated that the maximum discharge to atmosphere was approximately 0.722 lbs/day (PCE = 3.5 parts per million by volume (ppmV), TCE = 0.095 ppmV, cis-1,2-DCE = 0.028 ppmV and other VOCs = 0.017 ppmV) (the field measurement was zero). This result was well below the 2.0 lbs/day limit requiring a Permit to Operate. Field measurements in August, September and October 2014 continue to reflect an emission rate well below the 2.0 lbs/day limit. Laboratory analysis of vapor influent samples collected on January 22, 2015 and March 27, 2015 reported PCE at 0.12 ppmV and 0.079 ppmV (see Table 7). These concentrations equate to removal rates of 0.062 and 0.025 lb/day, respectively, well below the 2.0 lbs/day limit.

Note the carbon vessels remain at the Site. Should emissions exceed 2.0 lbs/day the EDCAQMD will be contacted, the system will be shut down and a new PTO will be issued for operations through carbon.

3.3 VOC Mass Removal

Laboratory analytical data were used to estimate the VOC mass removed during SVE/GASS operations (see Table 6). Mass removal calculations were performed for PCE, TCE and cis-1,2-DCE individually. Low concentrations of fuel hydrocarbon compounds and other VOCs have also been reported sporadically in influent vapor samples. These compounds have been included in the ‘Total VOC’ category for mass removal calculation purposes.

Based on laboratory-derived vapor influent concentrations and incremental running time, approximately 891.75 pounds (lbs) of VOC mass were removed via the SVE/GASS operations from system startup (April 9, 2010) to March 31, 2015 (see Table 6).

4.0 ESTIMATE OF RESIDUAL PCE MASS IN SOILS AND GROUNDWATER

In their August 2, 2013 letter, CRWQCB directed that PCE mass remaining in soil and the aquifer be calculated based on known conditions in each status report, which are to be submitted quarterly.

4.1 Estimate of Residual PCE Mass in Vadose Zone

In order to estimate residual PCE mass in soils, analytical data from soil samples collected from confirmation borings would be needed. Although this is technically feasible, it is not financially feasible to advance soil borings every quarter to collect soil samples for laboratory analyses. However, it is possible to estimate residual PCE soil vapor mass in the vadose zone using shallow-soil vapor analytical data, which is collected quarterly, except during times that VP wells are not able to be sampled due to snow and ice in wells or obstructions (see Table 4A). Although the soil vapor data can be used to estimate residual PCE in soil, some assumptions need to be applied to provide a conservative estimate as follows:

1) For the First Quarter 2015, the impacted area is approximately 7,410 square feet (sf) approximate from Figure 7B) (note: although the size of the impacted area would change through time, increasing, or decreasing, as concentrations fluctuate, this area of impact allows for relative interpretations) (see Table 9B for calculation criteria);
2) The soil vapor data represents residual PCE concentrations contained within the pore space of the shallow subsurface soils, the porosity of which is conservatively estimated to be 30%; and
3) Although the VP wells are set at 5 feet in depth, the resultant data is assumed to represent the thickness of the vadose zone; in this case, approximately 10 feet on average.

Based on these assumptions, and using the most recent soil vapor data collected on March 31, 2015 (see Table 4A), the estimated residual PCE mass in vadose zone vapor is 0.00119 lb (see Table 9A).

4.2 Estimate of Residual PCE Mass in Groundwater

The following assumptions have been made to estimate residual PCE mass in groundwater:

1) For the First Quarter 2015, there were no wells containing PCE at concentrations of 5 μg/L, or greater; therefore, apparent residual dissolved-phase PCE mass (calculated using the area with concentrations greater than 5 μg/l) was zero. Note: See Table 10A for trend of PCE groundwater plume size;
2) The saturated zone soil porosity is 30%; and
3) The impacted thickness within the saturated zone is approximately 10 feet on average.

Based on these assumptions, an estimate of residual PCE groundwater mass can be made. Using the most recent March 2015 data, the estimated apparent PCE mass in groundwater affected by PCE at concentrations equal to, or greater than, or equal to, 5 µg/L is 0.00 lb (see Table 10B).

5.0 CONCLUSIONS

Based on the monitoring data collected to date, the following conclusions can be made:

- Since restart of the remediation system on August 4, 2014, dissolved-phase VOC concentrations in groundwater have been reduced. In March 2015, PCE was detected at a maximum concentration of 2.7 µg/L at LW-MW-13S;
- Since restart of the remediation system on August 4, 2014, shallow soil vapor concentrations have been significantly reduced, such that in March 2015 there was only 0.00119 lb of residual soil vapor mass;
- Since re-start of the remediation system on August 4, 2014, influent concentrations to the system have been very low to 'zero' conditions. Laboratory-reported concentrations in January 2015 and March 2015 were very low, equating to removal rates of 0.062 lb/day and 0.025 lb/day, respectively;
- Dissolved-phase concentrations in on-site monitoring wells have been reduced to less than the 5 µg/L PCE concentration criteria set by the CRWQCB (in April 9, 2014 letter) for calculating residual PCE mass in groundwater; and
- As groundwater at LW-MW-11S could not be sampled in March 2015, SVE/GASS operations should continue until a full data set of groundwater analytical data can be obtained.

6.0 RECOMMENDATIONS

Based on the above conclusions, E_2C recommends the following:

- Continue full-time continuous SVE/GASS operation; and
- Continue groundwater monitoring on a quarterly basis.

7.0 FUTURE ACTIVITIES

Activities in the Second Quarter 2015 will consist of groundwater monitoring in June 2015 with continued full-time SVE/GASS operation. Based on the results of the Second Quarter 2015 monitoring and the SVE/GASS operations, the data will be evaluated and further recommendation will be made, as warranted.

8.0 LIMITATIONS AND CERTIFICATION

E_2C has performed this investigation in accordance with generally accepted standards of care existing in California at this time. It should be recognized that definition and evaluation of geologic conditions is a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with limited knowledge of subsurface conditions present. No warranty expressed or implied is made.

This Report has been prepared under the professional supervision of the registered professionals whose seals and signatures appear herein. The proposed site monitoring and remediation tasks in this Report are based solely on the Scope of Services outlined and the sources of information referenced in this report. Any additional information that becomes available concerning the Site should be submitted to E_2C so that our conclusions may be reviewed and modified, if necessary. This Report was prepared for the sole use of Seven Springs Limited Partnership, Fox Capital Management, and/or their agent(s), the CRWQCB and the CEDEMD.

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Reviewed By:

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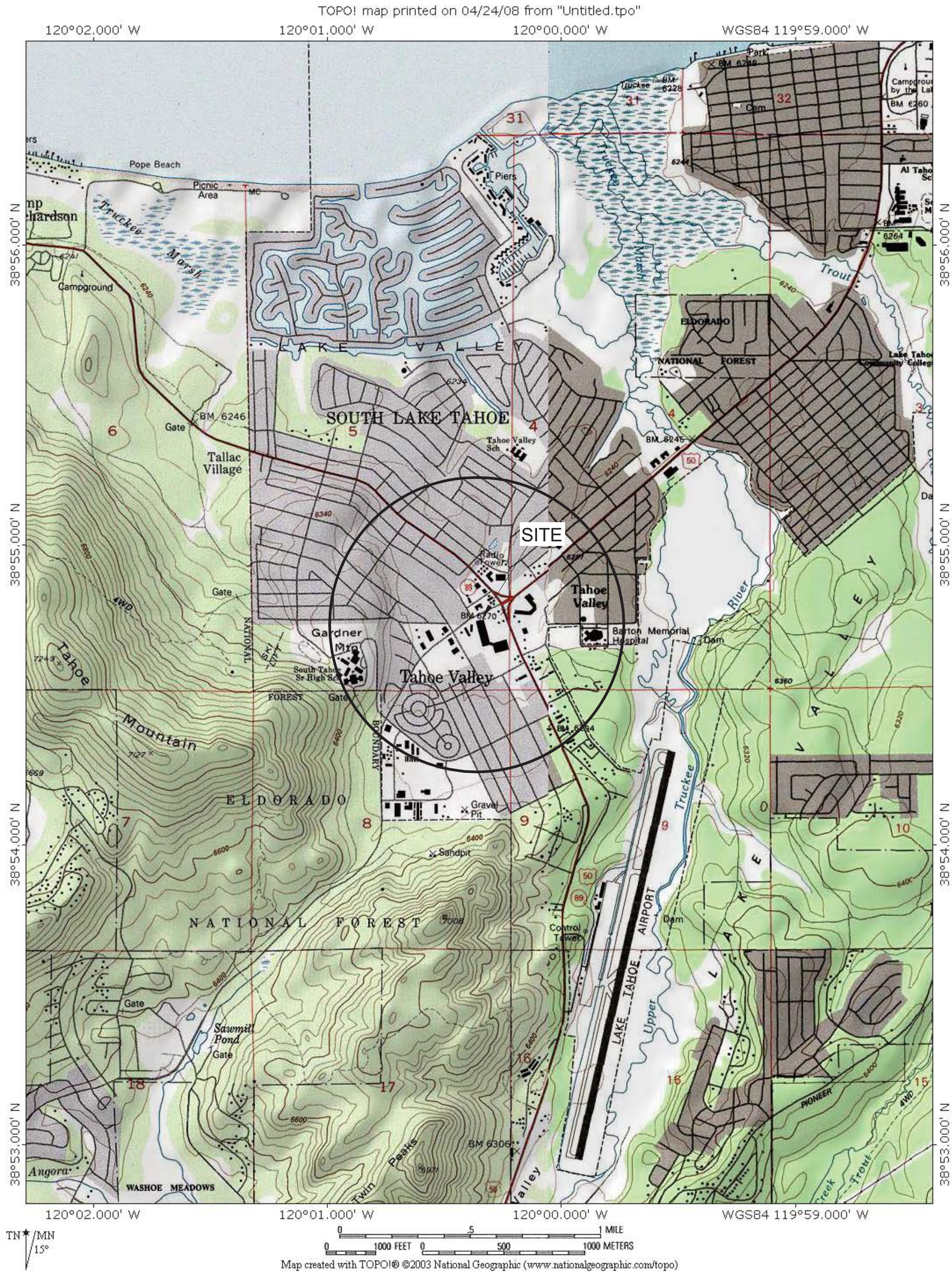
FIGURES



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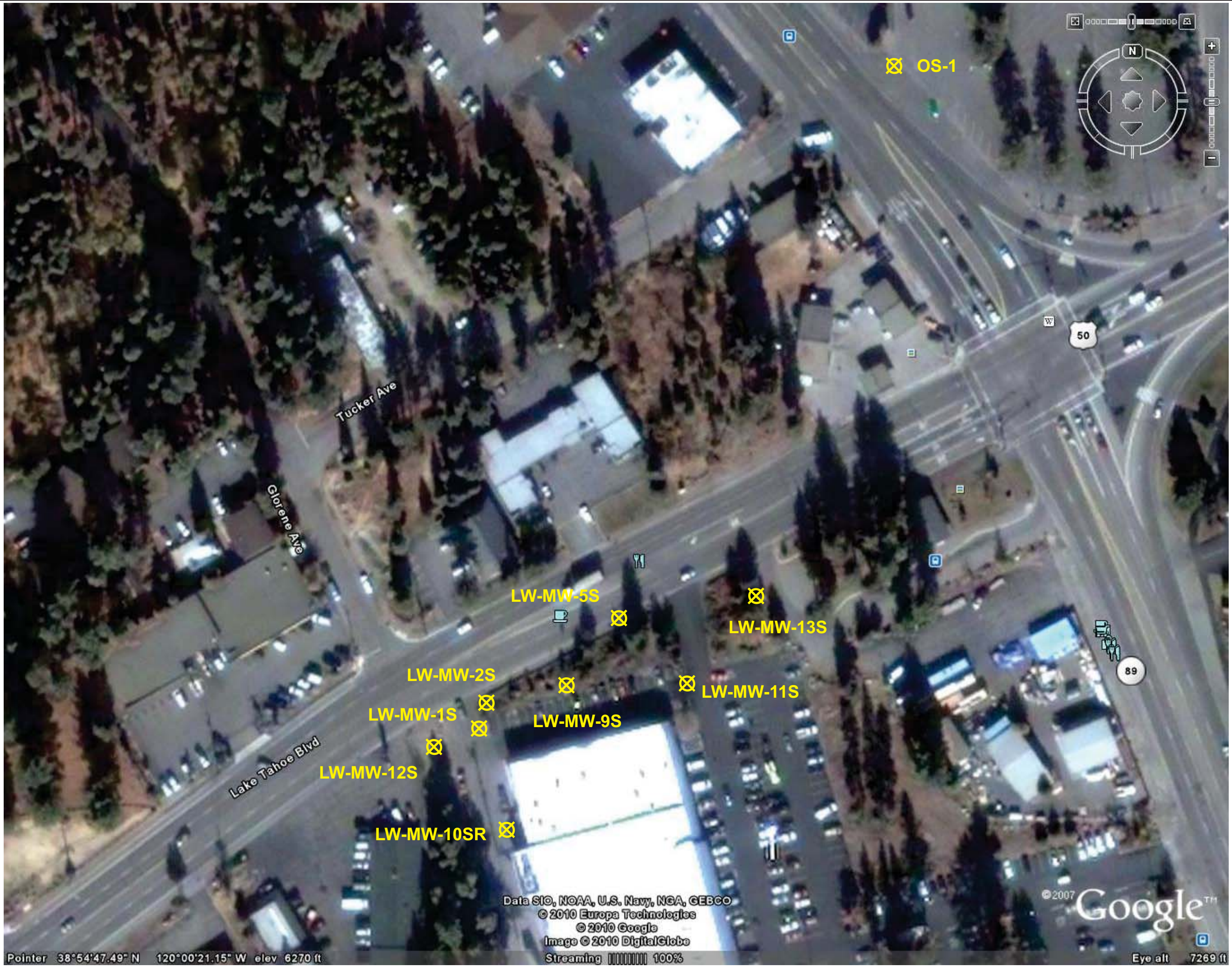
LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BOULEVARD
SOUTH LAKE TAHOE, CALIFORNIA

SITE LOCATION MAP

FIGURE 1

LEGEND

⊠ Approximate Location of Groundwater Monitoring Well
LW-MW-1S



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NOT TO SCALE

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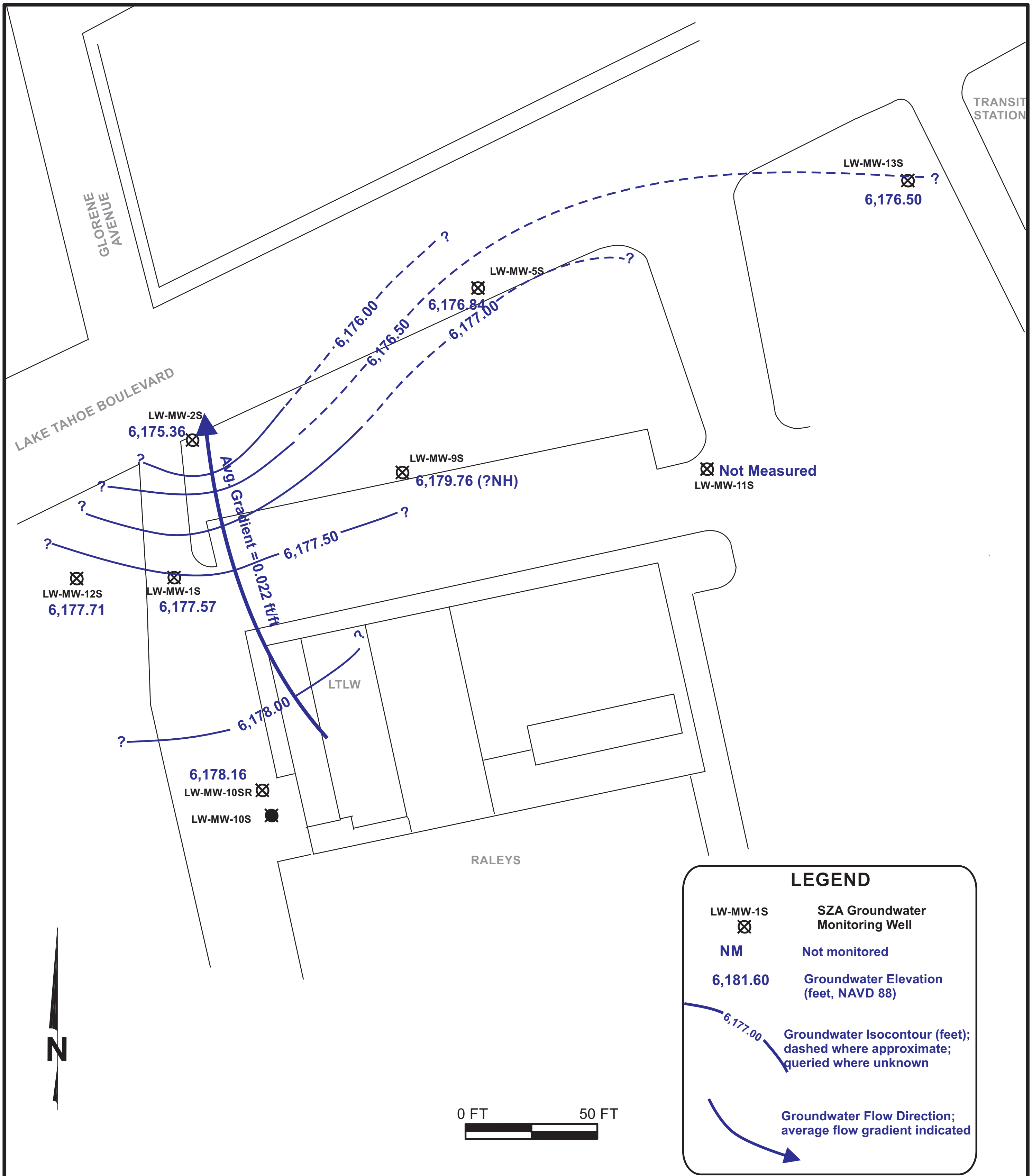
SITE PLAN

FIGURE 2



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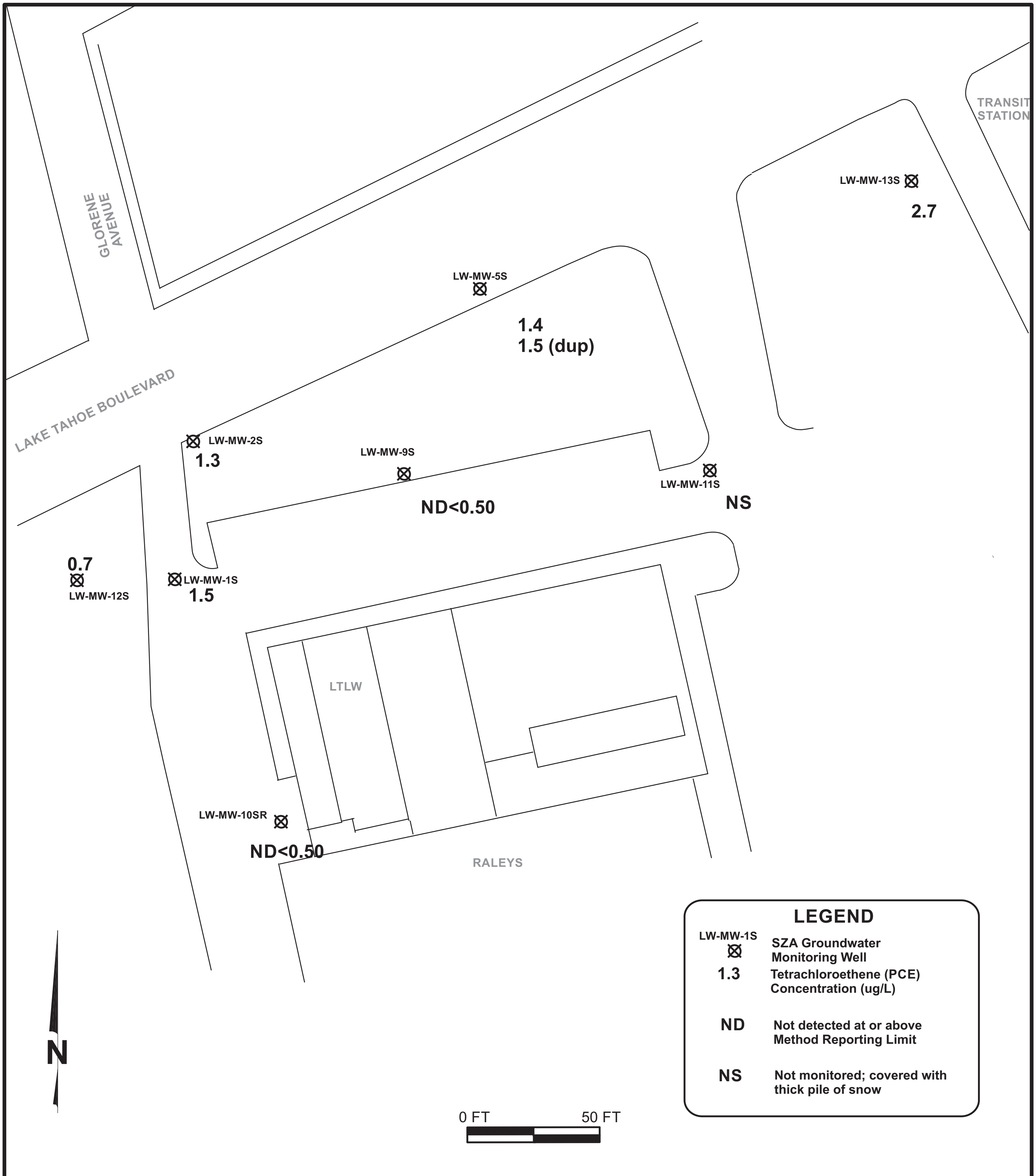
FIRST QUARTER 2015
GROUNDWATER GRADIENT PLOT

FIGURE 3



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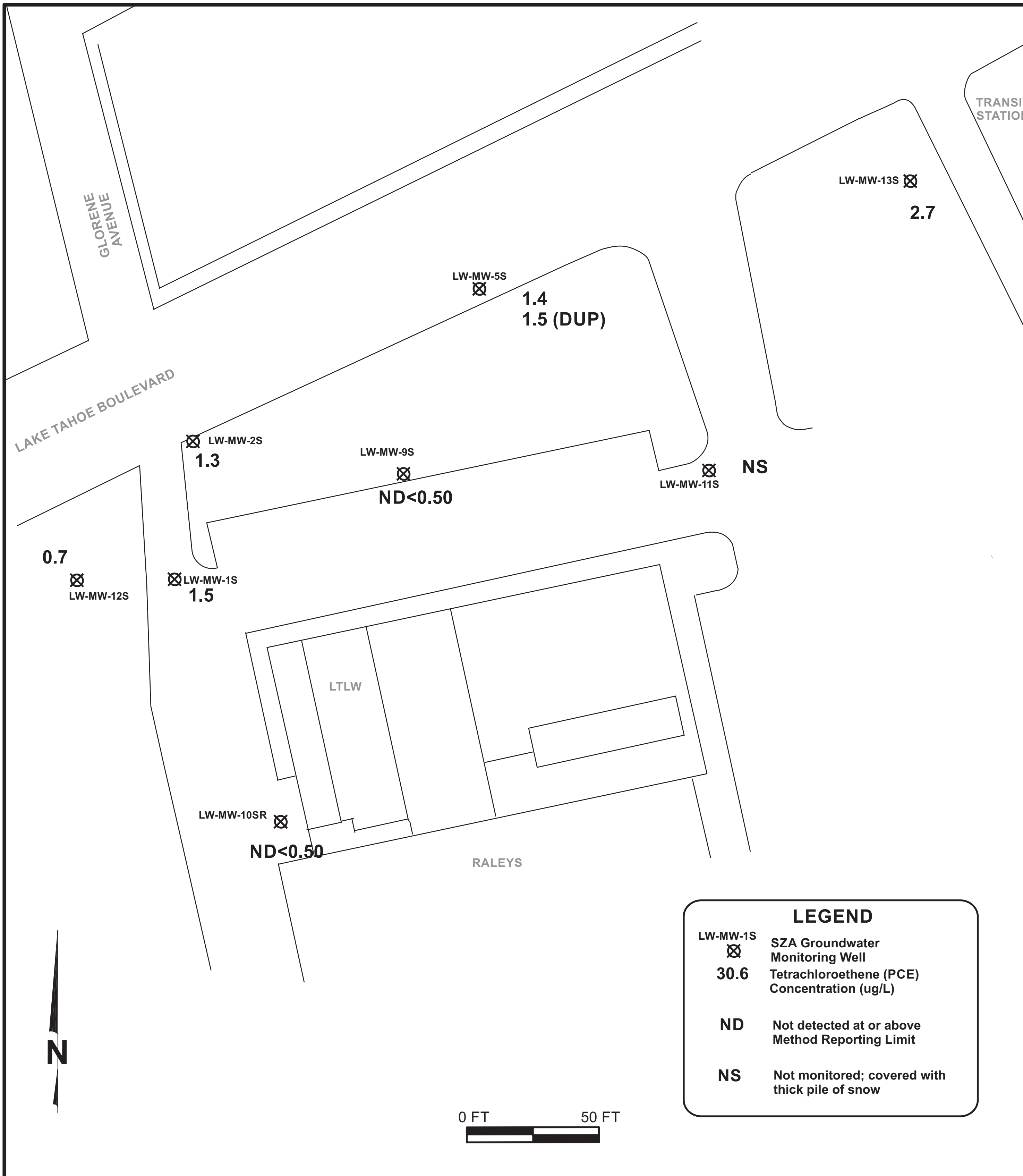
FIRST QUARTER 2015
DISSOLVED-PHASE
PCE DISTRIBUTION PLOT

FIGURE

4



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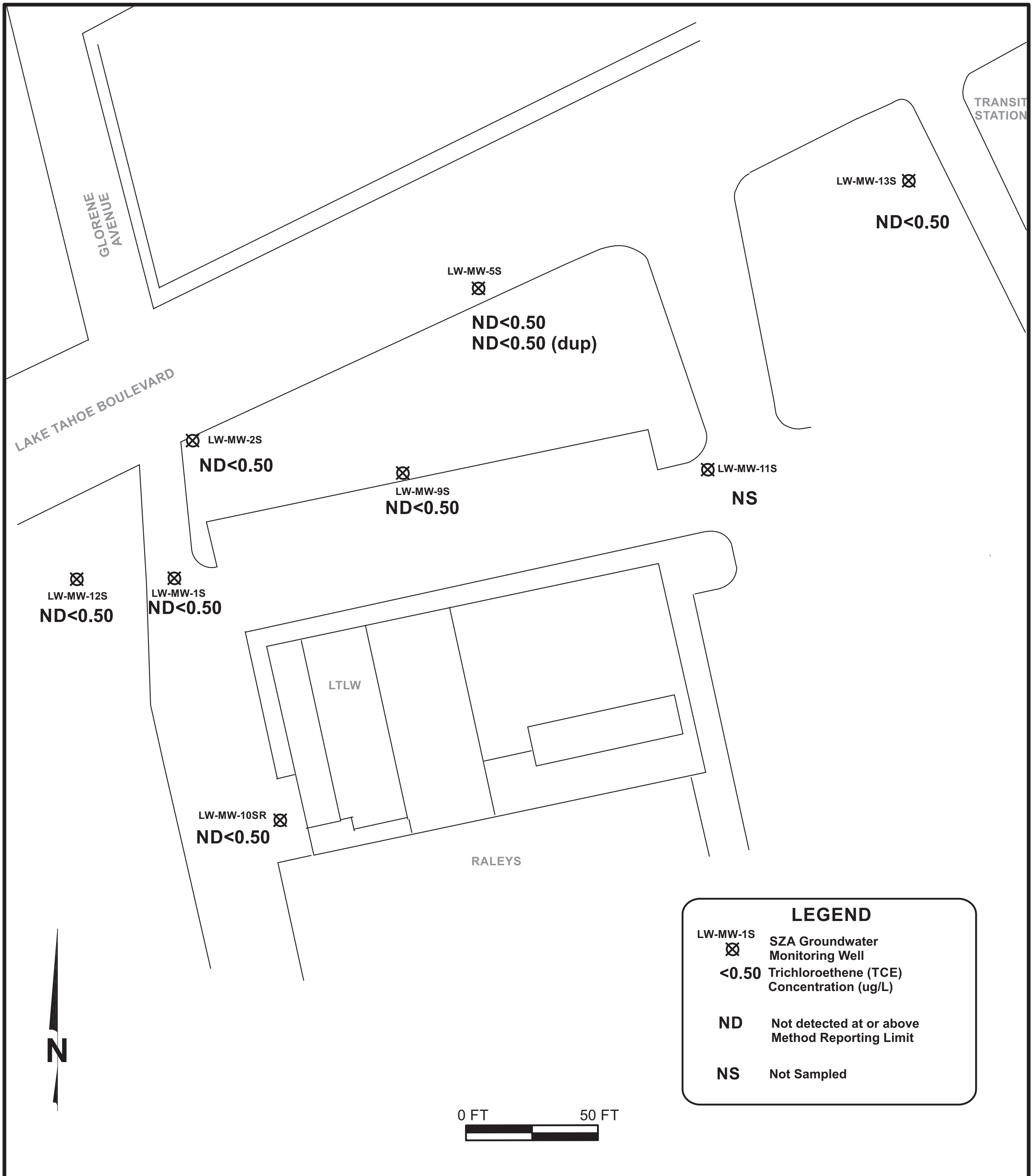
FIRST QUARTER 2015
DISSOLVED-PHASE
PCE 5 ug/L BOUNDARY PLOT

FIGURE

4A



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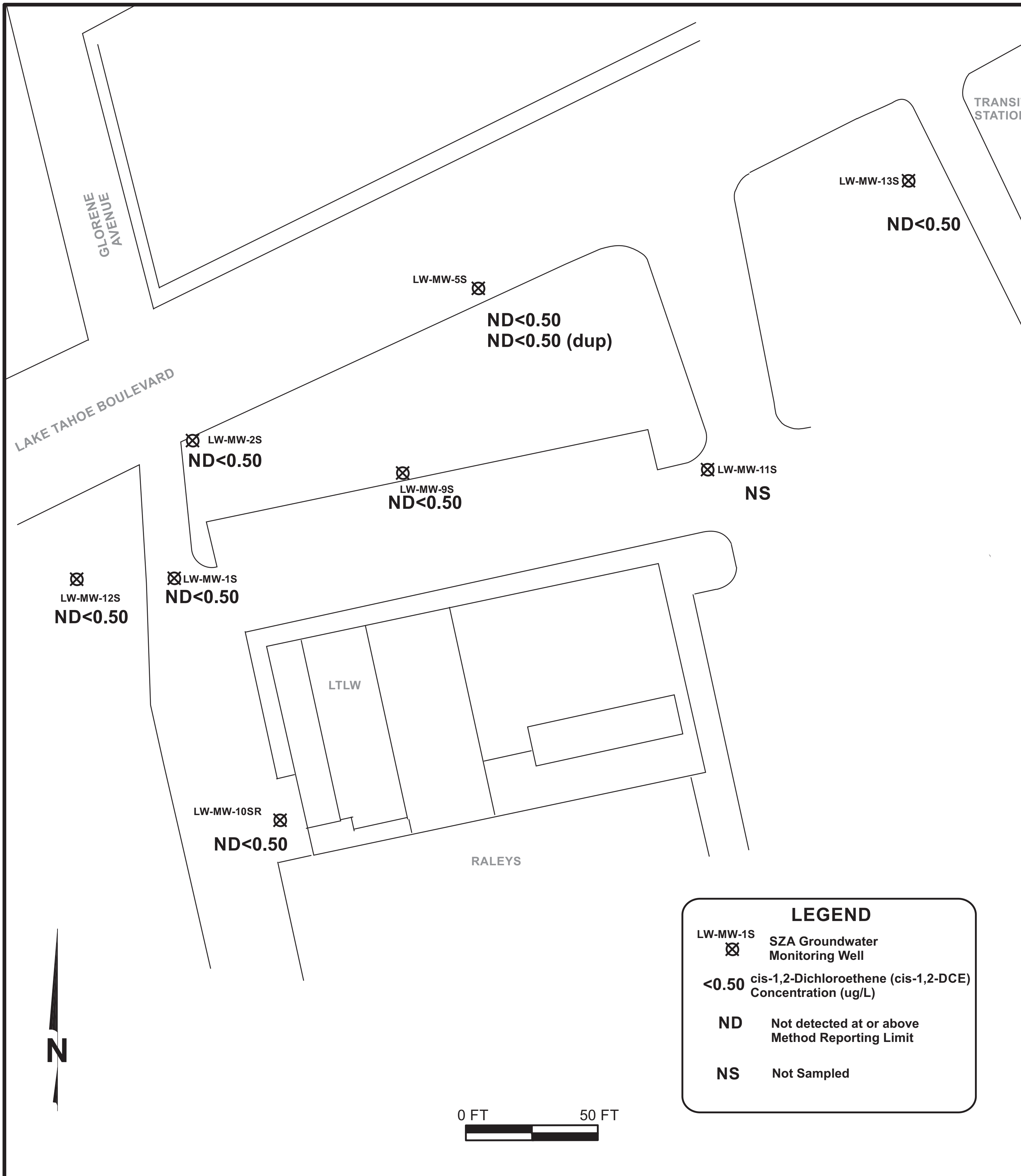
FIRST QUARTER 2015
DISSOLVED-PHASE
TCE DISTRIBUTION PLOT

FIGURE 5



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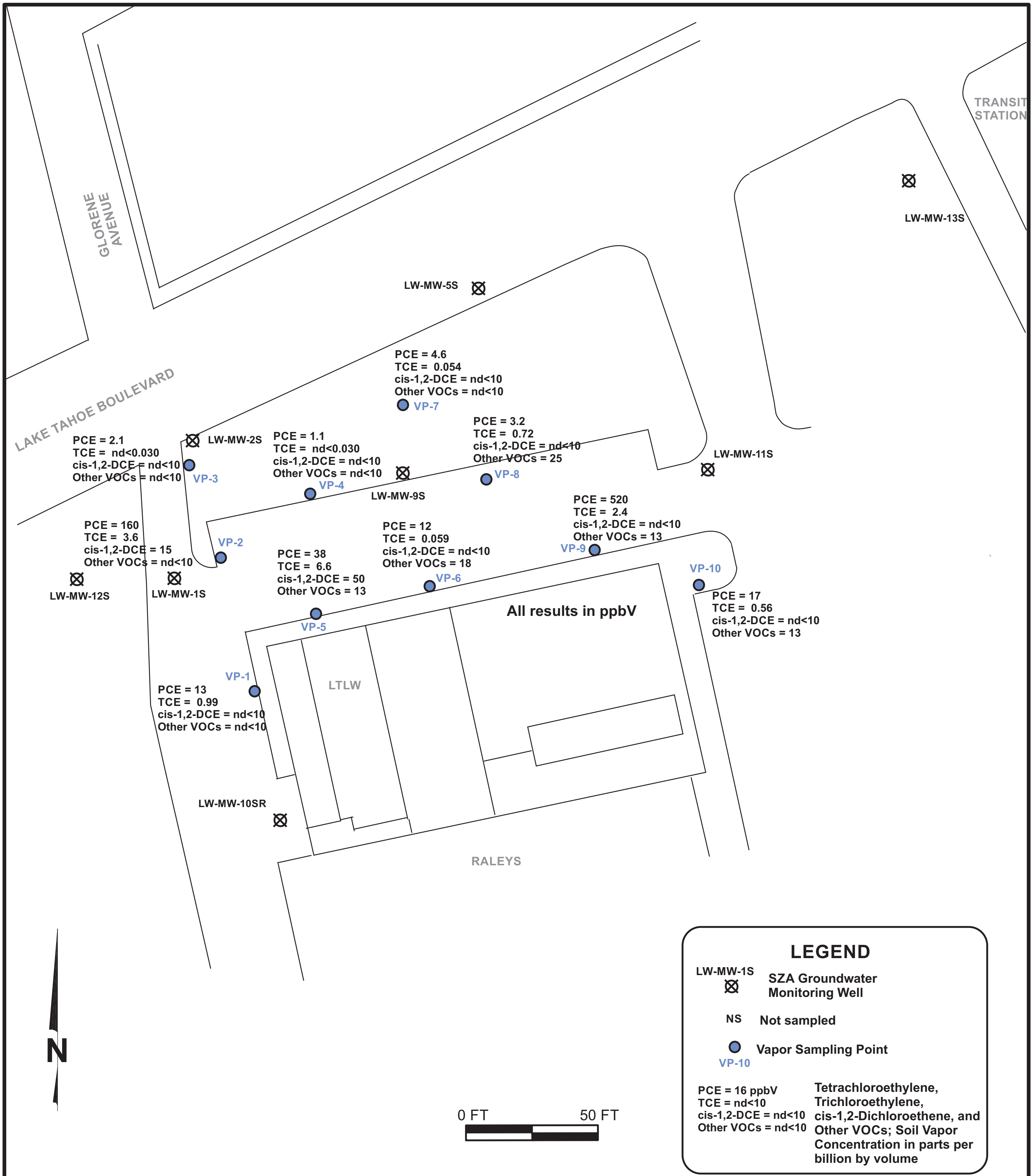
FIRST QUARTER 2015
DISSOLVED-PHASE
cis-1,2-DCE DISTRIBUTION PLOT

FIGURE 6



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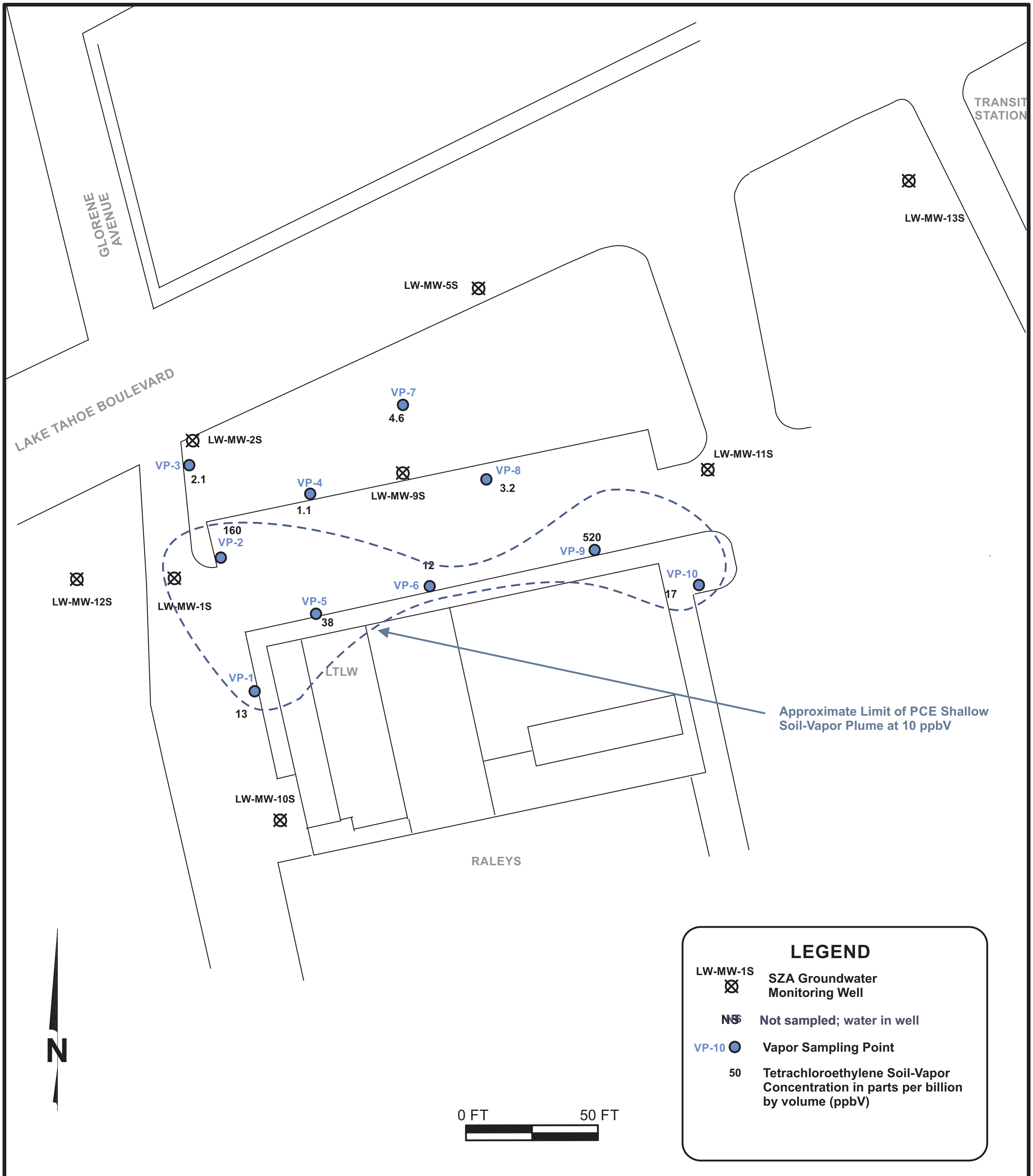
FIRST QUARTER 2015
SHALLOW SOIL VAPOR
DISTRIBUTION PLOT

FIGURE
7A



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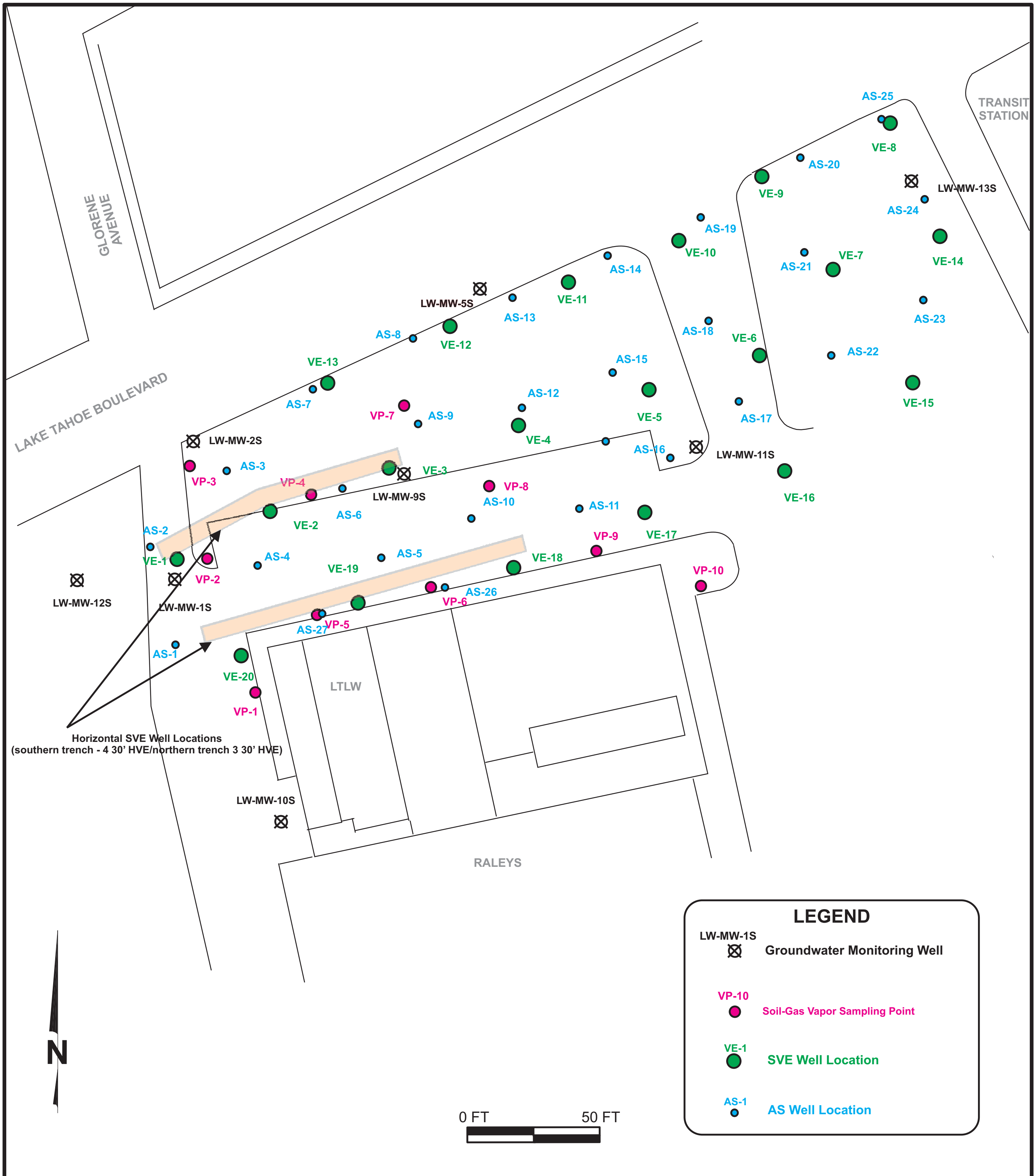
FIRST QUARTER 2015
SHALLOW SOIL VAPOR PCE
DISTRIBUTION PLOT

FIGURE

7B



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REMEDIATION WELL LOCATION PLOT

FIGURE 8

TABLES

TABLE 1
SUMMARY OF FIRST QUARTER 2015 GROUNDWATER MONITORING DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California
March 26, 2015

Well ID	TOC Elev.	Depth to GW	GW Elevation	PCE	TCE	VC	CA	CB	1,1-DCE	MC	Trans-1,2-DCE	1,1-DCA	cis-1,2-DCE	1,2-DCA	1,1,1,2-Tetra	1,1,1-TCA	CF	BDCM	B	EB	MtBE
	(feet rel MSL)	(feet BTOC)	(feet MSL)	(µg/L)																	
LW-MW-1S	6,191.41	13.84	6,177.57	**1.5**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
LW-MW-2S	6,192.41	17.05	6,175.36	**1.3**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
LW-MW-5S	6,189.47	12.63	6,176.84	**1.4**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
duplicate				**1.5**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
LW-MW-9S	6,192.98	13.22	6,179.76	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
LW-MW-10SR	6,191.91	13.75	6,178.16	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
LW-MW-11S	6,191.67	nm		**Unable to Monitor (see note below)**																	
LW-MW-12S	6,190.71	13.00	6,177.71	**0.7**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
LW-MW-13S	6,190.82	14.32	6,176.50	**2.7**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**1.2**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
OS-1	6,188.12	12.85	6,175.27	**64**	**1.4**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50

Notes:

Results in micrograms per liter (µg/L) (equivalent to parts per billion, ppb)

1,1-DCA = 1,1,-Dichloroethane
1,1-DCE = 1,2-Dichloroethene
1,1,1-TCA = 1,1,1-Trichlorethane
1,1,1,2-Tetra = 1,1,1,2-Tetrachloroethane
B = Benzene
BDCM - Bromodichloromethane
BTOC = Below Top of Casing
CA = Chloroethane
CB = Chlorobenzene
CF = Chloroform
cis-1,2-DCE = cis-1,2-Dichloroethene
EB = Ethlybenzene
MC = Methylene Chloride
MtBE = Methyl tertiary-butyl ether
nd< = Not detected at or above the Method Detection Limit, which is indicated by the value
nm = Not monitored
PCE = Tetrachloroethene (a.k.a. perchloroethene)
TCE = Trichloroethene
trans-1,2-DCE = trans-1,2-Dichloroethene
VC = Vinyl Chloride

LW-MW-14 is the duplicate of LW-MW-5S on Chain-of-Custody
Well box for LW-MW-11S found damaged; would have been unsafe to open, as box would have had to be left open on departure creating safety issue in high vehicle traffic area; steel box will be replaced before next monitoring event

TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER ELEVATION DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Date	Reference Elevation (feet MSL)	Total Well Depth (feet BTOC)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet MSL)	GW Elevation Change (feet)
LW-MW-1S	08/13/08	6,191.41	---	13.69	6,177.72	---
	12/04/09		23.91	15.09	6,176.32	-1.40
	03/23/10		23.90	13.99	6,177.42	1.10
	06/15/10		23.90	11.16	6,180.25	2.83
	09/08/10		23.90	12.73	6,178.68	-1.57
	12/16/10		23.90	12.49	6,178.92	0.24
	05/11/11		23.90	5.08	6,186.33	7.41
	09/29/11		23.90	10.71	6,180.70	-5.63
	12/09/11		23.90	10.16	6,181.25	0.55
	03/29/12		23.90	9.03	6,182.38	1.13
	06/08/12		23.90	10.75	6,180.66	-1.72
	08/21/12		23.90	12.19	6,179.22	-1.44
	11/19/12		23.90	13.66	6,177.75	-1.47
	03/11/13		23.90	10.18	6,181.23	3.48
	07/30/13		23.90	11.27	6,180.14	-1.09
	09/30/13		23.90	12.31	6,179.10	-1.04
	12/10/13		23.90	13.91	6,177.50	-1.60
	03/06/14		23.90	14.14	6,177.27	-0.23
	06/26/14		23.90	12.30	6,179.11	1.84
	09/17/14		23.90	14.36	6,177.05	-2.06
	12/16/14		23.90	13.58	6,177.83	0.78
	03/26/15		23.90	13.84	6,177.57	-0.26
LW-MW-2S	08/13/08	6,192.41	---	14.99	6,177.42	---
	12/04/09		34.82	17.29	6,175.12	-2.30
	03/23/10		34.85	15.44	6,176.97	1.85
	06/15/10		34.85	13.21	6,179.20	2.23
	09/08/10		34.85	14.85	6,177.56	-1.64
	12/16/10		34.85	14.11	6,178.30	0.74
	05/11/11		34.85	7.41	6,185.00	6.70
	09/29/11		34.85	11.76	6,180.65	-4.35
	12/09/11		34.85	12.63	6,179.78	-0.87
	03/29/12		34.85	11.85	6,180.56	0.78
	06/08/12		34.85	12.73	6,179.68	-0.88
	08/21/12		34.85	13.64	6,178.77	-0.91
	11/19/12		34.85	14.97	6,177.44	-1.33
	03/11/13		34.85	12.84	6,179.57	2.13
	07/30/13		34.85	14.32	6,178.09	-1.48
	09/30/13		34.85	15.11	6,177.30	-0.79
	12/10/13		34.85	16.52	6,175.89	-1.41
	03/06/14		34.85	15.94	6,176.47	0.58
	06/26/14		34.85	15.4	6,177.01	0.54
	09/17/14		34.85	16.88	6,175.53	-1.48
	12/16/14		34.85	16.89	6,175.52	-0.01
	03/26/15		34.85	17.05	6,175.36	-0.16

TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER ELEVATION DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Date	Reference Elevation (feet MSL)	Total Well Depth (feet BTOC)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet MSL)	GW Elevation Change (feet)
LW-MW-5S	08/13/08	6,189.47	---	14.04	6,175.43	---
	12/04/09		29.73	14.85	6,174.62	-0.81
	03/23/10		29.73	14.21	6,175.26	0.64
	06/15/10		29.73	9.75	6,179.72	4.46
	09/08/10		29.73	12.06	6,177.41	-2.31
	12/16/10		29.73	nm		
	05/11/11		29.73	4.75	6,184.72	
	09/29/11		29.73	9.21	6,180.26	-4.46
	12/09/11		29.73	8.94	6,180.53	0.27
	03/29/12		29.73	7.94	6,181.53	1.00
	06/08/12		29.73	8.84	6,180.63	-0.90
	08/21/12		29.73	11.84	6,177.63	-3.00
	11/19/12		29.73	15.25	6,174.22	-3.41
	03/11/13		29.73	9.25	6,180.22	6.00
	07/30/13		29.73	10.22	6,179.25	-0.97
	09/30/13		29.73	11.36	6,178.11	-1.14
	12/10/13		29.73	14.32	6,175.15	-2.96
	03/06/14		29.73	12.93	6,176.54	1.39
	06/26/14		29.73	11.27	6,178.20	1.66
	09/17/14		29.73	12.73	6,176.74	-1.46
	12/16/14		29.73	12.89	6,176.58	-0.16
	03/26/15		29.73	12.63	6,176.84	0.26
LW-MW-9S	12/04/09	6,192.98	24.40	16.01	6,176.97	---
	03/23/10		24.25	14.82	6,178.16	1.19
	06/15/10		24.25	12.29	6,180.69	2.53
	09/08/10		24.25	13.91	6,179.07	-1.62
	12/16/10		24.25	14.75	6,178.23	-0.84
	05/11/11		24.25	6.37	6,186.61	8.38
	09/29/11		24.25	12.51	6,180.47	-6.14
	12/09/11		24.25	11.57	6,181.41	0.94
	03/29/12		24.25	10.68	6,182.30	0.89
	06/08/12		24.25	12.76	6,180.22	-2.08
	08/21/12		24.25	13.92	6,179.06	-1.16
	11/19/12		24.25	15.26	6,177.72	-1.34
	03/11/13		24.25	11.66	6,181.32	3.60
	07/30/13		24.25	12.69	6,180.29	-1.03
	09/30/13		24.25	13.75	6,179.23	-1.06
	12/10/13		24.25	17.23	6,175.75	-3.48
	03/06/14		24.25	16.80	6,176.18	0.43
	06/26/14		24.25	13.73	6,179.25	3.07
	09/17/14		24.25	12.40	6,180.58	1.33
	12/16/14		24.25	15.46	6,177.52	-3.06
	03/26/15		24.25	13.22	6,179.76	2.24

TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER ELEVATION DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Date	Reference Elevation (feet MSL)	Total Well Depth (feet BTOC)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet MSL)	GW Elevation Change (feet)
LW-MW-10S	12/04/09	6,192.15	24.76	14.30	6,177.85	---
	03/23/10		24.60	13.27	6,178.88	1.03
	06/15/10		24.60	10.55	6,181.60	2.72
	09/08/10		24.60	12.13	6,180.02	-1.58
	12/16/10		24.60	11.07	6,181.08	1.06
	05/11/11		24.60	4.41	6,187.74	6.66
	09/29/11		24.60	9.20	6,182.95	-4.79
	12/09/11		24.60	9.80	6,182.35	-0.60
	03/29/12		24.60	9.02	6,183.13	0.78
	06/08/12		24.60	9.43	6,182.72	-0.41
	08/21/12		24.60	10.45	6,181.70	-1.02
	11/19/12		Well Grouted Up on Arrival/Unaccessible			
LW-MW-10SR	07/30/13	6,191.91	24.65	11.73	6,180.18	---
	09/30/13		24.65	11.95	6,179.96	-0.22
	12/10/13		24.65	13.40	6,178.51	-1.45
	03/06/14		24.65	13.21	6,178.70	0.19
	06/26/14		24.65	11.99	6,179.92	1.22
	09/17/14		24.65	13.61	6,178.30	-1.62
	12/16/14		24.65	14.78	6,177.13	-1.17
	03/26/15		24.65	13.75	6,178.16	1.03

TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER ELEVATION DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Date	Reference Elevation (feet MSL)	Total Well Depth (feet BTOC)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet MSL)	GW Elevation Change (feet)
LW-MW-11S	12/04/09	6,191.67	24.30	14.91	6,176.76	---
	03/23/10		24.02	14.72	6,176.95	0.19
	06/15/10		24.02	11.38	6,180.29	3.34
	09/08/10		24.02	12.87	6,178.80	-1.49
	12/16/10		24.02	14.95	6,176.72	-2.08
	05/11/11		24.02	5.40	6,186.27	9.55
	09/29/11		24.02	10.25	6,181.42	-4.85
	12/09/11		24.02	10.61	6,181.06	-0.36
	03/29/12		24.02	9.79	6,181.88	0.82
	06/08/12		24.02	10.52	6,181.15	-0.73
	08/21/12		24.02	11.06	6,180.61	-0.54
	11/19/12		24.02	13.03	6,178.64	-1.97
	03/11/13		24.02	11.84	6,179.83	1.19
	07/30/13		24.02	11.74	6,179.93	0.10
	09/30/13		24.02	12.85	6,178.82	-1.11
	12/10/13		24.02	14.59	6,177.08	-1.74
	03/06/14		24.02	14.01	6,177.66	0.58
	06/26/14		24.02	12.80	6,178.87	1.21
	09/17/14		24.02	14.31	6,177.36	-1.51
	12/16/14		24.02	14.62	6,177.05	-0.31
	03/26/15		nm - unable to monitor			
LW-MW-12S	12/04/09	6,190.71	24.20	15.00	6,175.71	---
	03/23/10		23.80	13.36	6,177.35	1.64
	06/15/10		23.80	9.99	6,180.72	3.37
	09/08/10		23.80	11.57	6,179.14	-1.58
	12/16/10		23.80	nm		
	05/11/11		23.80	4.07	6,186.64	
	09/29/11		23.80	10.75	6,179.96	-6.68
	12/09/11		23.80	9.15	6,181.56	1.60
	03/29/12		nm	nm		
	06/08/12		23.80	9.51	6,181.20	
	08/21/12		23.80	9.37	6,181.34	0.14
	11/19/12		23.80	11.31	6,179.40	-1.94
	03/11/13		nm	nm		
	07/30/13		23.80	10.31	6,180.40	
	09/30/13		23.80	11.32	6,179.39	-1.01
	12/10/13		Not Measured - Snow Cover			
	03/06/14		23.80	12.57	6,178.14	---
	06/26/14		23.80	11.32	6,179.39	1.25
	09/17/14		23.80	13.05	6,177.66	-1.73
	12/16/14		23.80	12.96	6,177.75	0.09
	03/26/15		23.80	13.00	6,177.71	-0.04

TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER ELEVATION DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Date	Reference Elevation (feet MSL)	Total Well Depth (feet BTOC)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet MSL)	GW Elevation Change (feet)
LW-MW-13S	12/04/09	6,190.82	24.95	14.39	6,176.43	---
	03/23/10		24.78	13.20	6,177.62	1.19
	06/15/10		24.78	11.02	6,179.80	2.18
	09/08/10		24.78	12.42	6,178.40	-1.40
	12/16/10		24.78	14.09	6,176.73	-1.67
	05/11/11		24.78	5.07	6,185.75	9.02
	09/29/11		24.78	10.61	6,180.21	-5.54
	12/09/11		24.78	10.19	6,180.63	0.42
	03/29/12		24.78	9.37	6,181.45	0.82
	06/08/12		24.78	8.85	6,181.97	0.52
	08/21/12		24.78	10.22	6,180.60	-1.37
	11/19/12		24.78	11.98	6,178.84	-1.76
	03/11/13		nm	nm		
	07/30/13		24.78	11.36	6,179.46	
	09/30/13		24.78	12.78	6,178.04	-1.42
	12/10/13		Not Measured - Snow Cover			
	03/06/14		24.78	12.90	6,177.92	---
	06/26/14		24.78	12.46	6,178.36	0.44
	09/17/14		24.78	13.42	6,177.40	-0.96
	12/16/14		24.78	14.29	6,176.53	-0.87
	03/26/15		24.78	14.32	6,176.50	-0.03

TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER ELEVATION DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Date	Reference Elevation (feet MSL)	Total Well Depth (feet BTOC)	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet MSL)	GW Elevation Change (feet)
OS-1	03/24/10	6,188.12	23.45	13.25	6,174.87	---
	06/15/10		24.00	11.17	6,176.95	2.08
	09/08/10		24.00	12.68	6,175.44	-1.51
	12/16/10		24.00	12.13	6,175.99	0.55
	05/11/11		24.00	5.91	6,182.21	6.22
	09/29/11		24.00	9.25	6,178.87	-3.34
	12/09/11		24.00	10.47	6,177.65	-1.22
	03/29/12		24.00	9.93	6,178.19	0.54
	06/08/12		24.00	9.52	6,178.60	0.41
	08/21/12		24.00	11.06	6,177.06	-1.54
	11/19/12		24.00	11.41	6,176.71	-0.35
	03/11/13		nm	nm		
	07/30/13		24.00	10.69	6,177.43	
	09/30/13		24.00	13.10	6,175.02	-2.41
	12/10/13		24.00	14.02	6,174.10	-0.92
	03/06/14		24.00	13.41	6,174.71	0.61
	06/26/14		24.00	12.71	6,175.41	0.70
	09/17/14		24.00	13.86	6,174.26	-1.15
	12/16/14		24.00	14.47	6,173.65	-0.61
	03/26/15		24.00	12.85	6,175.27	1.62

Notes:
BTOC = Below Top of Casing
MSL = Mean Sea Level

Avg Groundwater Elevation Change	
4th.09-1st.10	1.10
1st.10-2nd.10	2.86
2nd.10-3rd.10	-1.63
3rd. 10-4th.10	-0.29
4th.10-2nd.11	7.71
2nd.11-3rd.11	-4.95
3rd.11-4th.11	-0.16
4th.11-1st.12	0.82
1st.12-2nd.12	-0.70
2nd.12-3rd.12	-1.14
3rd.12-4th.12	-1.57
4th.12-1st.13	3.28
1st.13-2nd.13	-0.89
2nd.13-3rd.13	-1.03
3rd.13-4th.13	-2.24
4th.13-1st.14	0.51
1st.14-2nd.14	1.33
2nd.14-3rd.14	-1.18
3rd.14-4th.14	-0.59
4th.14-1st.15	0.43

TABLE 3
SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Sample Date	PCE	TCE	VC	CA	CB	1,1-DCE	MC	Trans-1,2-DCE	1,1-DCA	cis-1,2-DCE	1,2-DCA	1,1,1,2-Tetra	1,1,1-TCA	Chloroform	BDCM	Benzene	EB	MtBE
		(ug/L)																	
LW-MW-1S	08/13/08	**706**	**74.0**	nd<0.50	nd<0.50	nd<0.50	**1.25**	nd<0.50	**0.727**	nd<0.50	**41.3**	nd<0.50	nd<0.50	nd<0.50	na	na	na	na	na
	12/04/09	**5,150**	**72.7**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.575**	nd<0.500	na	na	na
	03/23/10	**1,850**	nd<0.500	nd<0.500	nd<0.500	**0.962**	**7.71**	nd<0.500	**1.41**	nd<0.500	**339**	nd<0.500	**0.795**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	duplicate	**2,000**	nd<0.500	nd<0.500	nd<0.500	**0.845**	**7.40**	nd<0.500	**1.23**	nd<0.500	**314**	nd<0.500	**0.710**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	06/15/10	**4,920**	**8.90**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**6.48**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/08/10	**547**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**3.71**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	12/16/10	**109**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	05/11/11	**5,380**	**21.4**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**12.7**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/29/11	**93**	**4.0**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**61**	nd<0.50	nd<0.50	**2.8**	nd<0.50	nd<0.50	nd<0.50	**4.4**	nd<0.50	**0.14**	nd<0.50	**0.26**
	12/09/11	**841**	**5.45**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**2.35**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/29/12	**1,540**	**4.83**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**2.85**	nd<0.500	**5.56**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	duplicate	**1,300**	**3.77**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	2.15	nd<0.500	**6.26**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	06/08/12	**95.5**	**2.06**	nd<0.500	nd<0.500	nd<0.500	**2.23**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	08/21/12	**13.2**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	CLS-Split	**11.0**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	CRWQCB	**5.4**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	11/19/12	**7.98**	**0.907**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/11/13	**5.94**	**1.68**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	07/30/13	**450**	**7.5**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**3.8**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	duplicate	**550**	**7.7**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**4.0**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	09/30/13	**770**	**8.4**	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<0.50	nd<2.0	nd<0.50
	12/10/13	**4.8**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/06/14	**2.8**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	06/26/14	**130**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	09/17/14	**2.2**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/16/14	**22**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/26/15	**1.5**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50

TABLE 3
SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Sample Date	PCE	TCE	VC	CA	CB	1,1-DCE	MC	Trans-1,2-DCE	1,1-DCA	cis-1,2-DCE	1,2-DCA	1,1,1,2-Tetra	1,1,1-TCA	Chloroform	BDCM	Benzene	EB	MtBE
		(ug/L)																	
LW-MW-2S	08/13/08	**3.00**	**2.52**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**31.0**	nd<0.50	nd<0.50	nd<0.50	na	na	na	na	na
	12/04/09	**8.29**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	na	na
	03/23/10	**5.9**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.731**	na	nd<0.500
	06/15/10	**98.7**	**4.39**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**4.07**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/08/10	**65.7**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**3.14**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	12/16/10	**21.3**	**1.09**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	05/11/11	**376**	**11.7**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**5.04**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/29/11	**100**	**14**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**51**	nd<0.50	nd<0.50	**4.6**	nd<0.50	nd<0.50	nd<0.50	**1.6**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/09/11	**63.8**	**7.67**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**1.89**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	duplicate	**74.4**	**8.61**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**2.41**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/29/12	**23.2**	**3.18**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**1.09**	nd<0.500	**2.14**	nd<0.500	**1.47**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	06/08/12	**84.8**	**6.94**	nd<0.500	nd<0.500	nd<0.500	**2.69**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	08/21/12	**44.1**	**3.22**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**1.67**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	CLS-Split	**48**	**2.70**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**1.20**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	CRWQCB	**20.8**	**2.30**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**1.10**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	11/19/12	**1.38**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.877**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/11/13	**1.11**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	07/30/13	**67**	**2.5**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**1.1**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	09/30/13	**86**	**2.2**	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<0.50	nd<2.0	nd<0.50
	12/10/13	**33**	**0.57**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	duplicate	**33**	**0.85**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/06/14	**6.2**	**0.90**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	06/26/14	**5..2**	**0.57**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	09/17/14	**2.7**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/16/14	**3.1**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/26/15	**1.3**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50

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Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
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Well ID	Sample Date	PCE	TCE	VC	CA	CB	1,1-DCE	MC	Trans-1,2-DCE	1,1-DCA	cis-1,2-DCE	1,2-DCA	1,1,1,2-Tetra	1,1,1-TCA	Chloroform	BDCM	Benzene	EB	MtBE
		(ug/L)																	
LW-MW-5S	08/13/08	**85.1**	**3.50**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**2.00**	nd<0.50	nd<0.50	nd<0.50	na	na	na	na	na
	12/04/09	nd<0.500	**11.7**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	na	na
	03/23/10	nd<0.500	**26.5**	**3.22**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**38.2**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.778**	na	**0.529**
	06/15/10	**1,400**	**28.1**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**29.0**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/08/10	**480**	**11.0**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**11.5**	nd<0.500	nd<0.500	nd<0.500	**1.07**	nd<0.500	nd<0.500	na	nd<0.500
	duplicate	**448**	**10.6**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**11.3**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	12/16/10	not sampled; covered with 5 feet of snow																	
	05/11/11	**625**	**2.74**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**1.13**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/29/11	**750**	**14**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**44**	**0.19**	nd<0.50	**8.4**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	duplicate	**600**	**13**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**37**	nd<0.50	nd<0.50	**6.7**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/09/11	**964**	**23.6**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/29/12	**225**	**4.81**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**2.23**	nd<0.500	**4.04**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	06/08/12	**931**	**37.6**	nd<0.500	nd<0.500	nd<0.500	**37.8**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	08/21/12	**5.06**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	CLS-Split	**6.2**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	CRWQCB	**3.1**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	11/19/12	**6.99**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/11/13	**3.72**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	duplicate	**2.57**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	07/30/13	**59**	**1.7**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.93**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	09/30/13	**81**	**2.1**	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<0.50	nd<2.0	nd<0.50
	12/10/13	**150**	**2.1**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**0.82**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/06/14	**2.6**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	06/26/14	**13**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	duplicate	**13**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	09/17/14	**8.2**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/16/14	**12**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/26/15	**1.4**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	duplicate	**1.5**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50

TABLE 3
SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Sample Date	PCE	TCE	VC	CA	CB	1,1-DCE	MC	Trans-1,2-DCE	1,1-DCA	cis-1,2-DCE	1,2-DCA	1,1,1,2-Tetra	1,1,1-TCA	Chloroform	BDCM	Benzene	EB	MtBE
		(ug/L)																	
LW-MW-9S	12/04/09	**324**	**12.7**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**19.0**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	na	na
	03/23/10	**174**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**7.78**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	06/15/10	**162**	**7.57**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**22.5**	nd<0.500	nd<0.500	nd<0.500	**1.32**	nd<0.500	nd<0.500	na	nd<0.500
	duplicate	**172**	**8.04**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**24.5**	nd<0.500	nd<0.500	nd<0.500	**1.29**	nd<0.500	nd<0.500	na	nd<0.500
	09/08/10	**2.18**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	12/16/10	**89.8**	**4.64**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**17.4**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	duplicate	**89.6**	**4.51**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**18.4**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	05/11/11	**30.6**	**0.509**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/29/11	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**64**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/09/11	**7.64**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/29/12	**1.15**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	06/08/12	**0.66**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.596**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	08/21/12	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	11/19/12	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/11/13	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	07/30/13	**5.3**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	09/30/13	**4.9**	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<0.50	nd<2.0	nd<0.50
	12/10/13	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/06/14	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	06/26/14	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	09/17/14	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/16/14	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/26/15	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50

TABLE 3
SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Sample Date	PCE	TCE	VC	CA	CB	1,1-DCE	MC	Trans-1,2-DCE	1,1-DCA	cis-1,2-DCE	1,2-DCA	1,1,1,2-Tetra	1,1,1-TCA	Chloroform	BDCM	Benzene	EB	MtBE
		(ug/L)																	
LW-MW-10S	12/04/09	**15.8**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	na	na
	duplicate	**10.6**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	na	na
	03/23/10	**1.04**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	06/15/10	**63.8**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/08/10	**23.7**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	12/16/10	**7.57**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**2.09**	nd<0.500	nd<0.500	na	nd<0.500
	05/11/11	**8.59**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**4.93**	nd<0.500	nd<0.500	na	nd<0.500
	09/29/11	**13**	**0.18**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**56**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**0.32**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/09/11	**6.82**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/29/12	**1.42**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	06/08/12	**3.56**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**3.08**	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	08/21/12	**2.02**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**4.45**	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	11/19/12	**WELL FOUND TO BE DESTROYED ON ATTEMPT TO MONITOR**																	
LW-MW-10SR	07/30/13	**0.89**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**3.7**	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	09/30/13	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	**4.1**	nd<1.0	nd<0.50	nd<2.0	nd<0.50
	duplicate	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	**4.3**	nd<1.0	nd<0.50	nd<2.0	nd<0.50
	12/10/13	**0.65**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**3.4**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/06/14	**1.4**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**0.62**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	duplicate	**1.5**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**0.63**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	06/26/14	**0.84**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**1.9**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	09/17/14	**0.84**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**4.1**	**0.88**	nd<0.50	nd<0.50	nd<0.50
	12/16/14	**0.51**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**1.2**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/26/15	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50

TABLE 3
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Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Sample Date	PCE	TCE	VC	CA	CB	1,1-DCE	MC	Trans-1,2-DCE	1,1-DCA	cis-1,2-DCE	1,2-DCA	1,1,1,2-Tetra	1,1,1-TCA	Chloroform	BDCM	Benzene	EB	MtBE
		(ug/L)																	
LW-MW-11S	12/04/09	**42.9**	nd<0.50	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	na	na
	03/23/10	**32.5**	**1.08**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**3.63**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	06/15/10	**28.3**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.909**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/08/10	**14.8**	nd<0.50	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.830**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	12/16/10	**2.63**	nd<0.50	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	05/11/11	**1.33**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/29/11	**0.68**	**0.27**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**36**	nd<0.50	nd<0.50	**1.1**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/09/11	**18.3**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/29/12	**1.41**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	06/08/12	**2.13**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.547**	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	08/21/12	**2.14**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**3.97**	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	11/19/12	**6.19**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/11/13	**4.41**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	07/30/13	**4.5**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**2.4**	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	09/30/13	**4.6**	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	**2.0**	nd<1.0	nd<0.50	nd<2.0	nd<0.50
	12/10/13	**8.2**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**2.0**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/06/14	**7.2**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**0.70**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	06/26/14	**3.8**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**1.1**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	09/17/14	**4.5**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**0.71**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/16/14	**2.7**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	duplicate	**2.7**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/26/15	**Not Sampled - Wellhead Damaged**																	

TABLE 3
SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Sample Date	PCE	TCE	VC	CA	CB	1,1-DCE	MC	Trans-1,2-DCE	1,1-DCA	cis-1,2-DCE	1,2-DCA	1,1,1,2-Tetra	1,1,1-TCA	Chloroform	BDCM	Benzene	EB	MtBE
		(ug/L)																	
LW-MW-12S	12/04/09	**10.7**	nd<0.50	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	na	na
	03/23/10	**34.3**	nd<0.50	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.613**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	06/15/10	**314**	**1.40**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**1.46**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/08/10	**824**	nd<0.50	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**4.31**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	12/16/10	**not sampled; covered with 12 feet of snow**																	
	05/11/11	**105**	**0.651**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	duplicate	**95.4**	**0.586**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/29/11	**23**	**0.35**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**54**	nd<0.50	nd<0.50	**0.12**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/09/11	**25.1**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/29/12	**not sampled; covered with 12-foot high pile of snow**																	
	06/08/12	**7.89**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	08/21/12	**2.45**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	11/19/12	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/11/13	**not sampled; covered with high pile of snow**																	
	07/30/13	**35**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	09/30/13	**34**	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<0.50	nd<2.0	nd<0.50
	12/10/13	**Not Sampled - well covered with snow**																	
	03/06/14	**2.4**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	06/26/14	**6.1**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	09/17/14	**3.7**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/16/14	**5.2**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/26/15	**0.7**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50

TABLE 3
SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Sample Date	PCE	TCE	VC	CA	CB	1,1-DCE	MC	Trans-1,2-DCE	1,1-DCA	cis-1,2-DCE	1,2-DCA	1,1,1,2-Tetra	1,1,1-TCA	Chloroform	BDCM	Benzene	EB	MtBE
		(ug/L)																	
LW-MW-13S	12/04/09	**17**	nd<0.50	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	na	na
	03/23/10	**65.2**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.784**	nd<0.500	nd<0.500	**2.92**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.645**	na	nd<0.500
	06/15/10	**14.1**	**0.603**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.627**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/08/10	**4.86**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	12/16/10	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	05/11/11	**3.71**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/29/11	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**39**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/09/11	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/29/12	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	06/08/12	**1.71**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	08/21/12	**2.16**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	11/19/12	**2.33**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	duplicate	**2.18**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/11/13	**not sampled; covered with high pile of snow**																	
	07/30/13	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**2.7**	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	09/30/13	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<0.50	nd<2.0	nd<0.50
	12/10/13	**Not Sampled - well covered with snow**																	
	03/06/14	**0.89**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	06/26/14	**1.8**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**0.63**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	09/17/14	**0.86**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**1.0**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	duplicate	**0.85**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**0.90**	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/16/14	**2.6**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**3.1**	**0.62**	nd<0.50	nd<0.50	nd<0.50
	03/26/15	**2.7**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50

TABLE 3
SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Well ID	Sample Date	PCE	TCE	VC	CA	CB	1,1-DCE	MC	Trans-1,2-DCE	1,1-DCA	cis-1,2-DCE	1,2-DCA	1,1,1,2-Tetra	1,1,1-TCA	Chloroform	BDCM	Benzene	EB	MtBE
		(ug/L)																	
OS-1	03/24/10	**91.2**	**1.41**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**1.02**	nd<0.500	nd<0.500	**0.989**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**0.908**	na	**0.807**
	06/15/10	**75.9**	**2.91**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**1.41**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/08/10	**13.5**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	12/16/10	**52.5**	**2.43**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	**4.43**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	05/11/11	**7.1**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	na	nd<0.500
	09/29/11	**4.6**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**25**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	**0.12**	nd<0.50
	12/09/11	**20.6**	**0.617**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/29/12	**8.97**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	06/08/12	**11.60**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	duplicate	**11.20**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	08/21/12	**6.3**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	11/19/12	**34.9**	**1.84**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	03/11/13	**not sampled; covered with high pile of snow**																	
	07/30/13	**26**	**1.7**	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500	nd<0.500
	09/30/13	**8.0**	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<1.0	nd<0.50	nd<2.0	nd<0.50
	12/10/13	**16**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/06/14	**5.6**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	06/26/14	**15**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	09/17/14	**10**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	12/16/14	**9.8**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50
	03/26/15	**64**	**1.4**	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50	nd<0.50

Notes:

Results in micrograms per liter (μg/L) (equivalent to parts per billion, ppb)

1,1-DCA = 1,1,-Dichloroethane
1,1-DCE = 1,2-Dichloroethene
1,1,1-TCA = 1,1,1-Trichlorethane
1,1,1,2-Tetra = 1,1,1,2-Tetrachloroethane
B = Benzene
BDCM - Bromodichloromethane
CA = Chloroethane
CB = Chlorobenzene
CF = Chloroform
cis-1,2-DCE = cis-1,2-Dichloroethene
EB = Ethlybenzene
MC = Methylene Chloride
MtBE = Methyl tertiary-butyl ether
nd< = Not detected at or above the Method Detection Limit, which is indicated by the value
nm = Not monitored
ns- not sampled
PCE = Tetrachloroethene (a.k.a. perchloroethene)
TCE = Trichloroethene
trans-1,2-DCE = trans-1,2-Dichloroethene
VC = Vinyl Chloride

TABLE 4A
SUMMARY OF HISTORICAL VP SHALLOW SOIL-GAS ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample ID	Sample Date	PCE		TCE		cis-1,2-DCE		Tracer Gas		Other VOCs	
		(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)
VP-1	4/9/10	**16**	**108.5**	nd	nd	nd	nd	nd	nd	nd	nc
	9/8/10	**72**	**488.2**	nd	nd	nd	nd	nd	nd	**0.031**	nc
	12/16/10	**133**	**901.7**	nd	nd	nd	nd	nd	nd	nd	nc
	5/11/11	unable to sample - water in well									
	9/29/11	nd<1.0	nd<6.78	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/9/11	nd<1.0	nd<6.78	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	3/29/12	nd<1.0	nd<6.78	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	6/8/12	**16.8**	**113.9**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	**4.59**	nc
	9/13/12	**40**	**271.2**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/17/12	**Unable to collect sample; well tubing filled with ice**									
	2/14/13	**6.48**	**43.9**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	6/25/13	**Sample Collected - Sample Holding Time Expired, not analyzed**									
	9/30/13	**250**	**1,700**	**5.5**	**30**	nd<1.2	nd<4.8	nd<1.2	nd<6.74	**35.7**	nc
	12/10/13	**30**	**200**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	**18**	nc
	3/6/14	**38**	**258**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	**11**	nc
	6/26/14	**610**	**4,136**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	**12**	**62.9**
	9/17/14	**38**	**258**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd	nc
	12/16/14	**7.5**	**51**	nd<0.03	nd<0.016	nd<10	nd<39.6	nd<10	nd<56.1	nd	nc
	3/31/15	**13**	**88**	**0.99**	**5.3**	nd<10	nd<39.6	nd<10	nd<56.1	nd	nc
VP-2	4/9/10	**429**	**2,908.6**	**29**	**155.7**	**380**	**1506**	nd	nd	nd	nc
	9/8/10	**82**	**556.0**	nd	nd	nd	nd	nd	nd	nd	nc
	12/16/10	**2,510**	**17017.8**	**174**	**9,344**	**150**	**594**	nd	nd	**186**	nc
	5/11/11	unable to sample - water in well									
	9/29/11	**189**	**1,281**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/9/11	**2,020**	**13,696**	**86.1**	**4,624**	**42.6**	**169**	nd<1.0	nd<5.61	**87.8**	nc
	3/29/12	**4,700**	**31,866**	**459**	**2,465**	nd<1.0	nd<3.96	nd<1.0	nd<5.61	**861.96**	nc
	6/8/12	**5,050**	**34,239**	**107**	**575**	**55.2**	**219**	nd<1.0	nd<5.61	**108**	nc
	9/13/12	**7,150**	**48,477**	**20**	**107.41**	nd<1.0	nd<3.96	nd<1.0	nd<5.61	**55**	nc
	12/17/12	**Unable to collect sample; well covered with snow**									
	2/14/13	**Unable to collect sample; well covered with snow**									
	6/25/13	**Sample Collected - Sample Holding Time Expired, not analyzed**									
	9/30/13	**140,000**	**949,200**	**4,400**	**23,628**	**26,000**	**102,960**	nd<660	nd<3,700	**2,700**	nc
	12/10/13	**Not Sampled - not accessible**									
	3/6/14	**Not Sampled - not accessible**									
	6/26/14	**8,500**	**57,630**	**240**	**1,289**	**250**	**990**	nd<1.0	nd<5.61	**11**	nc
	9/17/14	**800**	**5,424**	nd<10	nd<53.7	nd<10	nd<39.6	nd<1.0	nd<5.61	nd	nc
	12/16/14	**520**	**3,527**	**2.7**	**14.5**	**12**	**48**	nd<1.0	nd<5.61	nd	nc
	3/31/15	**160**	**1,085.1**	**3.6**	**19.3**	**15**	**59**	nd<1.0	nd<5.61	nd	nc

TABLE 4A
SUMMARY OF HISTORICAL VP SHALLOW SOIL-GAS ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample ID	Sample Date	PCE (ppbV)	PCE (ug/m^3)	TCE (ppbV)	TCE (ug/m^3)	cis-1,2-DCE (ppbV)	cis-1,2-DCE (ug/m^3)	Tracer Gas (ppbV)	Tracer Gas (ug/m^3)	Other VOCs (ppbV)	Other VOCs (ug/m^3)
VP-3	4/9/10	unable to sample - water in well									
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nc
	12/16/10	unable to sample - water in well									
	5/11/11	unable to sample - water in well									
	9/29/11	**527**	**3,573**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/9/11	**469**	**3,180**	**1.96**	**10.53**	nd<1.0	nd<3.96	nd<1.0	nd<5.61	**1.98**	nc
	3/29/12	**900**	**6,102**	**3.24**	**18.4**	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	6/8/12	**522**	**3,539**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	9/13/12	nd<1.0	nd<6.78	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/17/12	**Unable to collect sample; well covered with snow**									
	2/14/13	**Unable to collect sample; well covered with snow**									
	6/25/13	**Sample Collected - Sample Holding Time Expired, not analyzed**									
	9/30/13	**3,900**	**26,442**	**47**	**252**	**170**	**673**	nd<26	nd<140	nd	nc
	12/10/13	nd<10	nd<67.8	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	3/6/14	nd<10	nd<67.8	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	6/26/14	**330**	**2,237**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	9/17/14	**18**	**122**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	12/16/14	**4.2**	**28**	**0.032**	**0.17**	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	3/31/15	**2.1**	**14**	nd<0.030	nd<0.016	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
VP-4	4/9/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nc
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nc
	12/16/10	unable to sample - water in well									
	5/11/11	unable to sample - water in well									
	9/29/11	**47**	**318.7**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/9/11	**22.1**	**149.8**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	3/29/12	nd<1.0	nd<6.78	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	6/8/12	**54.3**	**368.2**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	9/13/12	nd<1.0	nd<6.78	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/17/12	**Unable to collect sample; well covered with snow**									
	2/14/13	**1.38**	**9.36**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	6/25/13	**Sample Collected - Sample Holding Time Expired, not analyzed**									
	9/30/13	**4,300**	**29,154**	**64**	**344**	**26**	**103**	nd<1.2	nd<6.74	**21**	**78**
	12/10/13	**16**	**108**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	3/6/14	nd<10	nd<67.8	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	6/26/14	**340**	**2,305**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	**12**	**41.6**
	9/17/14	nd<10	nd<67.8	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	12/16/14	**2.5**	**17**	**0.10**	**0.54**	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	3/31/15	**1.1**	**7.5**	nd<0.030	nd<0.016	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc

TABLE 4A
SUMMARY OF HISTORICAL VP SHALLOW SOIL-GAS ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample ID	Sample Date	PCE		TCE		cis-1,2-DCE		Tracer Gas		Other VOCs	
		(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)
VP-5	4/9/10	**12**	**81.4**	nd	nd	**15**	**59.44**	nd	nd	nd	nc
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nc
	12/16/10	**63**	**427.1**	nd	nd	**62**	**246**	nd	nd	nd	nc
	5/11/11	unable to sample - water in well									
	9/29/11	**2,130**	**14,441**	**15**	**81**	nd<1.0	nd<3.96	nd<1.0	nd<5.61	**15.8**	nc
	12/9/11	**41.5**	**281.4**	**1.57**	**84**	**8.54**	**34**	nd<1.0	nd<5.61	nd	nc
	3/29/12	**93.1**	**631.2**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	**332.3**	nc
	6/8/12	**393**	**2,665**	nd<1.0	nd<5.37	**230**	**911**	nd<1.0	nd<5.61	**23.0**	nc
	9/13/12	**390**	**2,644**	**40**	**215**	**420**	**1,663**	nd<1.0	nd<5.61	**40**	nc
	12/17/12	**Unable to collect sample; well box filled with ice**									
	2/14/13	**Unable to collect sample; well box filled with ice**									
	6/25/13	**Sample Collected - Sample Holding Time Expired, not analyzed**									
	9/30/13	**3,700**	**25,000**	**480**	**2,578**	**2,500**	**9,900**	nd<13	nd<74	**505**	nc
	12/10/13	**Not Sampled - not accessible**									
	3/6/14	**62**	**420**	nd<10	nd<53.7	**39**	**154**	nd<10	nd<56.1	nd<10	nc
	6/26/14	**540**	**3,661**	**52**	**279**	**0.27**	**1.07**	nd<10	nd<56.1	nd<10	nc
	9/17/14	**Unable to Collect Sample - Wellhead Damaged**									
	12/16/14	**Unable to Collect Sample - Wellhead Damaged**									
	3/31/15	**38**	**257.640**	**6.6**	**35**	**50**	**198**	nd<10	nd<56.1	**13**	nc
VP-6	4/9/10	**28**	**189.8**	nd	nd	nd	nd	nd	nd	nd	nc
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nc
	12/16/10	nd	nd	nd	nd	nd	nd	nd	nd	**98**	nc
	5/11/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nc
	9/29/11	nd<1.0	nd<6.78	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/9/11	**1.44**	**9.8**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	3/29/12	**1.77**	**12.0**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	6/8/12	**39.3**	**266.5**	nd<1.0	nd<5.37	**4.95**	**20**	nd<1.0	nd<5.61	**5.85**	nc
	9/13/12	**50**	**339.0**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/17/12	**Unable to collect sample; well covered with snow**									
	2/14/13	**Unable to collect sample; well box filled with ice**									
	6/25/13	**Sample Collected - Sample Holding Time Expired, not analyzed**									
	9/30/13	**93**	**631**	**6.3**	**34**	**21**	**83**	nd<1.3	nd<7.5	**61.5**	nc
	12/10/13	nd<10	nd<67.8	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	**11**	nc
	3/6/14	**Unable to collect sample; well box filled with ice**									
	6/26/14	**Unable to collect sample; too much vacuum on well**									
	9/17/14	**Unable to Collect Sample - Obstruction in Well**									
	12/16/14	**Unable to Collect Sample - Obstruction in Well**									
	3/31/15	**12**	**81.360**	**0.059**	**0.317**	nd<10	nd<39.6	nd<10	nd<56.1	**18**	nc

TABLE 4A
SUMMARY OF HISTORICAL VP SHALLOW SOIL-GAS ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample ID	Sample Date	PCE		TCE		cis-1,2-DCE		Tracer Gas		Other VOCs	
		(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)
VP-7	4/9/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nc
	9/8/10	**64**	**433.9**	nd	nd	nd	nd	nd	nd	nd	nc
	12/16/10	**32**	**217.0**	nd	nd	nd	nd	nd	nd	**247**	nc
	5/11/11	**73**	**494.9**	nd	nd	nd	nd	nd	nd	nd	nc
	9/29/11	**2.0**	**13.6**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/9/11	nd<1.0	nd<6.78	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	**16.1**	nc
	3/29/12	nd<1.0	nd<6.78	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	6/8/12	**125**	**847.5**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	9/13/12	**60**	**406.8**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/17/12	**Unable to collect sample; well box filled with ice**									
	2/14/13	**5.03**	**34.1**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	6/25/13	**Sample Collected - Sample Holding Time Expired, not analyzed**									
	9/30/13	**110**	**746**	nd<1.3	nd<6.8	**2.5**	**10**	nd<1.3	nd<7.1	**27.2**	nc
	12/10/13	nd<10	nd<67.8	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	3/6/14	nd<10	nd<67.8	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	6/26/14	nd<10	nd<67.8	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	9/17/14	nd<10	nd<67.8	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	12/16/14	**0.65**	**4.4**	nd<0.03	nd<0.016	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	3/31/15	**4.6**	**31.2**	**0.054**	**0.290**	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
VP-8	4/9/10	**34**	**230.5**	nd	nd	nd	nd	nd	nd	nd	nc
	9/8/10	**133**	**901.7**	nd	nd	nd	nd	nd	nd	nd	nc
	12/16/10	**318**	**2,156**	nd	nd	nd	nd	nd	nd	nd	nc
	5/11/11	**281**	**1,905**	nd	nd	nd	nd	**173**	**971.3**	nd	nc
	9/29/11	nd<1.0	nd<6.78	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/9/11	**2.01**	**13.6**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	3/29/12	**39.9**	**270.5**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	**3.33**	nc
	6/8/12	**537**	**3,641**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	9/13/12	**30**	**203.4**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	11/19/12	**Unable to collect sample; well covered with snow**									
	2/14/13	**17.8**	**121**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	6/25/13	**Sample Collected - Sample Holding Time Expired, not analyzed**									
	9/30/13	**580**	**3,932**	**5.9**	**32**	nd<2.2	nd<8.6	nd<1.2	nd<6.74	**127.7**	nc
	12/10/13	nd<10	nd<67.8	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	**25**	nc
	3/6/14	nd<10	nd<67.8	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	**27**	nc
	6/26/14	**100**	**678**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	9/17/14	**38**	**258**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	12/16/14	**12**	**81**	**0.65**	**3.49**	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	3/31/15	**3.2**	**22**	**0.72**	**3.87**	nd<10	nd<39.6	nd<10	nd<56.1	**25**	nc

TABLE 4A
SUMMARY OF HISTORICAL VP SHALLOW SOIL-GAS ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample ID	Sample Date	PCE		TCE		cis-1,2-DCE		Tracer Gas		Other VOCs	
		(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)
VP-9	4/9/10	**29**	**196.6**	nd	nd	nd	nd	nd	nd	nd	nc
	9/8/10	**7,530**	**51,053**	nd	nd	nd	nd	nd	nd	nd	nc
	12/16/10	**1,610**	**10,916**	nd	nd	nd	nd	nd	nd	**111**	nc
	5/11/11	**4,480**	**30,374**	nd	nd	nd	nd	nd	nd	nd	nc
	9/29/11	nd<1.0	nd<6.78	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	**60**	nc
	12/9/11	**48.2**	**326.8**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	3/29/12	**1,270**	**8,611**	**3.57**	**19**	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	6/8/12	**680**	**4,610**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	9/13/12	**190**	**1,288**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/17/12	**Unable to collect sample; well box filled with ice**									
	2/14/13	**Unable to collect sample; well box filled with ice**									
	6/25/13	**Sample Collected - Sample Holding Time Expired, not analyzed**									
	9/30/13	**3,800**	**25,764**	nd<12	nd<67	nd<12	nd<49	nd<12	nd<70	nd	nc
	12/10/13	**1,300**	**8,814**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	**23**	nc
	3/6/14	**560**	**3,797**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	**10**	nc
	6/26/14	**1,300**	**8,814**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	**10**	**52.4**
	9/17/14	**2,400**	**16,272**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd	nc
	12/16/14	**13**	**88**	nd<0.03	nd<0.016	nd<10	nd<39.6	nd<10	nd<56.1	nd	nc
	3/31/15	**520**	**3,526**	**2.4**	**13**	nd<10	nd<39.6	nd<10	nd<56.1	**13**	nc
VP-10	4/9/10	**1,980**	**13,424**	**47**	**252.4**	**50**	**198.1**	nd	nd	nd	nc
	9/8/10	**132**	**895.0**	nd	nd	nd	nd	nd	nd	nd	nc
	12/16/10	**43**	**291.5**	nd	nd	nd	nd	nd	nd	**183**	nc
	5/11/11	**132**	**895.0**	nd	nd	nd	nd	nd	nd	nd	nc
	9/29/11	**114**	**772.9**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/9/11	**9.34**	**63.3**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	3/29/12	nd<1.0	nd<6.78	**3.57**	**19**	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	6/8/12	**416**	**2,820**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	9/13/12	**290**	**1,966**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	12/17/12	**Unable to collect sample; well box filled with ice**									
	2/14/13	**13.6**	**92.2**	nd<1.0	nd<5.37	nd<1.0	nd<3.96	nd<1.0	nd<5.61	nd	nc
	6/25/13	**Sample Collected - Sample Holding Time Expired, not analyzed**									
	9/30/13	**670**	**4,543**	nd<2.5	nd<14	nd<2.5	nd<10	nd<2.5	nd<14	**12.7**	nc
	12/10/13	**70**	**475**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	**13**	nc
	3/6/14	**38**	**258**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	**18**	nc
	6/26/14	**210**	**1,424**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	9/17/14	**160**	**1,085**	nd<10	nd<53.7	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	12/16/14	**24**	**163**	nd<0.03	nd<0.016	nd<10	nd<39.6	nd<10	nd<56.1	nd<10	nc
	3/31/15	**17**	**115.3**	**0.56**	**3.01**	nd<10	nd<39.6	nd<10	nd<56.1	**13**	nc

TABLE 4A
SUMMARY OF HISTORICAL VP SHALLOW SOIL-GAS ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample ID	Sample Date	PCE		TCE		cis-1,2-DCE		Tracer Gas		Other VOCs	
		(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)

Notes:

For Other VOCs and Individual concentrations - See Table 4B

cis-1,2-DCE = cis-1,2-Dichloroethene (atomic weight = 96.95 g/mol)
g/mol = grams per mole
nc = Not calculated, as detection limit is based on atomic weight of a compound
nd = Not detected at or above detection limit for each respective compound
nd< = Not detected at or above the practical quantitation limit (PQL), which is indicated by value
PCE = Tetrachloroethene (a.k.a. perchloroethene) (atomic weight = 165.82 g/mol)
ppbV = parts per billion by volume
TCE = Trichloroethene (atomic weight = 131.39 g/mol)
Tracer Gas = Freon 11
ug/m^3 = micrograms per cubic meter

TABLE 4B
SUMMARY OF HISTORICAL VP SHALLOW SOIL-GAS ANALYTICAL DATA - OTHER VOCS
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample ID	Sample Date	Vinyl Acetate		Vinyl Chloride		n-Hexane		Isopropyl Alcohol		1,1-DCE		1,1,1-TCA		Tetrahydrofuran		Chloroform		Ethanol		Acetone		MC		Benzene		Toluene		Ethylbenzene		Total Xylenes		4-Ethyltoluene		1,3,5-TMB		1,2,4-TMB		Naphthalene	
		(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)
VP-1	4/9/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	12/16/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	5/11/11	unable to sample - water in well																																					
	9/29/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	na	na
	12/9/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	3/29/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	6/8/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	**4.59**	**22.56**	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	8/21/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<10	nd<52.4
	11/19/12	**Unable to collect sample; well tubing filled with ice**																																					
	2/14/13	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	6/25/13	**Sample Collected - Sample Holding Time Expired, Not Analyzed**																																					
	9/30/13	na	na	nd<1.2	nd<3.1	nd<1.2	nd<4.23	na	na	nd<1.2	nd<4.8	nd<1.2	nd<6.6	**1.4**	**4.0**	nd<1.2	nd<5.9	**5.0**	**9.4**	**15**	**36**	**13**	**44**	nd<1.2	nd<3.8	nd<1.2	nd<4.5	nd<1.2	nd<5.2	**1.3**	**5.7**	nd<1.2	nd<5.9	nd<1.2	nd<5.9	nd<1.2	nd<5.9	na	na
	12/10/13	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	**18**	**63**	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/6/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	**11**	**27**	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	6/26/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	**12**	**62.9**
	9/17/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	12/16/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/31/15	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
VP-2	4/9/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	12/16/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	**186**	**1,015**	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	5/11/11	unable to sample - water in well																																					
	9/29/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	na	na
	12/9/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	**87.8**	**478.7**	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	3/29/12	nd<1.0	nd<3.52	**33.9**	**86.6**	nd<1.0	nd<3.52	nd<1.0	nd<2.46	**459**	**2,470**	**405**	**2,210**	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	**7.26**	**31.5**	**91.2**	**396**	**133**	**652**	**35.4**	**174**	**137**	**673**	nd<1.0	nd<5.24
	6/8/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	**108**	**589**	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	8/21/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	**50**	**217**	**50**	**246**	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<10	nd<52.4
	11/19/12	**Unable to collect sample; well covered with snow**																																					
	2/14/13	**Unable to collect sample; well covered with snow**																																					
	6/25/13	**Sample Collected - Sample Holding Time Expired, Not Analyzed**																																					
	9/30/13	na	na	**1,500**	**3,800**	nd<660	nd<2,300	na	na	nd<660	nd<2,600	nd<660	nd<3,600	nd<660	nd<1,900	nd<660	nd<3,200	nd<2,600	nd<5,000	nd<6,600	nd<16,000	nd<6,660	nd<66,000	**nd<660**	**nd<2,100**	**1,200**	**2,500**	nd<660	nd<2,900	nd<660	nd<2,900	nd<660	nd<3,200	nd<660	nd<3,200	nd<660	nd<3,200	na	na
	12/10/13	**Not Sampled - not accessible**																																					
	3/6/14	**Not Sampled - not accessible**																																					
	6/26/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	9/17/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	12/16/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/31/15	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
VP-3	4/9/10	unable to sample - water in well																																					
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	12/16/10	unable to sample - water in well																																					
	5/11/11	unable to sample - water in well																																					
	9/29/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	na	na
	12/9/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	**1.98**	**10.8**	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	3/29/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	**3.18**	**17.3**	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	**10.9**	**47.3**	**17.0**	**83.6**	**3.84**	**18.9**	**17.3**	**85**	nd<1.0	nd<5.24
	6/8/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	8/21/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<10	nd<52.4
	11/19/12	**Unable to collect sample; well covered with snow**																																					
	2/14/13	**Unable to collect sample; well covered with snow**																																					
	6/25/13	**Sample Collected - Sample Holding Time Expired, Not Analyzed**																																					
	9/30/13	na	na	nd<26	nd<66	nd<26	nd<91	na	na	nd<26	nd<100	nd<26	nd<140	nd<26	nd<76	nd<26	nd<120	nd<100	nd<190	nd<260	nd<610	nd<260	nd<900	nd<26	nd<82	nd<26	nd<97	nd<26	nd<110	nd<26	nd<110	nd<26	nd<130	nd<26	nd<130	nd<26	nd<130	na	na
	12/10/13	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/6/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	6/26/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	9/17/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	12/16/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/31/15	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4

TABLE 4B
SUMMARY OF HISTORICAL VP SHALLOW SOIL-GAS ANALYTICAL DATA - OTHER VOCS
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample ID	Sample Date	Vinyl Acetate		Vinyl Chloride		n-Hexane		Isopropyl Alcohol		1,1-DCE		1,1,1-TCA		Tetrahydrofuran		Chloroform		Ethanol		Acetone		MC		Benzene		Toluene		Ethylbenzene		Total Xylenes		4-Ethyltoluene		1,3,5-TMB		1,2,4-TMB		Naphthalene	
		(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)	(ppbV)	(ug/m³)
VP-4	4/9/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	12/16/10	unable to sample - water in well																																					
	5/11/11	unable to sample - water in well																																					
	9/29/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	na	na
	12/9/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	3/29/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	6/8/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	8/21/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<10	nd<52.4
	11/19/12	**Unable to collect sample; well covered with snow**																																					
	2/14/13	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	6/25/13	**Sample Collected - Sample Holding Time Expired, Not Analyzed**																																					
	9/30/13	na	na	nd<17	nd<44	nd<17	nd<61	na	na	nd<17	nd<68	nd<17	nd<94	nd<17	nd<51	nd<17	nd<84	nd<69	nd<130	nd<170	nd<410	nd<170	nd<600	nd<17	nd<55	**21**	**78**	nd<17	nd<75	nd<17	nd<75	nd<17	nd<84	nd<17	nd<84	nd<17	nd<84	na	na
	12/10/13	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/6/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	6/26/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	**12**	**41.6**	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	9/17/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	12/16/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/31/15	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
VP-5	4/9/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	12/16/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	5/11/11	unable to sample - water in well																																					
	9/29/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	**15.8**	**86.15**	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	na	na
	12/9/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	3/29/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	**23.3**	**87.8**	**9.3**	**40.4**	**101**	**438**	**77.1**	**379**	**24.2**	**120**	**96.9**	**476**	nd<1.0	nd<5.24
	6/8/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	**23.0**	**125.5**	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	8/21/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	**40.0**	**218.0**	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<10	nd<52.4
	11/19/12	**Unable to collect sample; well box filled with ice**																																					
	2/14/13	**Unable to collect sample; well box filled with ice**																																					
	6/25/13	**Sample Collected - Sample Holding Time Expired, Not Analyzed**																																					
	9/30/13	na	na	nd<13	nd<34	nd<13	nd<46	na	na	nd<13	nd<52	nd<13	nd<72	nd<13	nd<39	nd<13	nd<64	nd<53	nd<99	nd<130	nd<310	nd<130	nd<460	nd<13	nd<42	nd<13	nd<50	nd<13	nd<57	nd<13	nd<57	nd<13	nd<65	nd<13	nd<65	nd<13	nd<65	na	na
	12/10/13	**Not Sampled - not accessible**																																					
	3/6/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	6/26/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	9/17/14	**Unable to collect sample; wellhead damaged**																																					
	12/16/14	**Unable to collect sample; wellhead damaged**																																					
	3/31/15	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	**13**	**56.4**	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
VP-6	4/9/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	12/16/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	5/11/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/29/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	na	na
	12/9/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	3/29/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	6/8/12	**5.85**	**20.55**	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	8/21/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<10	nd<52.4
	11/19/12	**Unable to collect sample; well covered with snow**																																					
	2/14/13	**Unable to collect sample; well covered with snow**																																					
	6/25/13	**Sample Collected - Sample Comprimised, Not Analyzed**																																					
	9/30/13	na	na	nd<1.3	nd<3.4	nd<1.3	nd<4.7	na	na	nd<1.3	nd<5.3	nd<1.3	nd<7.3	nd<1.3	nd<3.9	nd<1.3	nd<6.5	**15**	**28**	**29**	**69**	nd<130	nd<460	**1.6**	**5.2**	**1.5**	**5.8**	nd<1.3	nd<5.8	**1.9**	**8.3**	nd<1.3	nd<6.6	nd<1.3	nd<6.6	nd<1.3	nd<6.6	na	na
	12/10/13	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	**11**	**27**	nd<10	nd	nd<10	nd	nd<10	nd	nd<10	nd	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/6/14	**Unable to collect sample; well box filled with ice**																																					
	6/26/14	**Unable to collect sample; too much vacuum on well**																																					
	9/17/14	**Unable to collect sample; obstruction in well**																																					
	12/16/14	**Unable to collect sample; obstruction in well**																																					
	3/31/15	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	**18**	**67.9**	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
VP-7	4/9/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	12/16/10	nd	nd	nd	nd	nd	nd	**247**	**607.15**	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	5/11/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/29/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	na	na
	12/9/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	3/29/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	6/8/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	8/21/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<10	nd<52.4
	11/19/12	**Unable to collect sample; well box filled with ice**																																					
	2/14/13	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	6/25/13	**Sample Collected - Sample Holding Time Expired, Not Analyzed**																																					
	9/30/13	na	na	nd<1.3	nd<2.8	nd<1.3	nd<2.4	na	na	nd<1.3	nd<5.0	nd<1.3	nd<6.9	nd<1.3	nd<6.7	nd<1.3	nd<6.2	**9.2**	**17**	**18**	**44**	nd<1.3	nd<44	nd<1.3	nd<4.0	nd<1.3	nd<4.8	nd<1.3	nd<5.5	nd<1.3	nd<5.5	nd<1.3	nd<6.2	nd<1.3	nd<6.2	nd<1.3	nd<6.2	na	na
	12/10/13	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/6/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	6/26/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	9/17/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	12/16/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/31/15	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4

TABLE 4B
SUMMARY OF HISTORICAL VP SHALLOW SOIL-GAS ANALYTICAL DATA - OTHER VOCS
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample ID	Sample Date	Vinyl Acetate		Vinyl Chloride		n-Hexane		Isopropyl Alcohol		1,1-DCE		1,1,1-TCA		Tetrahydrofuran		Chloroform		Ethanol		Acetone		MC		Benzene		Toluene		Ethylbenzene		Total Xylenes		4-Ethyltoluene		1,3,5-TMB		1,2,4-TMB		Naphthalene	
		(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)	(ppbV)	(ug/m^3)
VP-8	4/9/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	12/16/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	5/11/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/29/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	na	na
	12/9/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	3/29/12	**3.33**	**11.7**	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	6/8/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	8/21/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<10	nd<52.4
	11/19/12	**Unable to collect sample; well box filled with ice**																																			
	2/14/13	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	6/25/13	**Sample Collected - Sample Holding Time Expired, Not Analyzed**																																			
	9/30/13	na	na	nd<2.2	nd<5.5	nd<2.2	nd<7.6	na	na	nd<2.2	nd<8.6	nd<2.2	nd<12	nd<2.2	nd<6.4	**2.9**	**14**	**13**	**25**	**41**	**98**	nd<22	nd<75	**8.7**	**28**	**30**	**110**	**3.5**	**15**	**25.6**	**110**	**4.9**	**24**	nd<2.2	nd<11	**4.1**	20	na	na
	12/10/13	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	**12**	**29**	**13**	**45**	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/6/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	**27**	**66**	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	6/26/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	9/17/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	12/16/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/31/15	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	**13**	**56.4**	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	**13**	**68.1**
VP-9	4/9/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	12/16/10	nd	nd	nd	nd	nd	nd	**111**	**272.8**	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	5/11/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/29/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	**15**	**52.8**	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	na	na
	12/9/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	3/29/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	6/8/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	8/21/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<10	nd<52.4
	11/19/12	**Unable to collect sample; well box filled with ice**																																			
	2/14/13	**Unable to collect sample; well box filled with ice**																																			
	6/25/13	**Sample Collected - Sample Holding Time Expired, Not Analyzed**																																			
	9/30/13	na	na	nd<12	nd<32	nd<12	nd<44	na	na	nd<12	nd<49	nd<12	nd<68	nd<12	nd<36	nd<12	nd<60	nd<50	nd<93	nd<120	nd<290	nd<120	nd<430	nd<12	nd<40	nd<12	nd<47	nd<12	nd<54	nd<12	nd<54	nd<12	nd<61	nd<12	nd<61	nd<12	nd<61	na	na
	12/10/13	nd<10	nd<35.2	nd<10	nd<25.6	**11**	**39**	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	**12**	**45**	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/6/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	**10**	**52.4**
	6/26/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	**10**	**52.4**
	9/17/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	12/16/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/31/15	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	**13**	**56.4**	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
VP-10	4/9/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/8/10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	12/16/10	nd	nd	nd	nd	nd	nd	**183**	**449.8**	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	5/11/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	na
	9/29/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	na	na
	12/9/11	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	3/29/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	6/8/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	8/21/12	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<10	nd<52.4
	11/19/12	**Unable to collect sample; well box filled with ice**																																			
	2/14/13	nd<1.0	nd<3.52	nd<1.0	nd<2.56	nd<1.0	nd<3.52	nd<1.0	nd<2.46	nd<1.0	nd<3.96	nd<1.0	nd<5.45	nd<1.0	nd<2.95	nd<1.0	nd<4.88	nd<1.0	nd<1.88	nd<1.0	nd<2.375	nd<1.0	nd<3.47	nd<1.0	nd<3.95	nd<1.0	nd<3.77	nd<1.0	nd<4.34	nd<1.0	nd<4.34	nd<1.0	nd<4.92	nd<1.0	nd<4.91	nd<1.0	nd<4.91	nd<1.0	nd<5.24
	6/25/13	**Sample Collected - Sample Holding Time Expired, Not Analyzed**																																			
	9/30/13	na	na	nd<2.5	nd<6.4	nd<2.5	nd<8.9	na	na	nd<2.5	nd<10	nd<2.5	nd<140	nd<2.5	nd<7.4	**3.0**	**15**	nd<10	nd<19	nd<25	nd<60	nd<25	nd<88	nd<2.5	nd<8.0	**4.8**	**18**	nd<2.5	nd<11	**5.4**	**24**	nd<2.5	nd<12	nd<2.5	nd<12	nd<2.5	nd<12	na	na
	12/10/13	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd	**13**	**45**	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/6/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	**18**	**43**	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	6/26/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	9/17/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	12/16/14	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	nd<10	nd<43.4	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4
	3/31/15	nd<10	nd<35.2	nd<10	nd<25.6	nd<10	nd<35.2	nd<10	nd<24.6	nd<10	nd<39.6	nd<10	nd<54.5	nd<10	nd<29.5	nd<10	nd<48.8	na	na	nd<10	nd<23.75	nd<10	nd<34.7	nd<10	nd<39.5	nd<10	nd<37.7	nd<10	nd<43.4	**13**	**56.4**	nd<10	nd<49.2	nd<10	nd<49.1	nd<10	nd<49.1	nd<10	nd<52.4

Notes:
1,1-DCE = 1,1-Dichloroethene
1,1,1-TCA = 1,1,1-Trichloroethane
MC` = Methylene Chloride
na = not analyzed for this compound
nc = Not calculated
nd = Not detected at or above detection limit for each respective compound
nd< = Not detected at or above the practical quantitation limit (PQL), which is indicated by value
PCE = Tetrachloroethene (a.k.a. perchloroethene)
ppbV = parts per million by volume
TCE = Trichloroethene
Tracer Gas = Freon 11
ug/m^3 = micrograms per cubic meter

Notes: 6/8/12- Ethyl Acetate= 2.63 ppbV; 1,1-dichloroethane= 3.12 ppbV (VP-8)

TABLE 5
SUMMARY OF WELL CONSTRUCTION DETAILS
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

WELL ID	Completion Date	Well Type	Well Depth (feet bgs)	Well Casing Material	TOC Elevation (feet rel)	Top of Screen (feet bgs)	Screen Length (feet)
AS-1	11/3/09	Air Sparge	25.0	2" PVC	--	23.5	1.5
AS-2	11/5/09	Air Sparge	25.0	2" PVC	--	23.5	1.5
AS-3	11/6/09	Air Sparge	28.0	2" PVC	--	26.5	1.5
AS-4	11/5/09	Air Sparge	26.0	2" PVC	--	24.5	1.5
AS-5	11/5/09	Air Sparge	26.0	2" PVC	--	24.5	1.5
AS-6	11/5/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-7	11/7/09	Air Sparge	28.5	2" PVC	--	27.0	1.5
AS-8	11/7/09	Air Sparge	27.0	2" PVC	--	25.5	1.5
AS-9	11/9/09	Air Sparge	28.5	2" PVC	--	27.0	1.5
AS-10	11/4/09	Air Sparge	27.0	2" PVC	--	25.5	1.5
AS-11	11/4/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-12	11/8/09	Air Sparge	27.5	2" PVC	--	26.0	1.5
AS-13	11/8/09	Air Sparge	29.0	2" PVC	--	27.5	1.5
AS-14	11/8/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-15	11/9/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-16	11/12/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-17	11/12/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-18	11/11/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-19	11/11/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-20	11/13/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-21	11/12/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-22	11/11/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-23	11/6/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-24	11/13/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-25	11/13/09	Air Sparge	30.0	2" PVC	--	28.5	1.5
AS-26	11/4/09	Air Sparge	27.0	2" PVC	--	25.5	1.5
AS-27	11/9/09	Air Sparge	26.0	2" PVC	--	24.5	1.5

TABLE 5
SUMMARY OF WELL CONSTRUCTION DETAILS
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

WELL ID	Completion Date	Well Type	Well Depth (feet bgs)	Well Casing Material	TOC Elevation (feet rel)	Top of Screen (feet bgs)	Screen Length (feet)
LW-MW-1S	7/16/08	Monitoring	23.91	2" PVC	6,191.41	8.9	15
LW-MW-2S	7/23/08	Monitoring	34.82	2" PVC	6,192.41	19.8	15
LW-MW-5S	7/24/08	Monitoring	29.70	2" PVC	6,149.87	14.7	15
LW-MW-9S	11/10/09	Monitoring	24.40	2" PVC	6,192.98	9.4	15
LW-MW-10S	11/12/09	Monitoring	24.76	2" PVC	6,192.15	9.8	15
LW-MW-10SR	6/8/13	Monitoring	24.65	2" PVC	6,191.91	9.7	15
LW-MW-11S	11/12/09	Monitoring	24.30	2" PVC	6,191.67	9.3	15
LW-MW-12S	11/10/09	Monitoring	24.20	2" PVC	6,190.71	9.2	15
LW-MW-13S	11/10/09	Monitoring	24.95	2" PVC	6,190.82	10.0	15
OS-1	3/19/10	Monitoring	25.00	2" PVC	6,176.95	10.0	15
VED-1	11/5/09	Deep Vapor Extraction	13.0	2" PVC	--	11.0	2
VED-2	11/4/09	Deep Vapor Extraction	14.0	2" PVC	--	12.0	2
VED-3	11/7/09	Deep Vapor Extraction	14.0	2" PVC	--	12.0	2
VED-4	11/8/09	Deep Vapor Extraction	13.0	2" PVC	--	11.0	2
VED-5	11/9/09	Deep Vapor Extraction	13.4	2" PVC	--	11.4	2
VED-6	11/10/09	Deep Vapor Extraction	12.5	2" PVC	--	10.5	2
VED-7	11/12/09	Deep Vapor Extraction	12.0	2" PVC	--	10.0	2
VED-8	11/13/09	Deep Vapor Extraction	12.0	2" PVC	--	10.0	2
VED-9	11/11/09	Deep Vapor Extraction	12.0	2" PVC	--	10.0	2
VED-10	11/10/09	Deep Vapor Extraction	12.0	2" PVC	--	10.0	2
VED-11	11/8/09	Deep Vapor Extraction	12.0	2" PVC	--	10.0	2
VED-12	11/7/09	Deep Vapor Extraction	11.5	2" PVC	--	9.5	2
VED-13	11/7/09	Deep Vapor Extraction	13.5	2" PVC	--	11.5	2
VED-14	11/10/09	Deep Vapor Extraction	12.5	2" PVC	--	10.5	2
VED-15	11/6/09	Deep Vapor Extraction	12.0	2" PVC	--	10.0	2
VED-16	11/12/09	Deep Vapor Extraction	12.0	2" PVC	--	10.0	2
VED-17	11/4/09	Deep Vapor Extraction	15.0	2" PVC	--	13.0	2
VED-18	11/4/09	Deep Vapor Extraction	13.0	2" PVC	--	11.0	2
VED-19	11/3/09	Deep Vapor Extraction	12.0	2" PVC	--	10.0	2
VED-20	11/3/09	Deep Vapor Extraction	12.0	2" PVC	--	10.0	2

TABLE 5
SUMMARY OF WELL CONSTRUCTION DETAILS
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

WELL ID	Completion Date	Well Type	Well Depth (feet bgs)	Well Casing Material	TOC Elevation (feet rel)	Top of Screen (feet bgs)	Screen Length (feet)
VES-1	11/5/09	Shallow Vapor Extraction	9.0	2" PVC	--	4.0	5
VES-2	11/4/09	Shallow Vapor Extraction	10.0	2" PVC	--	5.0	5
VES-3	11/7/09	Shallow Vapor Extraction	10.0	2" PVC	--	5.0	5
VES-4	11/8/09	Shallow Vapor Extraction	9.0	2" PVC	--	4.0	5
VES-5	11/9/09	Shallow Vapor Extraction	9.4	2" PVC	--	4.4	5
VES-6	11/10/09	Shallow Vapor Extraction	8.5	2" PVC	--	3.5	5
VES-7	11/12/09	Shallow Vapor Extraction	8.0	2" PVC	--	3.0	5
VES-8	11/13/09	Shallow Vapor Extraction	8.0	2" PVC	--	3.0	5
VES-9	11/11/09	Shallow Vapor Extraction	8.0	2" PVC	--	3.0	5
VES-10	11/11/09	Shallow Vapor Extraction	8.0	2" PVC	--	3.0	5
VES-11	11/8/09	Shallow Vapor Extraction	8.0	2" PVC	--	3.0	5
VES-12	11/7/09	Shallow Vapor Extraction	7.5	2" PVC	--	3.5	4
VES-13	11/7/09	Shallow Vapor Extraction	9.5	2" PVC	--	4.5	5
VES-14	11/10/09	Shallow Vapor Extraction	8.5	2" PVC	--	3.5	5
VES-15	11/6/09	Shallow Vapor Extraction	8.0	2" PVC	--	3.0	5
VES-16	11/12/09	Shallow Vapor Extraction	8.0	2" PVC	--	3.0	5
VES-17	11/4/09	Shallow Vapor Extraction	9.0	2" PVC	--	4.0	5
VES-18	11/4/09	Shallow Vapor Extraction	9.0	2" PVC	--	4.0	5
VES-19	11/3/09	Shallow Vapor Extraction	7.0	2" PVC	--	2.0	5

TABLE 5
SUMMARY OF WELL CONSTRUCTION DETAILS
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

WELL ID	Completion Date	Well Type	Well Depth (feet bgs)	Well Casing Material	TOC Elevation (feet rel)	Top of Screen (feet bgs)	Screen Length (feet)
VES-20	11/3/09	Shallow Vapor Extraction	7.0	2" PVC	--	2.0	5
VP-1	11/5/09	Shallow Soil-Gas	5.0	1/8-inch Teflon Tubing		4.875	0.125
VP-2	11/5/09	Shallow Soil-Gas	5.0	1/8-inch Teflon Tubing		4.875	0.125
VP-3	11/9/10	Shallow Soil-Gas	5.0	1/8-inch Teflon Tubing		4.875	0.125
VP-4	11/7/09	Shallow Soil-Gas	5.0	1/8-inch Teflon Tubing		4.875	0.125
VP-5	11/3/09	Shallow Soil-Gas	5.0	1/8-inch Teflon Tubing		4.875	0.125
VP-6	11/3/09	Shallow Soil-Gas	5.0	1/8-inch Teflon Tubing		4.875	0.125
VP-7	11/9/10	Shallow Soil-Gas	5.0	1/8-inch Teflon Tubing		4.875	0.125
VP-8	11/9/10	Shallow Soil-Gas	5.0	1/8-inch Teflon Tubing		4.875	0.125
VP-9	11/8/09	Shallow Soil-Gas	5.0	1/8-inch Teflon Tubing		4.875	0.125
VP-10	11/8/09	Shallow Soil-Gas	5.0	1/8-inch Teflon Tubing		4.875	0.125

Notes
All wells are of Schedule 40 PVC construction
PVC = Poly vinyl chloride
feet bgs = feet below ground surface
TOC Elevation = Top of casing elevation based on feet above MSL relative at MW-1 taken from Topographic Map

TABLE 6
SUMMARY OF SVE/GASS REMEDIATION SYSTEM OPERATIONAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Operational Status on Arrival	Cumulative Calendar Days	Hour Meter Reading	Cumulative Operating Hours	Inlet Flow (scfm)	Vacuum (in-Hg) System	Vacuum (in-Hg) Wellfield	Influent Oxygen Content (%)	Field Vapor Total VOCs Influent (ppmV)	Field Vapor Total VOCs Effluent (ppmV)	Lab Vapor Influent (ppmV) PCE	Lab Vapor Influent (ppmV) TCE**	Lab Vapor Influent (ppmV) cis-1,2-DCE	Lab Vapor Influent (ppmV) Other VOCs	VOCs Extracted (lbs/hr) PCE	VOCs Extracted (lbs/hr) TCE**	VOCs Extracted (lbs/hr) cis-1,2-DCE	VOCs Extracted (lbs/hr) Total	Cumulative VOCs Extracted (lbs)
4/8/10	off	0	202.0	0	500	3.75	2.75	20.6	140	0	0.681	0.031	0.041	ND	0.009	0.00032	0.00031	0.010	0.000
4/9/10	off	1	205.0	3.0	500	4.15	2.75	20.6	130	0	1.950	0.045	0.048	ND	0.026	0.00047	0.00037	0.026	0.054
4/16/10	off	8	369.4	167.4	500	3.50	3.50	20.2	110	0									3.419
4/29/10	off	21	678.9	476.9	500	3.70	3.70	20.1	80	0									7.917
5/6/10	on	28	841.0	639.0	500	4.50	4.50	20.9	25	0									10.27
5/12/10	on	34	978.7	776.7	500	3.50	3.50	20.9	90	0									12.27
6/1/10	off	54	1,462	1,260	500	3.70	3.70	20.9	90	0									19.30
6/15/10	on	68	1,834	1,632	500	3.30	3.30	20.8	65	0									24.71
6/24/10	on	77	2,006	1,804	500	3.45	3.45	20.9	45	0	0.204	ND	ND	ND	0.003	0.00	0.00	0.003	26.19
7/2/10	on	85	2,199	1,997	500	3.30	3.30	20.8	170	0									30.90
7/15/10	off	98	2514.0	2,312	500	2.50	2.50	20.8	130	0	6.61	0.281	ND	ND	0.087	0.00292	0.00	0.000	38.16
7/22/10	off	105	2680.0	2,478	500	3.00	3.00	20.7	120	0									43.00
7/28/10	off	111	2681.0	2,479	500	3.26	3.26	20.7	160	0									43.06
8/5/10	on	119	2850.0	2,648	500	3.15	3.15	nm	120	0									52.91
8/5/10	on	119	2853.0	2,651	500	3.14	3.14	nm	210	0									53.09
8/11/10	on	125	3020.0	2,818	500	3.15	3.15	20.9	170	0	2.04	0.031	ND	ND	0.027	0.00032	0.00	0.027	60.2
8/18/10	on	132	3187.0	2,985	500	3.46	3.46	20.9	170	0	9.14	0.096	0.047	ND	0.120	0.00100	0.00036	0.121	72.6
8/25/10	on	139	3355.0	3,153	500	2.46	2.46	nm	180	0	11.4	1.83	4.32	ND	0.149	0.01901	0.03311	0.202	99.7
9/3/10	on	148	3568.3	3,366	500	2.80	2.80	20.7	195	10									143.5
9/8/10	on	153	3694.4	3,492	500	2.80	2.80	20.7	85	0									169.9
9/15/10	on	160	3863.0	3,661	500	5.16	5.16	20.1	60	0									205.2
9/15/10	on	160	3866.0	3,664	500	5.16	5.16	20.1	120	0	16.4	0.154	0.046	0.266	0.215	0.00160	0.00035	0.217	205.8
9/23/10	off	168	4051.5	3,850	500	4.15	4.15	20.9	190	0									246.0
9/28/10	on	173	4169.9	3,968	500	3.99	4.00	20.1	130	0									271.7
10/6/10	off	181	4362.4	4,160	500	4.98	4.98	20.1	75	0	11.8	0.104	0.033	0.112	0.155	0.00108	0.00025	0.156	307.5
10/13/10	on	188	4532.7	4,331	500	5.71	5.71	20.8	135	0									329.0
10/22/10	on	197	4746.8	4,545	500	5.00	5.00	20.9	190	0									349.5
10/28/10	off	203	4889.2	4,687	500	4.95	4.95	20.1	180	0									363.1
11/4/10	on	210	5056.4	4,854	500	4.83	4.83	nm	110	0									379.1
11/11/10	on	217	5255.8	5,054	500	5.22	5.22	20.1	230	0	2.7	ND	ND	ND	0.035	0.00	0.00	0.035	392.2
11/23/10	off	229	5684.7	5,483	0	nm	nm	nm	0	0									399.8
12/1/10	off	237	5684.7	5,483	500	2.60	2.60	nm	200	0									399.8
12/7/10	on	243	5826.3	5,624	500	3.24	3.24	20.1	190	0									404.3
12/16/10	on	252	6043.2	5,841	500	nm	nm	nm	180	0	2.18	0.39	ND	ND	0.029	0.00405	0.00	0.033	411.3
1/4/11	off	271	6463.5	6,262	500	2.89	nm	20.1	80	0									436.7
1/14/11	off	281	6707.8	6,506	500	2.00	nm	20.9	55	0									447.5
1/21/11	on	288	6873.9	6,672	500	2.00	2.00	20.8	60	0	11.30	0.228	0.028	0.241	0.148	0.00237	0.00021	0.151	460.0
1/27/11	on	294	7018.5	6,817	500	2.50	nm	20.9	45	0									476.7
2/2/11	on	300	7158.7	6,957	500	3.03	3.03	20.9	45	0									488.0
2/11/11	on	309	7375.1	7,173	500	2.80	2.80	20.9	25	0									505.4
2/21/11	off	319	7616.5	7,415	500	2.80	2.80	20.4	30	0									524.8
3/4/11	off	330	7879.0	7,677	500	3.00	3.00	20.8	75	0									546.0
3/11/11	on	337	8048.6	7,847	500	4.45	4.45	20.9	220	0									559.6
3/26/11	off	352	8456.8	8,255	500	5.00	5.00	19.8	200	0									592.5
4/6/11	off	363	8674.5	8,473	500	5.90	nm	nm	0	0									610.0
4/12/11	off	369	8675.5	8,474	500	1.95	1.95	20.8	60	0									610.0

TABLE 6
SUMMARY OF SVE/GASS REMEDIATION SYSTEM OPERATIONAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Operational Status on Arrival	Cumulative Calendar Days	Hour Meter Reading	Cumulative Operating Hours	Inlet Flow (scfm)	Vacuum (in-Hg)		Influent Oxygen Content (%)	Field Vapor Total VOCs		Lab Vapor Influent (ppmV)				VOCs Extracted (lbs/hr)				Cumulative VOCs Extracted (lbs)
						System	Wellfield		Influent (ppmV)	Effluent (ppmV)	PCE	TCE**	cis-1,2-DCE	Other VOCs	PCE	TCE**	cis-1,2-DCE	Total	
5/11/11	off	398	9322.6	9,121	500	nm	nm	nm	nm	nm									662.1
5/18/11	on	405	9488.9	9,287	500	1.75	1.75	20.8	60	0	0.795	ND	ND	0.049	0.010	0.00	0.00	0.010	669.7
5/24/11	on	411	9632.8	9,431	500	4.10	4.10	nm	20	0									672.8
6/1/11	on	419	9823.0	9,621	500	3.50	3.50	20.8	10	0									679.1
6/9/11	on	427	10012.3	9,810	500	4.00	4.00	20.8	20	0									685.3
6/14/11	on	432	10134.7	9,933	500	5.30	5.30	nm	5	0	4.23	ND	ND	1.181	0.055	0.00	0.00	0.055	690.7
6/21/11	on	439	10303.2	10,101	500	5.50	5.50	nm	2.8	0									697.9
6/27/11	on	445	10446.1	10,244	500	4.80	4.80	nm	0	0									702.2
7/5/11	no	453	10637.1	10,435	500	5.50	5.50	nm	5.0	0									707.9
7/12/11	no	460	10803.4	10,601	0	0.00	0.00		0	0									710.4
7/13/11	no	461	10803.9	10,602	500	3.00	3.00	20.1	260	10									710.4
7/18/11	no	466	10949.5	10,748	500	3.00	3.00	20.8	160	10	0.332	ND	ND	0.419	0.0044	0.00	0.00	0.004	712.9
7/27/11	yes	475	11164.6	10,963	500	3.00	3.00	20.9	205	5									716.3
8/11/11	yes	490	11526.4	11,324	500	4.75	4.75	20.6	120	0									726.4
8/18/11	no	497	11692.8	11,491	500	4.60	4.60	nm	3										731.1
8/26/11	yes	505	11883.2	11,681	500	2.30	2.30	20.6	103	0									736.4
8/31/11	no	510	12005.0	11,803	500	3.80	3.80	nm	11	4	0.028	ND	ND	0.013	0.00037	0.00	0.00	0.0004	738.1
9/7/11	no	517	12170.7	11,969	500	3.75	3.75	nm	5	1									739.7
9/15/11	no	525	12362.0	12,160	500	3.70	3.70	nm	4	0.5									743.5
9/22/11	yes	532	12531.8	12,330	500	4.50	4.50	nm	3	6									746.8
9/29/11	yes	539	12703.5	12,502	500	4.60	4.60	nm	285	0									750.1
10/5/11	no	545	12838.8	12,637	0	0.00	0.00	0.0	67	0									751.5
10/6/11	no	546	12839.3	12,637	500	nm	nm	nm	160	0									751.5
10/13/11	yes	553	13010.1	12,808	500	3.00	3.00	nm	18.6	0	2.95	0.19	ND	0.0197	0.039	0.00194	0.00	0.041	756.6
10/18/11	yes	558	13130.1	12,928	500	5.00	5.00	20.9	45	0									760.8
10/26/11	yes	566	13324.3	13,122	500	3.00	3.00	20.6	60	0									766.6
11/30/11	no	601	13324.3	13,122	500	4.00	4.00	20.3	50	0									766.6
12/9/11	no	610	13535.1	13,333	500	3.50	3.50	20.8	140	0	1.61	0.024	ND	29.60	0.021	0.00025	0.00	0.021	772.3
12/15/11	yes	616	13681.1	13,479	500	3.50	3.50	20.8	160	0									775.2
12/21/11	yes	622	13825.5	13,624	500	3.00	3.00	20.8	85	0									777.6
1/4/12	yes	636	14165.5	13,964	500	2.15	nm	20.9	75	5.5	0.997	ND	ND	ND	0.013	0.00	0.00	0.013	782.5
1/12/12	yes	644	14353.0	14,151	500	3.15	3.15	20.9	60	0									785.1
1/17/12	no	649	14471.7	14,270	500	3.60	3.60	20.8	85	0									786.4
1/25/12	no	657	14667.2	14,465	500	4.10	4.10	20.9	90	0									787.5
2/3/12	no	666	14881.7	14,680	500	4.23	4.23	20.8	70	0									788.9
2/9/12	no	672	15024.4	14,822	500	4.00	4.00	nm	50	0	1.24	0.012	ND	ND	0.016	0.00	0.00	0.016	790.8
2/17/12	no	680	15215.9	15,014	0	0.00	0.00	0.0	0	0									792.4
3/8/12	no	700	15215.9	15,014	0	0.00	0.00	0.0	0	0									792.4
3/29/12	no	721	15215.9	15,014	500	0.00	0.00	0.0	0	0									792.4
4/18/12	no	741	15216.0	15,014	500	3.50	3.50	nm	4	0									792.4
4/26/12	no	749	15407.3	15,205	0	0.00	0.00	0.0	0	0									793.9
5/1/12	yes	754	15525.6	15,324	500	3.50	2.50	nm	10	0									794.9
5/8/12	yes	761	15693.3	15,491	500	3.50	2.50	nm	10	0									797.6
5/14/12	yes	767	15839.8	15,638	500	3.45	2.50	nm	18	0	1.24	ND	ND	0.056	0.016	0.00	0.00	0.016	800.0

TABLE 6
SUMMARY OF SVE/GASS REMEDIATION SYSTEM OPERATIONAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Operational Status on Arrival	Cumulative Calendar Days	Hour Meter Reading	Cumulative Operating Hours	Inlet Flow (scfm)	Vacuum (in-Hg)		Influent Oxygen Content (%)	Field Vapor Total VOCs (ppmV)		Lab Vapor Influent (ppmV)				VOCs Extracted (lbs/hr)				Cumulative VOCs Extracted (lbs)
						System	Wellfield		Influent	Effluent	PCE	TCE**	cis-1,2-DCE	Other VOCs	PCE	TCE**	cis-1,2-DCE	Total	
5/23/12	yes	776	16053.1	15,851	500	3.95	3.00	nm	20-23	0									804.4
5/30/12	yes	783	16220.0	16,018	500	3.00	3.00	nm	15.3	0									808.7
6/8/12	no	792	16438.7	16,237	500	3.95	3.00	nm	14.3	0									814.3
6/14/12	yes	798	16582.0	16,380	500	0.00	0.00	0.0	0	0									818.0
6/21/12	no	805	16584.2	16,382	500	3.50	2.75	nm	30	0									818.0
6/27/12	yes	811	16723.0	16,521	500	4.0	3.25	20.9	35	0	2.66	ND	ND	0.03	0.035	0.00	0.00	0.035	822.2
7/20/12	no	834	17275.9	17,074	500	4.5	4.00	20.8	35	0									839.0
7/26/12	no	840	17424.0	17,222	500	4.0	3.25	nm	22	0	1.31	0.013	ND	ND	0.017	0.00	0.00	0.017	842.2
8/1/12	yes	846	17564.2	17,362	500	4.0	3.40	nm	18.3	0									844.2
8/8/12	yes	853	17736.3	17,534	500	3.3	2.60	nm	20.6	0									846.2
8/16/12	no	861	17925.7	17,724	500	4.0	3.25	nm	21	0									848.4
8/21/12	yes	866	18043.6	17,842	500	3.7	3.00	nm	18.2	0	0.441	ND	ND	ND	0.006	0.00	0.00	0.006	849.4
8/28/12	yes	873	18212.9	18,011	500	4.5	5.20	20.8	40.0	0									850.1
9/7/12	no	883	18452.3	18,250	0	0.0	0.00	0.0	0.0	0									850.5
9/13/12	no	889	18452.3	18,250	500	5.5	4.15	nm	28.6	0	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.000	850.5
9/18/12	yes	894	18714.5	18,513	500	4.5	3.75	nm	14.1	0									850.6
9/28/12	yes	904	18949.8	18,748	500	4.1	3.40	nm	13.6	0									850.8
10/3/12	yes	909	19072.9	18,871	500	4.75	3.95	nm	18.6	0									851.0
10/12/12	no	918	19074.2	18,872	500	2.80	3.15	nm	13.1	0									851.0
10/17/12	yes	923	19191.5	18,990	500	2.32	1.86	20.3	20	0									851.1
10/23/12	yes	929	19335.9	19,134	500	3.75	2.50	20.8	65	0									851.2
10/31/12	yes	937	19527.3	19,325	500	2.45	2.00	nm	25	0	0.145	0.00	0.00	0.233	0.002	0.00	0.00	0.002	851.5
11/6/12	yes	943	19673.6	19,472	500	2.75	2.30	20.8	40	0									851.7
11/19/12	yes	956	19985.0	19,783	500	2.80	2.35	nm	14.4	0									852.0
11/30/12	no	967	20248.3	20,046	500	4.90	4.33	nm	5.0	0	0.000	0.00	0.00	0.00	0.000	0.00	0.00	0.000	852.1
11/5/13	off	967	36969.0	20,046	500	3.71	2.98	nm	149.5	1.6									852.1
11/15/13	on	977	37209.0	20,286	500	2.75	2.25	nm	13.6	0.3									852.7
11/22/13	on	984	170.7	20,457	500	2.80	2.25	nm	6.3	1.1	0.39	0.00	0.00	1.7	0.005	0.00	0.00	0.005	853.4
11/26/13	on	988	266.3	20,553	500	2.80	2.25	nm	6.1	0.4									853.9
12/4/13	on	996	459.9	20,746	500	2.95	2.50	nm	5.8	0									855.0
12/10/13	on	1,002	599.9	20,886	500	2.80	2.25	nm	4.6	0.1	0.49	0.00	0.00	0.09	0.006	0.00	0.00	0.006	855.9
12/19/13	on	1,011	812.3	21,099	500	2.95	2.50	nm	5.1	0									857.1
12/27/13	off	1,019	1006.4	21,293	500	2.96	2.50	nm	5.3	0									858.0
1/3/14	on	1,026	1173.1	21,459	500	2.90	2.30	nm	4.3	0									858.9
1/7/14	on	1,030	1267.9	21,554	500	2.90	2.30	nm	3.9	0	0.27	0.00	0.00	0.00	0.004	0.00	0.00	0.004	859.3
1/14/14	on	1,037	1434.8	21,721	500	2.90	2.30	nm	5.4	0									859.7
1/20/14	on	1,043	1577.8	21,864	500	3.20	2.60	nm	0.7	0									860.0
1/28/14	off	1,051	1767.7	22,054	500	2.90	2.30	nm	3.6	0									860.3
1/31/14	off	1,054	1834.9	22,121	500	1.49	1.88	nm	4.6	0									860.4
2/4/14	on	1,058	1924.8	22,211	500	2.21	1.76	nm	2.4	0									860.6
2/14/14	on	1,068	2164.8	22,451	500	3.41	3.71	nm	5.0	0									861.01
2/18/14	off	1,072	2166.9	22,453	500	1.07	1.54	20.9	5.0	0									861.02
2/26/14	on	1,080	2354.3	22,641	500	nm	nm	nm	0.0	0									861.35
2/28/14	off	1,082	2354.3	22,641	500	2.75	2.30	nm	0.0	0	0.00	0.00	0.00	0.025	0.000	0.00	0.00	0.000	861.35

TABLE 6
SUMMARY OF SVE/GASS REMEDIATION SYSTEM OPERATIONAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Operational Status on Arrival	Cumulative Calendar Days	Hour Meter Reading	Cumulative Operating Hours	Inlet Flow (scfm)	Vacuum (in-Hg) System	Vacuum (in-Hg) Wellfield	Influent Oxygen Content (%)	Field Vapor Total VOCs Influent (ppmV)	Field Vapor Total VOCs Effluent (ppmV)	Lab Vapor Influent (ppmV) PCE	Lab Vapor Influent (ppmV) TCE**	Lab Vapor Influent (ppmV) cis-1,2-DCE	Lab Vapor Influent (ppmV) Other VOCs	VOCs Extracted (lbs/hr) PCE	VOCs Extracted (lbs/hr) TCE**	VOCs Extracted (lbs/hr) cis-1,2-DCE	VOCs Extracted (lbs/hr) Total	Cumulative VOCs Extracted (lbs)
3/6/14	on	1,088	2495.7	22,782	500	2.60	2.00	nm	2.4	0									861.35
3/20/14	off	1,102	2496.1	22,782	500	1.25	0.70	nm	0.0	0	0.00	0.00	0.00	0.048	0.000	0.00	0.00	0.000	861.35
3/24/14	off	1,106	2590.5	22,877	500	1.20	0.65	nm	1.2	0									861.36
4/4/14	off	1,117	2850.6	23,137	0	0.00	0.00	nm	0.0	0									861.37
4/4/14	on at depart	1,117	2852.2	23,139	500	1.40	0.78	nm	1.3	0									861.37
4/10/14	on	1,123	2996.5	23,283	500	1.44	0.80	nm	0.8	0	0.022	0.00	0.00	0.011	0.000	0.00	0.00	0.000	861.41
4/25/14	off	1,138	2997.6	23,284	500	1.50	0.85	nm	1.1	0									861.41
5/1/14	off	1,144	3137.9	23,424	500	1.32	0.75	20.4	5.0	0									861.92
5/6/14	off	1,149	3258.1	23,544	0	0.00	0.00	nm	0.0	0									862.15
5/6/14	on at depart	1,149	3259.3	23,546	500	1.25	0.70	nm	3.6	0									862.15
5/9/14	on	1,152	3330.4	23,617	500	2.30	1.75	nm	4.8	0.019	0.540	0.00	0.00	0.00	0.007	0.00	0.00	0.007	862.53
5/9/14	off at depart	1,152	3331.5	23,618	0	0.00	0.00	nm	0.0	0									862.53
5/22/14	off	1,165	3331.5	23,618	0	0.00	0.00	nm	0.0	0									862.53
5/22/14	on at depart	1,165	3333.1	23,619	500	2.15	1.50	nm	1.3	0									862.54
5/30/14	off	1,173	3524.7	23,811	0	0.00	0.00	nm	0.0	0									863.51
5/30/14	on at depart	1,173	3526.1	23,812	500	2.20	1.53	nm	0.6	0									863.52
6/6/14	off	1,180	3689.6	23,976	0	0.00	0.00	nm	0.0	0									864.34
6/6/14	on at depart	1,180	3691.1	23,977	500	2.25	1.55	nm	3.1	0									864.35
6/13/14	on	1,187	3857.7	24,144	500	2.10	1.50	nm	1.8	0									866.03
6/13/14	off at depart	1,187	3859.6	24,146	0	0.00	0.00	nm	0.0	0									866.04
6/26/14	off	1,200	3859.6	24,146	0	0.00	0.00	nm	0.0	0									866.04
6/26/14	on	1,200	3861.1	24,147	500	2.55	2.02	nm	1.9	0.019	1.0	0.013	0.00	0.014	0.013	0.00	0.00	0.013	866.05
6/26/14	off at depart	1,200	3861.1	24,147	0	0.00	0.00	nm	0.0	0									866.05
8/4/14	off	1,239	3861.1	24,147	0	0.00	0.00	0.0	0.0	0									866.05
8/4/14	on at depart	1,239	3863.1	24,149	500	2.48	1.88	17.7	0.0	0	3.5	0.095	0.028	0.017	0.046	0.013	0.00	0.059	866.11
8/13/14	off	1,248	4069.9	24,356	0	0.00	0.00	0.0	0.0	0									872.20
8/13/14	on at depart	1,248	4071.2	24,358	500	2.04	1.53	20.2	0.0	0	0.94	0.011	0.000	0.000	0.012	0.013	0.00	0.025	872.21
8/20/14	on	1,255	4240.5	24,527	500	1.71	1.29	nm	0.0	n/a									874.97
8/25/14	on	1,260	4361.7	24,648	500	1.55	1.18	nm	0.0	n/a									875.85
9/3/14	off	1,269	4578.3	24,865	0	0.00	0.00	n/a	0.0	n/a									876.64
9/3/14	on at depart	1,269	4578.3	24,865	500	1.35	0.96	nm	1.8	n/a									876.64
9/8/14	on	1,274	4698.1	24,984	500	1.40	1.03	nm	0.0	n/a									877.51
9/17/14	on	1,283	4912.9	25,199	500	1.31	0.88	20.9	0.0	n/a									879.08
9/22/14	on	1,288	5033.8	25,320	500	1.28	0.89	20.9	0.0	n/a									879.96
10/10/14	on	1,306	5464.9	25,751	500	1.45	1.15	nm	1.1	n/a									883.09
10/17/14	on	1,313	5636.0	25,922	500	1.45	1.15	nm	0.0	n/a									884.34
10/24/14	on	1,320	5796.8	26,083	500	1.45	1.15	nm	1.7	n/a	0.170	0.000	0.000	0.000	0.002	0.000	0.00	0.002	885.10
11/3/14	on	1,330	6040.0	26,326	500	1.45	1.15	nm	1.1	n/a									885.60
11/7/14	off	1,334	6041.0	26,327	500	2.83	2.10	nm	1.3	n/a									885.60
11/14/14	on	1,341	6205.2	26,492	500	2.17	1.60	nm	1.0	n/a									885.90
11/14/14	on	1,341	6266.8	26,553	500	2.71	1.94	nm	1.0	n/a									886.01
11/20/14	on	1,347	6347.2	26,634	500	2.31	1.75	nm	1.6	n/a									886.16
11/20/14	on	1,347	6347.9	26,634	500	2.34	1.77	nm	2.1	n/a									886.16
11/26/14	on	1,353	6485.9	26,772	500	2.35	1.73	nm	2.3	n/a									886.41
11/26/14	on	1,353	6487.3	26,774	500	2.32	1.70	nm	2.1	n/a	0.11	0.000	0.000	0.000	0.001	0.000	0.00	0.001	886.42
12/3/14	off	1,360	6657.3	26,944	0	0.00	0.00	nm	0.0	n/a									886.54
12/3/14	on	1,360	6658.4	26,945	500	2.50	1.75	nm	1.7	n/a	0.32	0.000	0.000	0.000	0.004	0.000	0.00	0.004	886.54
12/9/14	on	1,366	6797.1	27,083	500	2.20	1.75	nm	1.0	n/a									887.03

TABLE 6
SUMMARY OF SVE/GASS REMEDIATION SYSTEM OPERATIONAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Operational Status on Arrival	Cumulative Calendar Days	Hour Meter Reading	Cumulative Operating Hours	Inlet Flow (scfm)	Vacuum (in-Hg) System	Vacuum (in-Hg) Wellfield	Influent Oxygen Content (%)	Field Vapor Total VOCs Influent (ppmV)	Field Vapor Total VOCs Effluent (ppmV)	Lab Vapor Influent (ppmV) PCE	Lab Vapor Influent (ppmV) TCE**	Lab Vapor Influent (ppmV) cis-1,2-DCE	Lab Vapor Influent (ppmV) Other VOCs	VOCs Extracted (lbs/hr) PCE	VOCs Extracted (lbs/hr) TCE**	VOCs Extracted (lbs/hr) cis-1,2-DCE	VOCs Extracted (lbs/hr) Total	Cumulative VOCs Extracted (lbs)
12/9/14	on	1,366	6802.4	27,089	500	2.20	1.75	nm	1.1	n/a									887.05
12/16/14	ofvf	1,373	6960.0	27,246	0	0.00	0.00	nm	0.0	n/a									887.27
12/16/14	on	1,373	6960.0	27,246	500	2.35	1.77	nm	2.3	n/a									887.27
12/29/14	on	1,386	7266.1	27,552	500	2.54	1.84	nm	2.2	n/a									888.16
12/29/14	on	1,386	7267.6	27,554	500	2.54	1.84	nm	2.3	n/a									888.16
1/8/15	on	1,396	7505.9	27,792	500	2.52	2.02	nm	2.2	n/a									888.85
1/16/15	on	1,404	7694.8	27,981	500	2.02	1.50	nm	1.1	n/a									889.39
1/22/15	on	1,410	7838.9	28,125	500	2.02	1.54	nm	1.1	n/a	0.12	0.00	0.00	0.000	0.002	0.000	0.00	0.002	889.71
1/30/15	on	1,418	8029.3	28,316	500	2.10	1.55	nm	2.1	n/a									889.99
2/3/15	on	1,422	8126.1	28,412	500	2.13	1.62	nm	1.9	n/a									890.11
2/9/15	on	1,428	8270.4	28,557	500	2.72	2.21	nm	2.1	n/a									890.30
2/17/15	on	1,436	8460.1	28,746	500	2.30	1.96	nm	2.0	n/a									890.55
2/24/15	on	1,443	8630.1	28,916	500	2.37	1.88	nm	1.1	n/a									890.77
3/2/15	on	1,449	8774.8	29,061	500	2.35	1.86	nm	2.0	n/a									890.96
3/10/15	on	1,457	8966.3	29,253	500	2.25	1.75	nm	1.0	n/a									891.21
3/17/15	on	1,464	9132.0	29,418	500	2.07	1.75	nm	1.1	n/a	0.079	0.00	0.00	0.000	0.001	0.000	0.00	0.001	891.40
3/27/15	on	1,474	9370.9	29,657	500	2.13	1.69	nm	1.8	n/a									891.65
3/31/15	on	1,478	9467.7	29,754	500	2.21	1.64	nm	1.7	n/a									891.75

Average Extraction Rate (Lbs/Hr): PCE 0.025; TCE** 0.00059; cis-1,2-DCE 0.00044; Total 0.026

Notes: **System shut down for ozone sparging on 11/30/12; system restarted on 11/5/13 per CRWQCB directive, dated 11/1/13**

System shut off on 4/10/14, with approval from CRWQCB, for 2 weeks on/2 weeks off cycling plan; system re-started on 4/25/14

-- = Data not available / not recorded
cis-1,2-DCE = cis-1,2-Dichloroethene
in-Hg = Inches of Mercury
Lbs./Hr. = Pounds per hour
nm = Not measured
ND = Not detected at or above the method detection limit
PCE = Tetrachloroethene
ppmV = Parts per million by volume
scfm = Standard cubic feet per minute
SVE/GASS = Soil Vapor Extraction / Groundwater Air Sparge System
TCE = Trichloroethene
VOCs = Volatile Organic Compounds (primarily tetrachloroethylene and trichloroethylene)
Volatile Organic Compounds Removal Rate (lbs/hr) = Influent (ppmV) x 10-6 x Influent Flow Rate (scfm) x 1 lb-mole/379.5 ft3 x 165.82 (lb/lb-mole) x 60 (min/hour)

** = TCE mass removed includes 1,1,1-Trichloroethane, as their atomic weights are similar
For mass removal calculations (lb/lb-mole) - PCE mass weight = 165.82, TCE = 131.39 and cis-1,2-DCE = 96.95

8/5/10 - Extensive wellfield optimization conducted
9/23/10 - System off on arrival due to power outages
11/23/10 - System off on arrival due to power outages
12/1/10 - System off on arrival due to high water
1/4/11 - System off on arrival; power outage; also repaired knockout pot
4/6/11 - System off on arrival due to high water and would not start; off on departure

TABLE 6
SUMMARY OF SVE/GASS REMEDIATION SYSTEM OPERATIONAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Operational Status on Arrival	Cumulative Calendar Days	Hour Meter Reading	Cumulative Operating Hours	Inlet Flow (scfm)	Vacuum (in-Hg)		Influent Oxygen Content (%)	Field Vapor Total VOCs (ppmV)		Lab Vapor Influent (ppmV)				VOCs Extracted (lbs/hr)				Cumulative VOCs Extracted (lbs)
						System	Wellfield		Influent	Effluent	PCE	TCE**	cis-1,2-DCE	Other VOCs	PCE	TCE**	cis-1,2-DCE	Total	

4/12/11 - System restarted
5/11/11 - System off on arrival due to high water
7/12/11 - System off on arrival; high water
7/13/11 - Remove water and restart system
7/18/11 - System off on arrival due to power outage
8/31/11 - System off on arrival due to power outage
9/7/11 - System off on arrival due to power outage
9/15/11 - System off on arrival due to power outage
10/5/11 - System off on arrival due to full water tank
10/6/11 - Water tank emptied and system restarted
10/26/11 - System shut off due to carbon back pressure
11/30/11 - Carbon changeout, restart system
12/9/11 - System off on arrival due to power outage
1/17/12 - System off on arrival due to power outage
1/25/12 - System off on arrival due to power outage
2/3/12 - System off on arrival due to power outage
2/9/12 - System off on arrival due to power outage
2/17/12 - System off on arrival due to high water
3/5/12 - Snow conditions finally were conducive to remove water; also, attempted to fix an oil leak, which was a broken seal; seal was back-ordered
3/8/12 - Attempted to repair seal; however, wrong parts were delivered
3/29/12 - Attempted to replace the broken seal; however, the part failed; had to order a new one (back-ordered)
4/18/12- Fix seal on compressor; change compressor and blower oil
4/26/12- High water upon arrival (system off); system off on departure; tech to empty water and restart system
5/1/12- Added air sparge to water and opened dilution air to drop VAC and collect vapors
5/8/12- Changed AS manifold and closed off wells at east end of field near compound
5/14/12- Shut off AS-14,15,16 to focus near MW-1S
5/23/12- Reduced dilution air; raised VAC from 2.35 to 3 in-Hg
6/8/12 - System off on arrival due to high water
6/14/12- turned system off..all PVC going to carbon and inbetween carbons melted from high temp.
6/21/12- replaced plumbing for carbon; added pressure switch between blower and carbon; added vent and therm.
6/27/12- installed fan over compressor exhaust
7/20/12 - System off on arrival due to power outage
7/26/12 - System off on arrival due to power outage; installed fan and additional vents to reduce heat inside building
8/16/12 - System off on arrival due to power outage
9/7/12 - System off on arrival due to high water
9/10/12 - Water removed for recycling
9/13/12 - System restarted
10/3/12 - System on on arrival, performed maintenance and recorded operational parameters; left system off on departure as carbon vessels needed re-plumbing
10/12/12 - Arrived and re-plumed carbon vessels; started system, recorded parameters; system running on departure
11/30/12 - System off on arrival due to power outage; restarted, recorded operational parameters, then shut down during storm period to not extract large volume of water during storms
12/18/12 - Installed and plumbed ozone unit to wells AS-1, AS-2, AS-3, AS-9, AS-7, AS-8 and AS-13; attempted to start; fuse problems requiring parts; ozone unit off on departure
11/5/13-11/15/13 - Air compressor hour meter reading used as system hour meter reading not functioning; replaced system hour meter on 11/15/13
12/10/13 - System shut-off for sampling and repairs to 4" pvc pipe (hairline crack at couple); restarted system before departure from site
12/27/13 - System off on arrival, possibly from a power outage; operating normally upon system startup; hour meter reading shows that system was only down for several hours before arrival to site
1/28/14 - System off on arrival; operated normally upon system startup
1/31/14 - System off on arrival due to possible power outage
2/18/14 - System off on arrival due to possible power outage
2/26/14 - Shut down system to make repairs to carbon system

TABLE 6
SUMMARY OF SVE/GASS REMEDIATION SYSTEM OPERATIONAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Operational Status on Arrival	Cumulative Calendar Days	Hour Meter Reading	Cumulative Operating Hours	Inlet Flow (scfm)	Vacuum (in-Hg)		Influent Oxygen Content (%)	Field Vapor Total VOCs		Lab Vapor Influent (ppmV)				VOCs Extracted (lbs/hr)				Cumulative VOCs Extracted (lbs)
						System	Wellfield		Influent (ppmV)	Effluent (ppmV)	PCE	TCE**	cis-1,2-DCE	Other VOCs	PCE	TCE**	cis-1,2-DCE	Total	

2/28/14 - Completed repairs to carbon system, restarted; operated normally
3/6/14 - Shut down system to make additional repairs to carbon system
3/20/14 - Completed repairs to carbon system, restarted; operated normally
3/24/14 - System off on arrival due to possible power outage
4/4/14- System off on arrival due to power outage; restarted, measured parameters, left system on on departure
4/10/14 - System on at arrival, record parameters, then shut down for off cycling (2 weeks on/2 weeks off)
4/25/2014 - System was in off-cycling mode, restart system, recorded parameters and left on at departure
5/1/14 - System off on arrival due to power outage; restart and record parameters; left on at departure
5/6/14 - System off on arrival, likely due to high temp; restarted system, recorded parameters and left on at departure
5/9/14 - System running on arrival; perform O&M, shut down for cycling
5/22/14 - Off for off-cycling on arrival; restart for on-cycle period, recorde parameters; left on at departure
5/30/14 - Off on arrival, likely due to overheating related to high back-pressure in GAC; restart, record parameters, left on at departure
6/6/14 - Off on arrival due to thermal overload related to high back-pressxure in GAC; restsarted, recorded parameters, left on at departure
6/13/14 - System on on arrival, however, pressure switch had shut down due to thermal overload related to high back-presxsure in GAC; restarted, recorded parameters; had to leave off, could not keep running
6/26/14 - System off on arrival, same back-presxsure problem; restart and record measurements; left off on departure
8/4/14 - Replumbed to discharge directly to atmosphere; restarted syhstem; cleaned compound
8/13/14 - Off on arrival for unknown reason; restarted; on on departure
9/3/2014 - Off on arrival due to power outage; restarted
11/3/2014 - Left off on departure; reversed pullys on blower to get more efficient flow; blower motor burned up
11/7/2014 - Swapped out blower motor abd restarted
12/3/14 - Off on arrival due to power outage; changed pullies; changed blower oil; greased motor and blower; restarted
12/16/14 - Off on arrival due to power outage; restarted
2/3/15 - Air compressor off due to broken hose; replaced hose and restarted

TABLE 6 GRAPH
TREND OF VOC MASS REMOVED

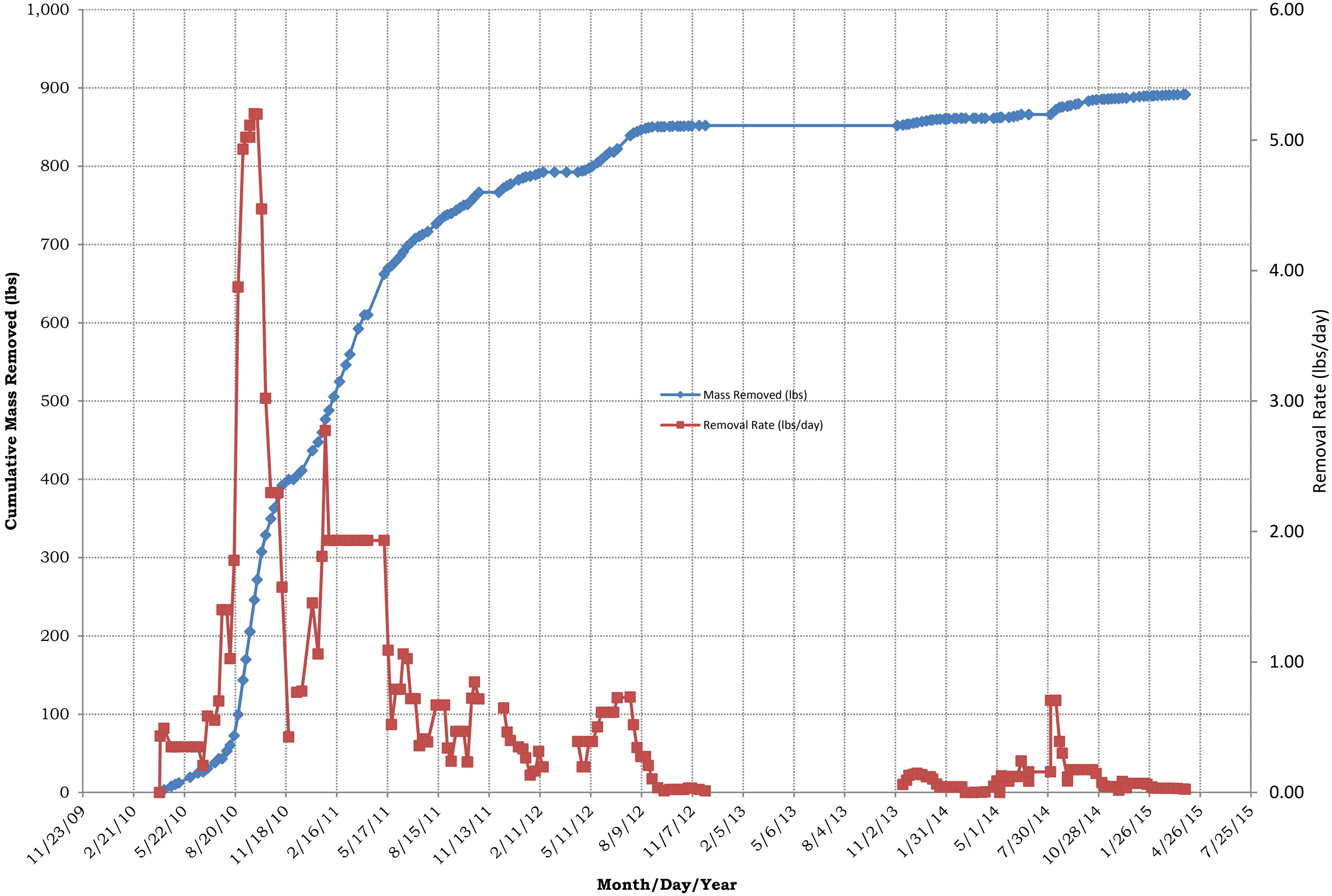


TABLE 7
SUMMARY OF VE WELLFIELD DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Well HVE-1 valve	Well HVE-2 valve	Well HVE-3 valve	Well HVE-4 valve	Well HVE-5 valve	Well HVE-6 valve	Well VES-1 valve	Well VED-1 valve	Well VES-2 valve	Well VED-2 valve	Well VES-3 valve	Well VED-3 valve	Well VES-4 valve	Well VED-4 valve	Well VES-5 valve	Well VED-5 valve	Well VES-6 valve	Well VED-6 valve	Well VES-7 valve	Well VED-7 valve	Well VES-8 valve	Well VED-8 valve	Well VES-9 valve	Well VED-9 valve	Well VES-10 valve	Well VED-10 valve	Well VES-11 valve	Well VED-11 valve	Well VES-12 valve	Well VED-12 valve	Well VES-13 valve	Well VED-13 valve	Well VES-14 valve	Well VED-14 valve	Well VES-15 valve	Well VED-15 valve	Well VES-16 valve	Well VED-16 valve	Well VES-17 valve	Well VED-17 valve	Well VES-18 valve	Well VED-18 valve	Well VES-19 valve	Well VED-19 valve	Well VES-20 valve	Well VED-20 valve
4/6/10	varying well configurations																																													
4/7/10	varying well configurations																																													
4/8/10	varying well configurations																																													
4/9/10	varying well configurations																																													
4/16/10	O	O	O	O	O	O	O	O	O	PO	O	PO	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
4/29/10	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
5/6/10	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
5/12/10	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
6/1/10	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
6/15/10	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
6/24/10	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
7/2/10	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
7/15/10	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
7/22/10	O	1/2	1/2	O	1/2	O	C	O	C	O	O	O	1/2	O	C	C	C	C	C	1/2	C	C	C	C	O	O	O	C	O	C	C	1/2	O	1/2	1/2	C	1/2	C	C	O	0	O	O	O	O	O
7/28/10	O	1/2	1/2	O	1/2	O	C	O	C	O	O	O	1/2	O	C	C	C	C	C	1/2	C	C	C	C	O	O	O	C	O	C	C	1/2	O	1/2	1/2	C	1/2	C	C	O	0	O	O	O	O	O
8/5/10	1/2	1/2	1/2	1/2	1/2	O	O	O	O	O	1/2	1/2	1/2	O	C	C	1/2	C	C	C	C	C	C	C	O	O	O	C	O	O	O	C	O	C	1/2	C	1/2	C	O	O	0	O	1/2	1/2	O	O
8/11/10	1/2	1/2	1/2	1/2	1/2	O	O	O	O	O	1/2	1/2	1/2	O	C	C	1/2	C	C	C	C	C	C	C	O	O	O	C	O	O	O	C	O	C	1/2	C	1/2	C	O	O	0	O	1/2	1/2	O	O
8/18/10	20%	1/2	O	C	O	1/2	O	C	O	1/2	O	O	1/2	O	C	O	C	O	1/2	1/2	C	1/2	1/2	O	O	O	O	1/2	1/2	O	C	C	C	C	O	1/2	O	O	O	O	1/2	1/2	O	C	O	C
8/25/10	O	O	O	1/2	O	1/2	20%	O	O	1/2	O	O	1/2	O	O	O	C	O	C	C	20%	C	C	C	1/2	C	O	C	O	20%	20%	O	O	1/2	O	20%	O	20%	O	1/2	O	1/2	O	O	O	O
9/3/10	O	O	O	1/2	O	1/2	20%	O	O	1/2	O	O	1/2	O	O	O	C	O	C	C	20%	C	C	C	1/2	C	O	C	O	20%	20%	O	O	1/2	O	20%	O	20%	O	1/2	O	1/2	O	O	O	O
9/8/10	O	O	O	1/2	O	1/2	20%	O	O	1/2	O	O	1/2	O	O	O	C	O	C	C	20%	C	C	C	1/2	C	O	C	O	20%	20%	O	O	1/2	O	20%	O	20%	O	1/2	O	1/2	O	O	O	O
9/15/10	O	1/2	O	1/2	1/2	20%	C	1/2	C	C	O	O	20%	O	C	C	C	O	C	C	C	C	C	C	1/2	1/2	O	1/2	C	C	C	C	C	C	1/2	1/2	O	1/2	C	1/2	C	20%	O	O	O	O
9/23/10	O	1/2	O	1/2	1/2	1/2	1/2	1/2	O	1/2	O	O	C	O	C	C	C	O	C	C	C	C	C	C	1/2	1/2	O	1/2	C	C	C	C	C	C	C	C	O	C	C	1/2	C	C	O	O	O	O
9/28/10	O	1/2	O	1/2	O	1/2	1/2	O	O	O	O	O	C	O	C	C	C	O	C	20%	C	C	C	C	1/2	1/2	O	1/2	C	C	C	C	C	1/2	C	C	O	C	C	1/2	C	C	O	O	O	O
10/13/10	20%	1/2	20%	O	20%	1/2	C	20%	20%	O	20%	1/2	10%	O	C	C	C	C	C	C	C	C	C	C	20%	20%	20%	1/2	20%	20%	C	20%	O	O	20%	20%	20%	20%	20%	20%	C	10%	20%	C	O	20%
10/28/10	1/2	1/2	1/2	O	1/2	1/2	C	O	20%	O	1/2	O	20%	C	C	C	C	C	C	C	C	C	C	C	1/2	1/2	20%	20%	20%	1/2	C	20%	O	O	O	O	O	O	1/2	20%	C	C	1/2	C	1/2	20%
11/4/10	1/2	1/2	1/2	O	1/2	1/2	C	O	20%	O	1/2	O	20%	C	C	C	C	C	C	C	C	C	C	C	1/2	1/2	20%	20%	20%	1/2	C	20%	O	O	O	O	O	O	1/2	20%	C	C	1/2	C	1/2	20%
11/11/10	1/2	1/2	1/2	O	1/2	1/2	C	O	20%	O	1/2	O	20%	C	C	C	C	C	C	C	C	C	C	C	1/2	1/2	20%	20%	20%	1/2	C	20%	O	O	O	O	O	O	1/2	20%	C	C	1/2	C	1/2	20%
11/23/10	1/2	1/2	1/2	O	1/2	1/2	C	O	20%	O	1/2	O	20%	C	C	C	C	C	C	C	C	C	C	C	1/2	1/2	20%	20%	20%	1/2	C	20%	O	O	O	O	O	O	1/2	20%	C	C	1/2	C	1/2	20%
12/1/10	1/2	1/2	1/2	O	1/2	1/2	C	O	20%	O	1/2	O	20%	C	C	C	C	C	C	C	C	C	C	C	1/2	1/2	20%	20%	20%	1/2	C	20%	O	O	O	O	O	O	1/2	20%	C	C	1/2	C	1/2	20%
12/7/10	1/2	1/2	1/2	O	1/2	1/2	C	O	20%	O	1/2	O	20%	C	C	C	C	C	C	C	C	C	C	C	1/2	1/2	20%	20%	20%	1/2	C	20%	O	O	O	O	O	O	1/2	20%	C	C	1/2	C	1/2	20%
12/16/10	1/2	1/2	1/2	O	1/2	1/2	C	O	20%	O	1/2	O	20%	C	C	C	C	C	C	C	C	C	C	C	1/2	1/2	20%	20%	20%	1/2	C	20%	O	O	O	O	O	O	1/2	20%	C	C	1/2	C	1/2	20%
1/4/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	O
1/14/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	O
1/27/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	O
2/2/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	O
2/21/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	O
3/4/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	O
3/11/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	O
3/26/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	O
4/6/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	O
4/12/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
5/11/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
5/18/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
6/1/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
6/9/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
6/14/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
6/21/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
6/27/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
7/5/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
7/12/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
7/13/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
7/27/11	O	O	O	O	O	O	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C
8/11/11	O	O	O	O	O	O	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C
8/18/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
8/26/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
8/31/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
9/7/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
9/15/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
9/22/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
9/29/11	C	C	C	C	C	C	O	C	O	C	C	C	O	C	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	C	C	C	C	C	C	C	O	C	O	C	O	C	O	C

TABLE 7
SUMMARY OF VE WELLFIELD DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Well HVE-1 valve	Well HVE-2 valve	Well HVE-3 valve	Well HVE-4 valve	Well HVE-5 valve	Well HVE-6 valve	Well VES-1 valve	Well VED-1 valve	Well VES-2 valve	Well VED-2 valve	Well VES-3 valve	Well VED-3 valve	Well VES-4 valve	Well VED-4 valve	Well VES-5 valve	Well VED-5 valve	Well VES-6 valve	Well VED-6 valve	Well VES-7 valve	Well VED-7 valve	Well VES-8 valve	Well VED-8 valve	Well VES-9 valve	Well VED-9 valve	Well VES-10 valve	Well VED-10 valve	Well VES-11 valve	Well VED-11 valve	Well VES-12 valve	Well VED-12 valve	Well VES-13 valve	Well VED-13 valve	Well VES-14 valve	Well VED-14 valve	Well VES-15 valve	Well VED-15 valve	Well VES-16 valve	Well VED-16 valve	Well VES-17 valve	Well VED-17 valve	Well VES-18 valve	Well VED-18 valve	Well VES-19 valve	Well VED-19 valve	Well VES-20 valve	Well VED-20 valve
10/5/11	System off on arrival and left off due to high water																																													
10/13/11	C	C	C	C	C	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C
10/18/11	C	C	C	C	C	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C
11/30/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	50%	C	C	50%	50%	50%	50%	50%	O	O	C	O	O	O	O	O	50%	50%	C	C	C	C	O	O	O	O	O	C	O	C
12/9/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	50%	C	C	50%	50%	50%	50%	50%	O	O	C	O	O	O	O	O	50%	50%	C	C	C	C	O	O	O	O	O	C	O	C
12/15/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	50%	C	C	50%	50%	50%	50%	50%	O	O	C	O	O	O	O	O	50%	50%	C	C	C	C	O	O	O	O	O	C	O	C
12/21/11	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	50%	C	C	50%	50%	50%	50%	50%	O	O	C	O	O	O	O	O	50%	50%	C	C	C	C	O	O	O	O	O	C	O	C
1/4/12	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	50%	C	C	50%	50%	50%	50%	50%	O	O	C	O	O	O	O	O	50%	50%	C	C	C	C	O	O	O	O	O	C	O	C
1/12/12	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	50%	C	C	50%	50%	50%	50%	50%	O	O	C	O	O	O	O	O	50%	50%	C	C	C	C	O	O	O	O	O	C	O	C
1/17/12	25%	25%	25%	25%	10%	10%	O	O	O	25%	O	O	25%	O	25%	25%	50%	50%	O	O	50%	50%	50%	50%	O	O	50%	O	O	O	O	O	50%	50%	25%	25%	50%	50%	25%	O	O	25%	O	O	O	50%
1/25/12	25%	25%	25%	25%	10%	10%	O	O	O	25%	O	O	25%	O	25%	25%	50%	50%	O	O	50%	50%	50%	50%	O	O	50%	O	O	O	O	O	50%	50%	25%	25%	50%	50%	25%	O	O	25%	O	O	O	50%
2/3/12	25%	25%	25%	25%	10%	10%	O	O	O	25%	O	O	25%	O	25%	25%	50%	50%	O	O	50%	50%	50%	50%	O	O	50%	O	O	O	O	O	50%	50%	25%	25%	50%	50%	25%	O	O	25%	O	O	O	50%
2/9/12	25%	25%	25%	25%	10%	10%	O	O	O	25%	O	O	25%	O	25%	25%	50%	50%	O	O	50%	50%	50%	50%	O	O	50%	O	O	O	O	O	50%	50%	25%	25%	50%	50%	25%	O	O	25%	O	O	O	50%
2/17/12	25%	25%	25%	25%	10%	10%	O	O	O	25%	O	O	25%	O	25%	25%	50%	50%	O	O	50%	50%	50%	50%	O	O	50%	O	O	O	O	O	50%	50%	25%	25%	50%	50%	25%	O	O	25%	O	O	O	50%
3/8/12	25%	25%	25%	25%	10%	10%	O	O	O	25%	O	O	25%	O	25%	25%	50%	50%	O	O	50%	50%	50%	50%	O	O	50%	O	O	O	O	O	50%	50%	25%	25%	50%	50%	25%	O	O	25%	O	O	O	50%
3/29/12	25%	25%	25%	25%	10%	10%	O	O	O	25%	O	O	25%	O	25%	25%	50%	50%	O	O	50%	50%	50%	50%	O	O	50%	O	O	O	O	O	50%	50%	25%	25%	50%	50%	25%	O	O	25%	O	O	O	50%
4/18/12	O	O	O	O	O	O	PO	C	PO	C	PO	C	O	C	PO	C	PO	C	O	C	O	C	O	C	O	C	O	C	O	C	PO	C	O	C	O	C	O	C	PO	C	PO	C	O	C	O	C
4/26/12	O	O	O	O	O	O	PO	C	PO	C	PO	C	O	C	PO	C	PO	C	O	C	O	C	O	C	O	C	O	C	O	C	PO	C	O	C	O	C	O	C	PO	C	PO	C	O	C	O	C
5/1/12	O	O	O	O	O	O	PO	C	PO	C	PO	C	O	C	PO	C	PO	C	O	C	O	C	O	C	O	C	O	C	O	C	PO	C	O	C	O	C	O	C	PO	C	PO	C	O	C	O	C
5/8/12	O	O	O	O	O	O	PO	C	PO	C	PO	C	O	C	PO	C	C	C	C	C	C	C	C	C	C	C	O	C	O	C	PO	C	C	C	C	C	C	C	PO	C	PO	C	O	C	O	C
5/14/12	O	O	O	O	O	O	PO	C	PO	C	PO	C	O	C	PO	C	C	C	C	C	C	C	C	C	C	C	O	C	O	C	PO	C	C	C	C	C	C	C	PO	C	PO	C	O	C	O	C
5/23/12	O	O	O	O	O	O	PO	C	PO	C	PO	C	O	C	PO	C	C	C	C	C	C	C	C	C	C	C	O	C	O	C	PO	C	C	C	C	C	C	C	PO	C	PO	C	O	C	O	C
5/30/12	O	O	O	O	O	O	PO	C	PO	C	PO	C	O	C	C	C	C	C	O	C	O	C	O	C	O	C	O	C	O	C	PO	C	O	C	O	C	O	C	C	C	PO	C	O	C	O	C
6/8/12	O	O	O	O	O	O	PO	C	PO	C	PO	C	O	C	C	C	C	C	O	C	O	C	O	C	O	C	O	C	O	C	PO	C	C	C	C	C	C	C	C	C	PO	C	O	C	O	C
6/14/12	O	O	O	O	O	O	PO	C	PO	C	PO	C	O	C	C	C	C	C	O	C	O	C	O	C	O	C	O	C	O	C	PO	C	C	C	C	C	C	C	C	C	PO	C	O	C	O	C
6/21/12	O	O	O	O	O	O	PO	C	PO	C	PO	C	O	C	C	C	C	C	O	C	O	C	O	C	O	C	O	C	O	C	PO	C	C	C	C	C	C	C	C	C	PO	C	O	C	O	C
6/27/12	O	O	O	O	C	C	O	C	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	C	O	C	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
7/20/12	O	O	O	O	C	C	O	C	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	C	O	C	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
7/26/12	O	O	O	O	C	C	O	C	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	C	O	C	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8/1/12	O	O	O	O	C	C	O	PO	O	PO	C	C	C	C	C	C	C	C	C	C	PO	C	C	PO	C	C	O	PO	O	PO	O	PO	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8/8/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	50%	C	C	50%	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8/16/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	50%	C	C	50%	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8/21/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	50%	C	C	50%	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8/28/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9/7/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9/13/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9/18/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9/28/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10/3/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10/12/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10/17/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10/23/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10/31/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11/6/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11/19/12	O	O	O	O	C	C	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	O	50%	O	50%	O	50%	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11/30/12	System off to start ozone sparging through AS wells																																													
11/5/13	O	O	O	O	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	O	C	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11/15/13	O	O	O	O	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	O	C	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11/22/13	O	O	O	O	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	O	C	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11/26/13	O	O	O	O	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	O	C	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12/4/13	O	O	O	O	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	O	C	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12/10/13	O	O	O	O	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	O	C	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12/19/13	O	O	O	O	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	O	C	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12/27/13	O	O	O	O	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	O	C	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1/3/14	O	O	O	O	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	O	C	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1/7/14	O	O	O	O	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	O	C	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1/14/14	O	O	O	O	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	O	C	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1/20/14	O	O	O	O	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	O	C	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1/28/14	O	O	O	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	O	C
1/31/14	O	O	O	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	O	C
2/4/14	O	O	O	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	O	O

TABLE 7
SUMMARY OF VE WELLFIELD DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Well HVE-1 valve	Well HVE-2 valve	Well HVE-3 valve	Well HVE-4 valve	Well HVE-5 valve	Well HVE-6 valve	Well VES-1 valve	Well VED-1 valve	Well VES-2 valve	Well VED-2 valve	Well VES-3 valve	Well VED-3 valve	Well VES-4 valve	Well VED-4 valve	Well VES-5 valve	Well VED-5 valve	Well VES-6 valve	Well VED-6 valve	Well VES-7 valve	Well VED-7 valve	Well VES-8 valve	Well VED-8 valve	Well VES-9 valve	Well VED-9 valve	Well VES-10 valve	Well VED-10 valve	Well VES-11 valve	Well VED-11 valve	Well VES-12 valve	Well VED-12 valve	Well VES-13 valve	Well VED-13 valve	Well VES-14 valve	Well VED-14 valve	Well VES-15 valve	Well VED-15 valve	Well VES-16 valve	Well VED-16 valve	Well VES-17 valve	Well VED-17 valve	Well VES-18 valve	Well VED-18 valve	Well VES-19 valve	Well VED-19 valve	Well VES-20 valve	Well VED-20 valve
2/14/14	O	O	O	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	O	O
2/18/14	O	O	O	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	O	O
2/26/14	O	O	O	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	O	O
2/28/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3/6/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3/20/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3/24/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4/4/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4/10/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4/25/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
5/1/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
5/6/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
5/9/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
5/22/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
5/30/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
6/6/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
6/13/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
6/26/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8/13/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8/20/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8/25/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9/3/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9/8/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9/17/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9/22/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10/10/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10/17/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10/24/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11/3/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11/7/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11/14/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11/20/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11/26/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12/3/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12/9/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12/16/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12/29/14	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1/8/15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1/16/15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1/22/15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1/30/15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2/3/15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2/9/15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2/17/15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2/24/15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3/2/15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3/10/15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3/17/15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3/27/15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3/31/15	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	O	O	O	O	O	O	O	O	C	C	C	C	C	C	C	C	C	C	C	C	C	C

Notes:
11/5/13: System restarted per CRWQCB directive, dated 11/1/13
8/13/14 - Restart with emissions direct to atmosphere per EDCQMD letter, dated 7/30/14

20% = 2O percent open
1/2 = One-half open
1/4 = 1/4 open
C = Closed
O = Fully open
PO = Partially Open

TABLE 7
SUMMARY OF VE WELLFIELD DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date Monitored	Well HVE-1 valve	Well HVE-2 valve	Well HVE-3 valve	Well HVE-4 valve	Well HVE-5 valve	Well HVE-6 valve	Well VES-1 valve	Well VED-1 valve	Well VES-2 valve	Well VED-2 valve	Well VES-3 valve	Well VED-3 valve	Well VES-4 valve	Well VED-4 valve	Well VES-5 valve	Well VED-5 valve	Well VES-6 valve	Well VED-6 valve	Well VES-7 valve	Well VED-7 valve	Well VES-8 valve	Well VED-8 valve	Well VES-9 valve	Well VED-9 valve	Well VES-10 valve	Well VED-10 valve	Well VES-11 valve	Well VED-11 valve	Well VES-12 valve	Well VED-12 valve	Well VES-13 valve	Well VED-13 valve	Well VES-14 valve	Well VED-14 valve	Well VES-15 valve	Well VED-15 valve	Well VES-16 valve	Well VED-16 valve	Well VES-17 valve	Well VED-17 valve	Well VES-18 valve	Well VED-18 valve	Well VES-19 valve	Well VED-19 valve	Well VES-20 valve	Well VED-20 valve

TABLE 8
SUMMARY OF HISTORICAL INTERIM REMEDIAL SYSTEM VAPOR LABORATORY ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample Point	Sample Date	PCE	TCE	cis-1,2-DCE	Trans-1,2-DCE	Other VOCs
		ppmV				
Influent	4/8/10	**0.680**	**0.031**	**0.041**	nd<0.01	nd<0.01
	4/9/10 - Test 9	**0.268**	**0.02**	**0.027**	nd<0.01	nd<0.01
	4/9/10	**1.950**	**0.045**	**0.048**	nd<0.01	nd<0.01
	6/24/10	**0.204**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	7/15/10	**6.61**	**0.281**	nd<2.00	nd<2.00	nd<2.00
	8/11/10	**2.04**	**0.031**	nd<0.025	nd<0.025	nd<0.025
	8/18/10	**9.14**	**0.096**	**0.047**	nd<0.041	nd<0.041
	8/25/10	**11.4**	**1.83**	**4.32**	nd<0.041	nd<0.041
	9/15/10	**16.4**	**0.154**	**0.046**	nd<0.041	**0.266**
	10/6/10	**11.8**	**0.104**	**0.033**	nd<0.041	**0.112**
	11/11/10	**2.7**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	12/16/10	**2.18**	**0.39**	nd<0.01	nd<0.01	nd<0.01
	1/21/11	**11.30**	**0.228**	**0.028**	nd<0.025	**0.241**
	5/18/11	**0.795**	nd<0.01	nd<0.01	nd<0.01	**0.049**
	6/14/11	**4.23**	nd<0.027	nd<0.027	nd<0.027	**1.181**
	7/18/11	**0.332**	nd<0.01	nd<0.01	nd<0.01	**0.419**
	8/31/11	**0.028**	nd<0.01	nd<0.01	nd<0.01	**0.015**
	10/13/11	**2.95**	**0.187**	nd<0.01	nd<0.01	**0.0197**
	12/9/11	**1.61**	**0.024**	nd<0.01	nd<0.01	**29.6**
	1/4/12	**0.997**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	2/9/12	**1.24**	**0.0124**	nd<0.01	nd<0.01	nd<0.01
	5/14/12	**1.24**	nd<0.01	nd<0.01	nd<0.01	**0.056**
	6/27/12	**2.66**	nd<0.01	nd<0.01	nd<0.01	**0.03**
	7/26/12	**1.31**	**0.013**	nd<0.01	nd<0.01	nd<0.01
	8/21/12	**0.441**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	9/13/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	10/31/12	**0.145**	nd<0.01	nd<0.01	nd<0.01	**0.233**
	11/30/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	11/22/13	**0.39**	nd<0.010	nd<0.010	nd<0.010	**1.7**
	12/10/13	**0.49**	nd<0.010	nd<0.010	nd<0.010	**0.09**
	1/7/14	**0.27**	nd<0.010	nd<0.010	nd<0.010	nd<0.010
	2/28/14	nd<0.010	nd<0.010	nd<0.010	nd<0.010	**0.025**
	3/20/14	nd<0.010	nd<0.010	nd<0.010	nd<0.010	**0.048**
	4/10/14	**0.022**	nd<0.010	nd<0.010	nd<0.010	**0.011**
	5/9/14	**0.54**	nd<0.010	nd<0.010	nd<0.010	nd<0.010
	6/26/14	**1.0**	**0.013**	nd<0.010	nd<0.010	**0.014**
	8/4/14	**3.5**	**0.095**	**0.028**	nd<0.010	**0.17**
	8/13/14	**0.94**	**0.011**	nd<0.010	nd<0.010	nd<0.010
	11/26/14	**0.11**	nd<0.010	nd<0.010	nd<0.010	nd<0.010
	12/3/14	**0.32**	nd<0.010	nd<0.010	nd<0.010	nd<0.010
	1/22/15	**0.12**	nd<0.010	nd<0.010	nd<0.010	nd<0.010
	3/27/15	**0.079**	nd<0.010	nd<0.010	nd<0.010	nd<0.010
Operational Average		**2.696**	**0.198**	**0.513**	**0.000**	**1.804**

TABLE 8
SUMMARY OF HISTORICAL INTERIM REMEDIAL SYSTEM VAPOR LABORATORY ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample Point	Sample Date	PCE	TCE	cis-1,2-DCE	Trans-1,2-DCE	Other VOCs
		ppmV				
Mid-Fluent	4/9/10	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	6/24/10	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	7/15/10	nd<2.00	nd<2.00	nd<2.00	nd<2.00	nd<2.00
	8/18/10	**2.23**	**0.027**	**0.19**	nd<0.02	**0.29**
	8/25/10	**3.98**	**0.272**	**0.161**	nd<0.02	**0.276**
	9/15/10	**3.29**	**0.133**	**0.097**	nd<0.02	**0.139**
	10/6/10	**1.5**	**0.034**	nd<2.00	nd<2.00	**0.032**
	11/11/10	**2.52**	nd<2.00	nd<2.00	nd<2.00	**0.024**
	1/21/11	**1.35**	nd<0.025	nd<0.025	nd<0.025	nd<0.025
	5/18/11	**1.00**	nd<0.01	nd<0.01	nd<0.01	**0.026**
	6/14/11	**2.00**	**0.109**	**0.128**	nd<0.029	**0.626**
	7/18/11	nd<0.01	nd<0.01	nd<0.01	nd<0.01	**0.195**
	8/31/11	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	10/13/11	**0.142**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	12/9/11	**1.61**	**0.024**	nd<0.01	nd<0.01	nd<0.01
	1/4/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	8/21/12	**0.297**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
Operational Average		**1.811**	**0.100**	**0.144**	**0.000**	**0.201**

TABLE 8
SUMMARY OF HISTORICAL INTERIM REMEDIAL SYSTEM VAPOR LABORATORY ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample Point	Sample Date	PCE	TCE	cis-1,2-DCE	Trans-1,2-DCE	Other VOCs
		ppmV				
Effluent	4/9/10	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	6/24/10	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	7/15/10	nd<2.00	nd<2.00	nd<2.00	nd<2.00	nd<2.00
	8/11/10	nd<0.023	nd<0.023	nd<0.023	nd<0.023	nd<0.023
	8/18/10	nd<0.01	nd<0.01	**0.192**	nd<0.01	nd<0.01
	8/25/10	nd<0.01	nd<0.01	**0.175**	nd<0.01	nd<0.01
	9/15/10	nd<0.01	nd<0.01	**0.221**	nd<0.01	nd<0.01
	10/6/10	**0.206**	nd<0.01	**0.024**	nd<0.01	nd<0.01
	11/11/10	**2.93**	**0.263**	nd<2.00	nd<0.01	**0.286**
	12/16/10	**0.948**	**0.067**	nd<2.00	nd<0.01	nd<0.01
	1/21/11	**3.68**	**0.233**	**0.081**	nd<0.027	**0.249**
	5/18/11	**0.106**	nd<0.01	nd<0.01	nd<0.01	**0.152**
	6/14/11	nd<0.029	nd<0.029	nd<0.029	nd<0.029	nd<0.029
	7/18/11	**0.187**	nd<0.01	nd<0.01	nd<0.01	**0.176**
	8/31/11	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	10/13/11	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	12/9/11	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	1/4/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	2/9/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	5/14/12	**0.633**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	6/27/12	**0.04**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	7/26/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	8/21/12	**0.287**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	9/13/12	**0.346**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	10/31/12	**0.117**	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	11/30/12	nd<0.01	nd<0.01	nd<0.01	nd<0.01	nd<0.01
	11/22/13	nd<0.010	nd<0.010	nd<0.010	nd<0.010	nd<0.010
	12/10/13	**0.13**	nd<0.010	nd<0.010	nd<0.010	nd<0.010
	1/7/14	nd<0.010	nd<0.010	nd<0.010	nd<0.010	nd<0.010
	2/28/14	nd<0.010	nd<0.010	nd<0.010	nd<0.010	**0.128**
	3/20/14	nd<0.010	nd<0.010	nd<0.010	nd<0.010	**1.5**
	4/10/14	nd<0.010	nd<0.010	nd<0.010	nd<0.010	**0.024**
	5/9/14	nd<0.010	nd<0.010	nd<0.010	nd<0.010	**0.019**
	6/26/14	**0.019**	nd<0.010	nd<0.010	nd<0.010	nd<0.010
Operational Average		**0.801**	**0.188**	**0.139**	**0.00**	**0.359**

TABLE 8
SUMMARY OF HISTORICAL INTERIM REMEDIAL SYSTEM VAPOR LABORATORY ANALYTICAL DATA
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Sample Point	Sample Date	PCE	TCE	cis-1,2-DCE	Trans-1,2-DCE	Other VOCs
		ppmV				

Notes:

cis-1,2-DCE = cis-1,2-Dichloroethene
na = Not applicable
nd< = Not detected at or above the detection limit, which is indicated by value
PCE = Tetrachloroethene (a.k.a. perchloroethene)
ppmV = parts per million by volume
TCE = Trichloroethene
Trans-1,2-DCE = Trans-1,2-dichloroethene

1/27/11 - Vapor samples collected; however, during lab analyses instrument malfunctioned; no results
2/21/11 - Vapor samples collected; however, during lab analyses instrument malfunctioned; no results
10/26/11-11/30/11 - carbon changeout

TABLE 9A
SUMMARY OF RESIDUAL VAPOR-PHASE PCE MASS ESTIMATES
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date	~PCE Plume Area (square feet)	Average PCE Concentration (μg/L)	Estimated Mass (pounds)	Change (+/-)
9/13/12	15,100	1,966	0.020	
2/14/13	15,100	0.060	0.0002	-0.02
9/30/13	15,100	1,614	0.005	0.005
12/10/13	8,500	2.4	0.004	-0.001
3/6/14	8,500	1.2	0.002	-0.002
6/26/14	14,500	20.1	0.025	0.023
9/17/14	13,000	2.9	0.007	-0.018
12/16/14	11,000	0.495	0.00102	-0.006
3/31/15	7,412	0.859	0.00119	0.00017

Notes:
See Figure 7b

TABLE 9B
3/31/15 - RESIDUAL PCE MASS IN SOIL-VAPOR CALCULATIONS
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Area Encompassed by all VP Wells within the 1 ppbV Plume Boundary Limit					
Well ID	**Sample Date**	**Impacted Soil Column** (feet)	**PCE** (ppbV)	($\mu g/m^3$)	($\mu g/L$)
VP-1	3/31/15	10	13	88.1	0.088
VP-2		10	160	1084.8	1.085
VP-5		10	38	257.64	0.2576
VP-6		10	12	81.36	0.0814
VP-9		10	520	3,525.6	3.526
VP-10		10	17	115.26	0.1153
		Averages	126.67	858.80	0.859

For conservative estimate assumes 10-foot thick soil column

As concervative estimate, assumes that VP analytical data represents residual in top 10 feet of soil column
Table 4 PCE ug/m3 concentration calculated based on PCE atomic weight of 165.82 g/mol

Residual PCE Mass	
Area in square feet (sf) - Estimated from Figure 7B	**7,412**
Impacted Column (ft)	**10**
Impacted Volume in cubic feet (cf)	**74,120**
Volume of soil gas, using 30% porosity (cf)	**22,236**
Soil gas volume in cubic meters	**630**
PCE in Mass in Soil Gas (µg)	**540,746**
PCE in Mass in Soil Gas (g)	**0.5407**
PCE in Mass in Soil Gas (lbs)	**0.00119**

Notes:
ppbV = parts per billion by volume
PCE = Tetrachloroethene (a.k.a. perchloroethene)
ug/L = micrograms per liter
ug/m3 = micrograms per cubic meter

TABLE 10A
SUMMARY OF RESIDUAL DISSOLVED-PHASE PCE MASS ESTIMATES
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Date	PCE Plume Area (square feet)	Average PCE Concentration (ug/L)	Estimated Mass (pounds)	Change (+/-)
7/30/13	24,300	143.26	0.65	na
9/30/13	23,000	242.75	1.05	0.40
12/10/13	15,300	63.73	0.18	-0.87
3/6/14	10,000	6.7	0.013	-0.17
6/26/14	2,750	20.1	0.020	0.01
9/17/14	500	6.35	0.0006	-0.02
12/16/14	1,300	13.07	0.0032	0.003
3/26/15	0	1.17	na	-0.003

Notes:
PCE plume area based on PCE concentrations greater than 5 ug/L
See Figure 4A for plot of data

TABLE 10B
3/26/15 - RESIDUAL DISSOLVED-PHASE PCE MASS CALCULATIONS
Lake Tahoe Laundry Works
1024 Lake Tahoe Boulevard
South Lake Tahoe, California

Area Encompassed by all LW-MW wells within the 5 ppb Plume Limit

Well ID	Sample Date	Impacted GW Column (feet)		PCE (ug/L)
LW-MW-1S	3/26/15	10		2
LW-MW-2S		10		1.3
LW-MW-5S		10		1.5
LW-MW-9S		10		nd<0.50
LW-MW-10SR		10		nd<0.50
LW-MW-11S		10		NS
LW-MW-12S		10		0.7
LW-MW-13S		10		2.7
			Average (ug/L)	**1.17**

For conservative estimate assumes 10-foot aquifer thickness

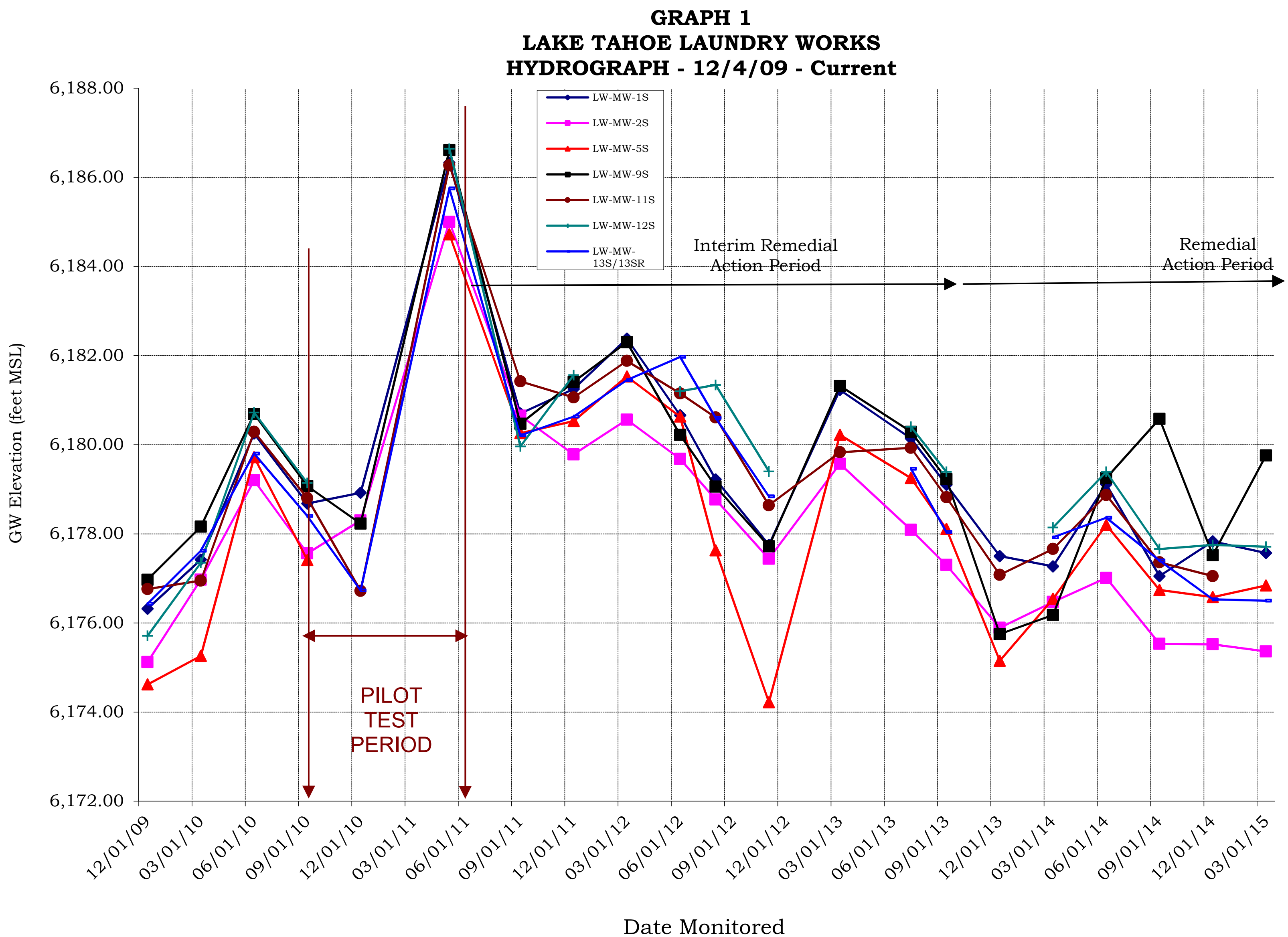
Residual PCE Mass

Area in square feet (sf) - From Figure 4	**0**	
Impacted Column (ft)	**10**	
Impacted GW Volume in cubic feet (cf)	**0**	multiply area by column
Aqueous volume using 30% porosity (cf)	**0**	
Groundwater Volume (GWV) in Liters	**0**	multiply GW volume (gal) by 3.78541178 liters per gal
GW PCE Mass (ug)	**0**	multiply GWV by avg concentration in ug/L
GW PCE Mass in grams (g)	**0.000**	divide by (1000 ug/mg)*1000 mg/g)
GW PCE Mass in pounds (lbs)	**0.0000**	multiply by 0.00220462 lbs/g

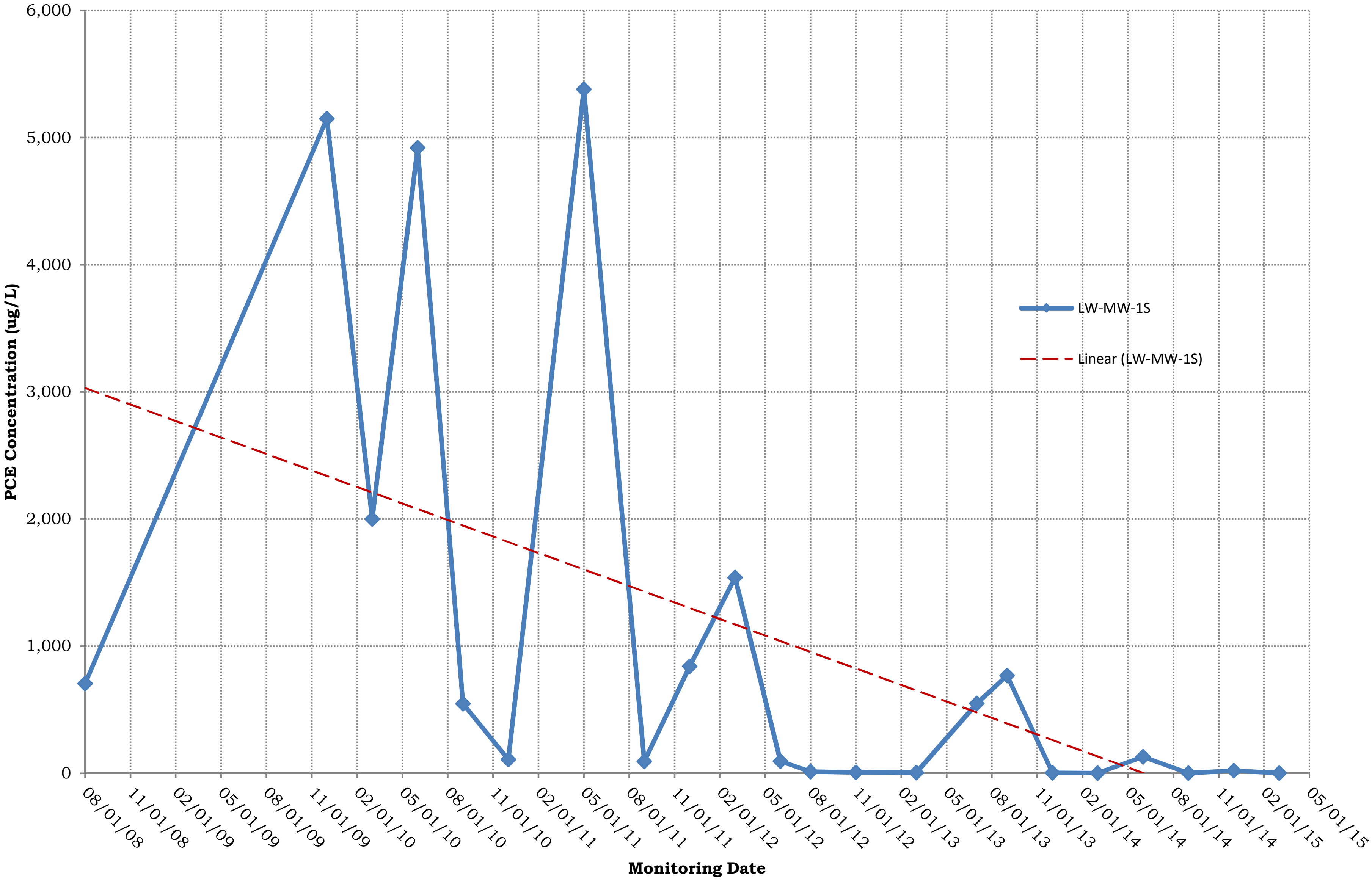
Notes:

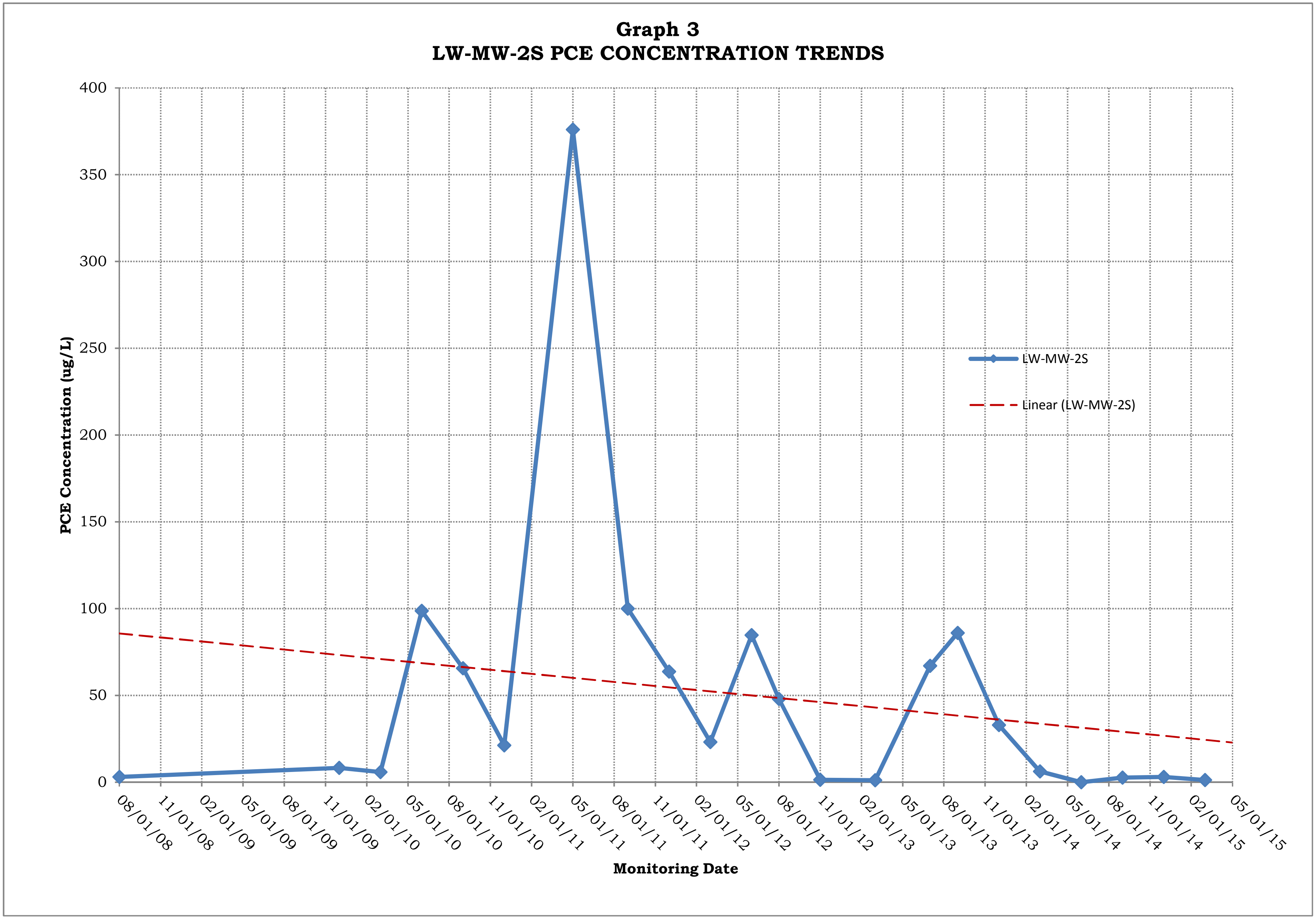
PCE = Tetrachloroethene (a.k.a. perchloroethene)
ug/L = micrograms per liter (equivalent to parts per billion, or ppb)

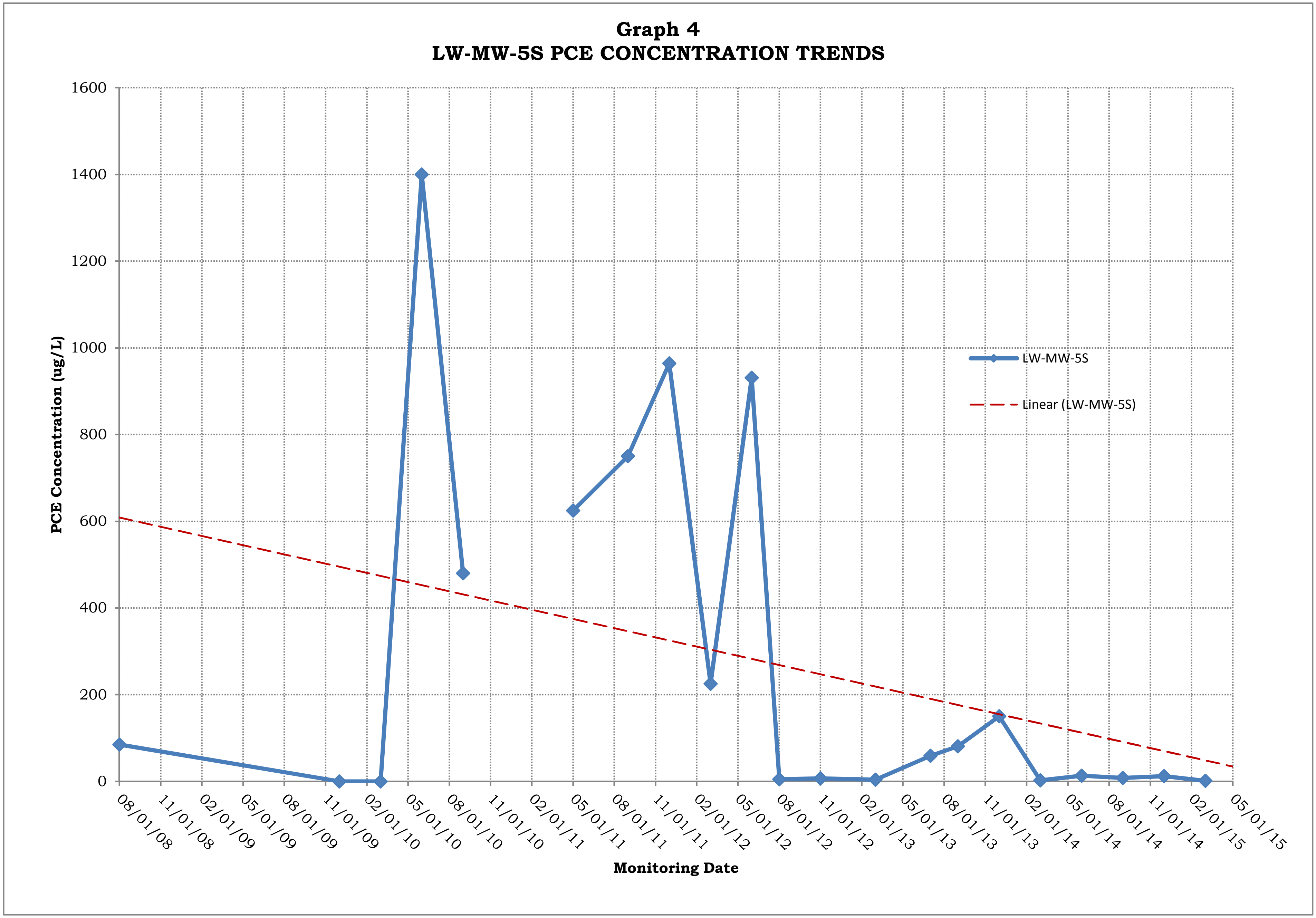
GRAPHS

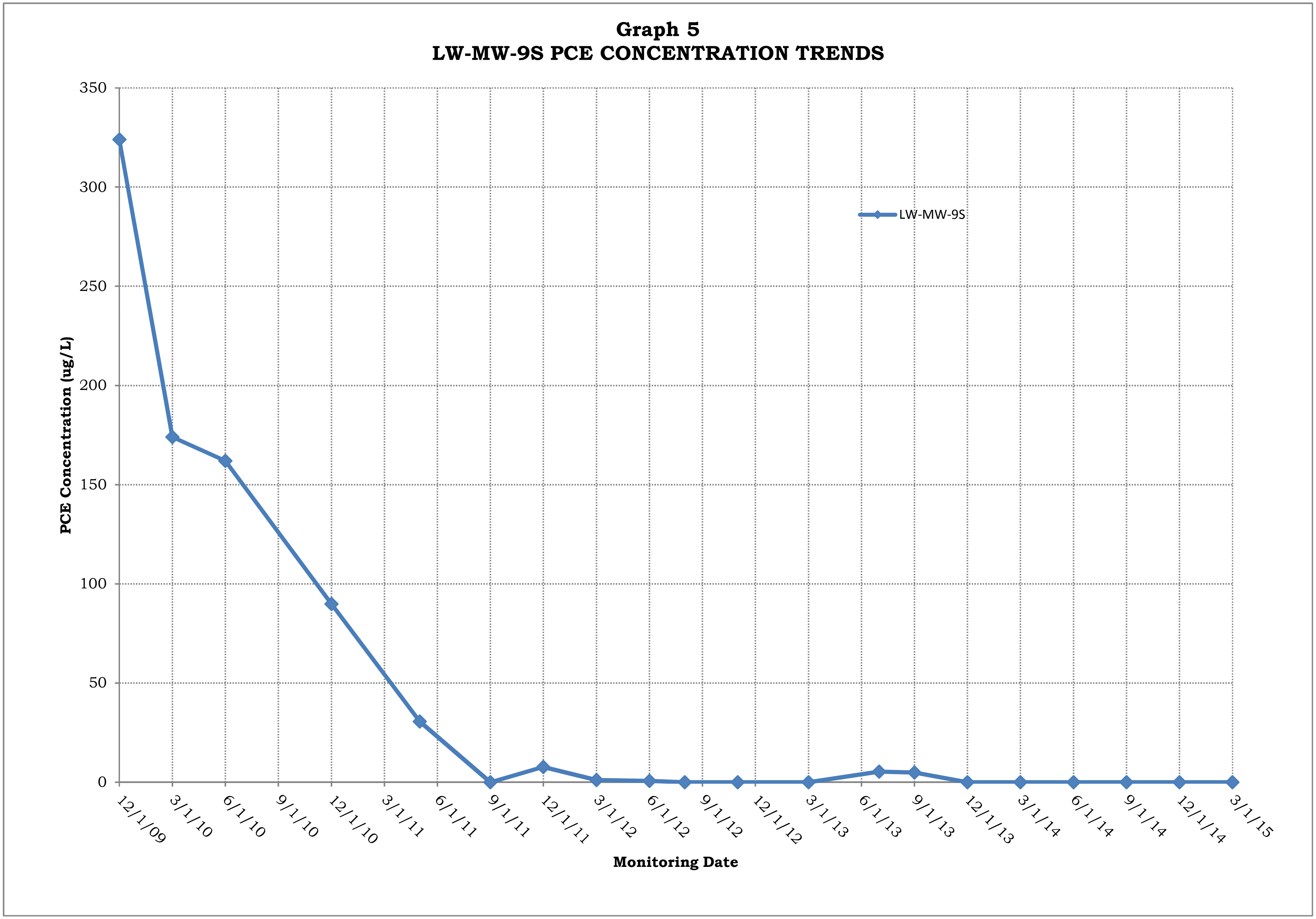

GRAPH 1
LAKE TAHOE LAUNDRY WORKS
HYDROGRAPH - 12/4/09 - Current
LW-MW-1S
LW-MW-2S
LW-MW-5S
LW-MW-9S
LW-MW-11S
LW-MW-12S
LW-MW-13S/13SR
Interim Remedial Action Period
Remedial Action Period
PILOT TEST PERIOD
GW Elevation (feet MSL)
6,188.00
6,186.00
6,184.00
6,182.00
6,180.00
6,178.00
6,176.00
6,174.00
6,172.00
12/01/09
03/01/10
06/01/10
09/01/10
12/01/10
03/01/11
06/01/11
09/01/11
12/01/11
03/01/12
06/01/12
09/01/12
12/01/12
03/01/13
06/01/13
09/01/13
12/01/13
03/01/14
06/01/14
09/01/14
12/01/14
03/01/15
Date Monitored

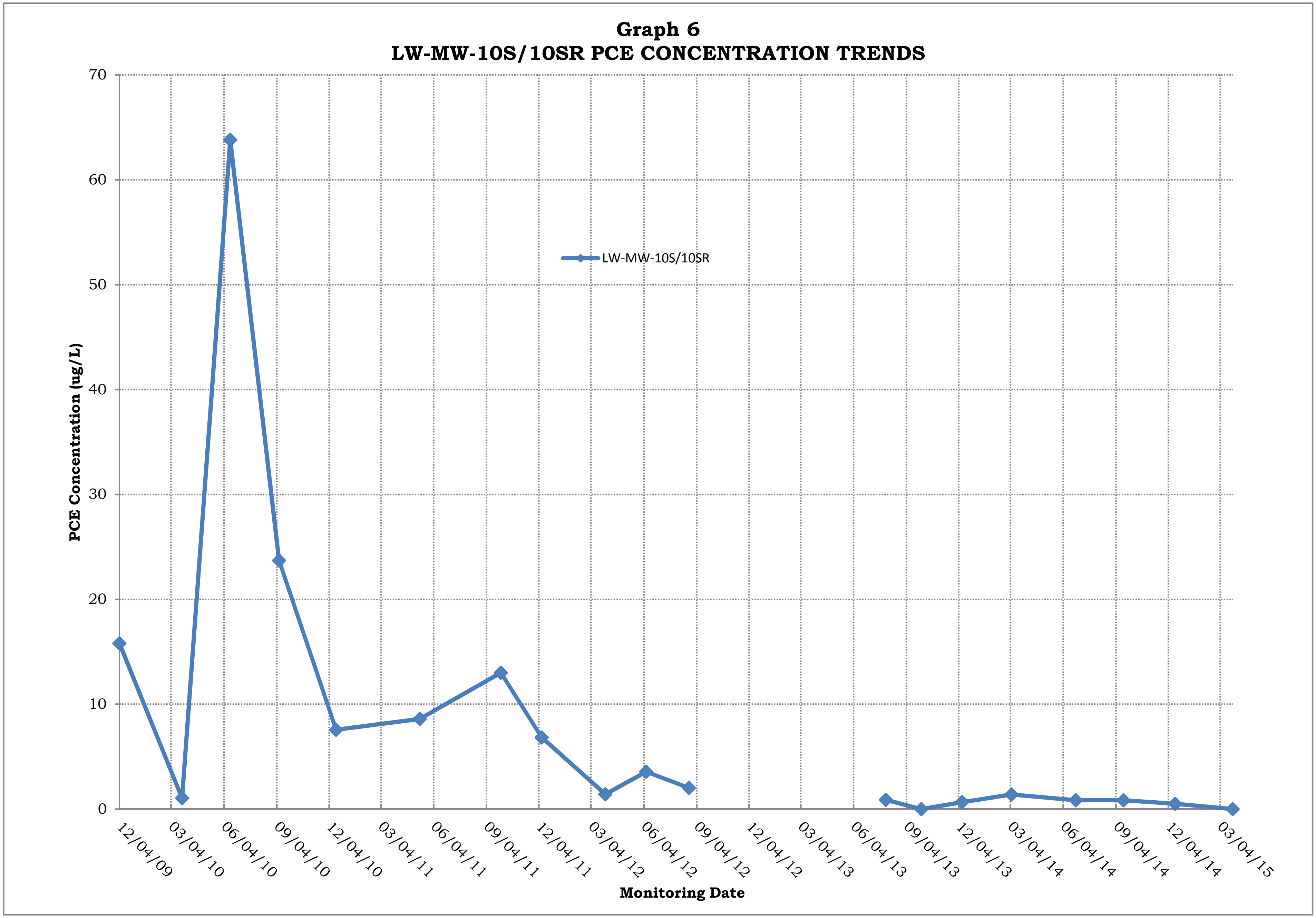
Graph 2
LW-MW-1S PCE CONCENTRATION TRENDS

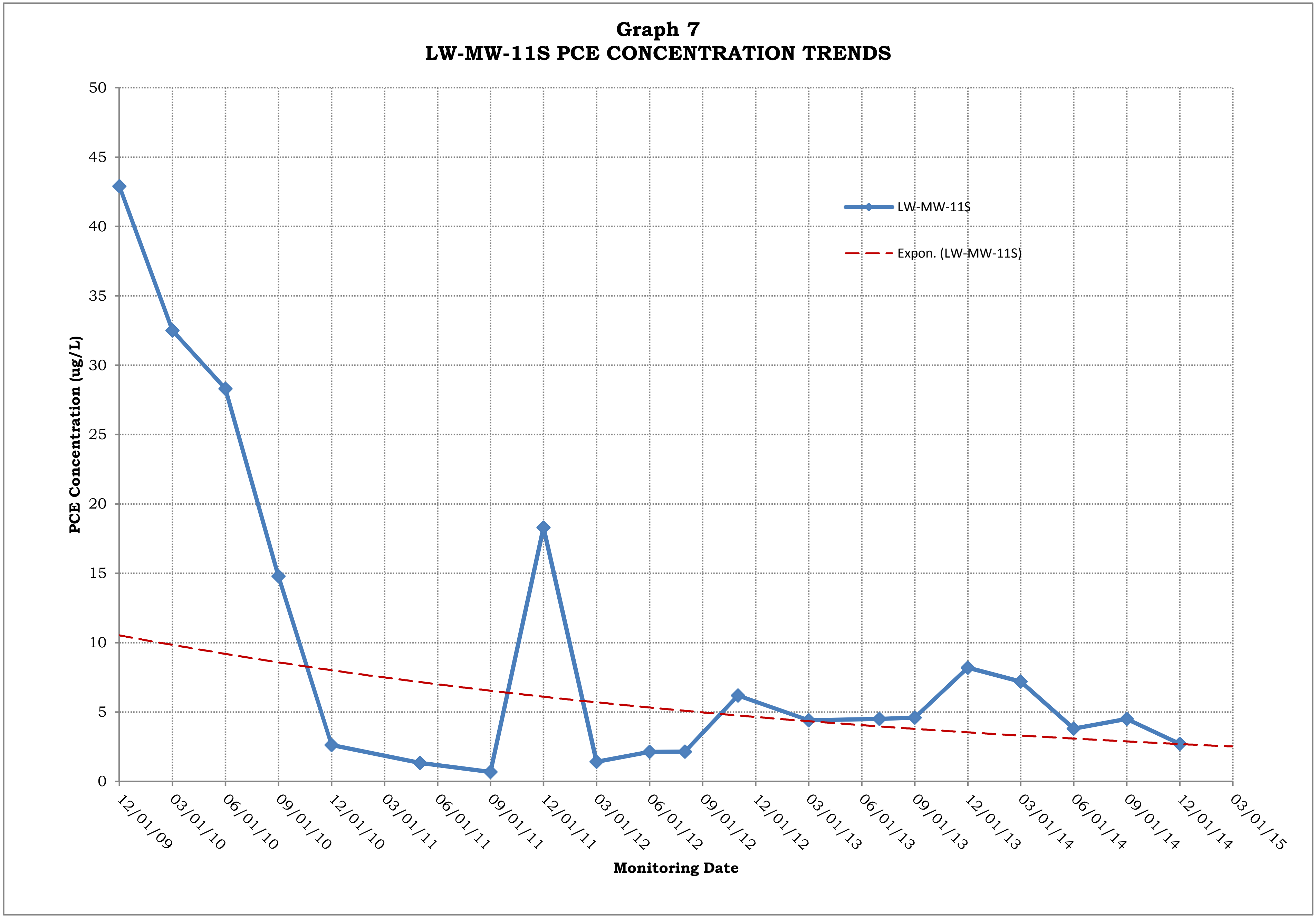



Graph 3
LW-MW-2S PCE CONCENTRATION TRENDS
400
350
300
250
200
150
100
50
0
PCE Concentration (ug/L)
LW-MW-2S
Linear (LW-MW-2S)
08/01/08
11/01/08
02/01/09
05/01/09
08/01/09
11/01/09
02/01/10
05/01/10
08/01/10
11/01/10
02/01/11
05/01/11
08/01/11
11/01/11
02/01/12
05/01/12
08/01/12
11/01/12
02/01/13
05/01/13
08/01/13
11/01/13
02/01/14
05/01/14
08/01/14
11/01/14
02/01/15
05/01/15
Monitoring Date

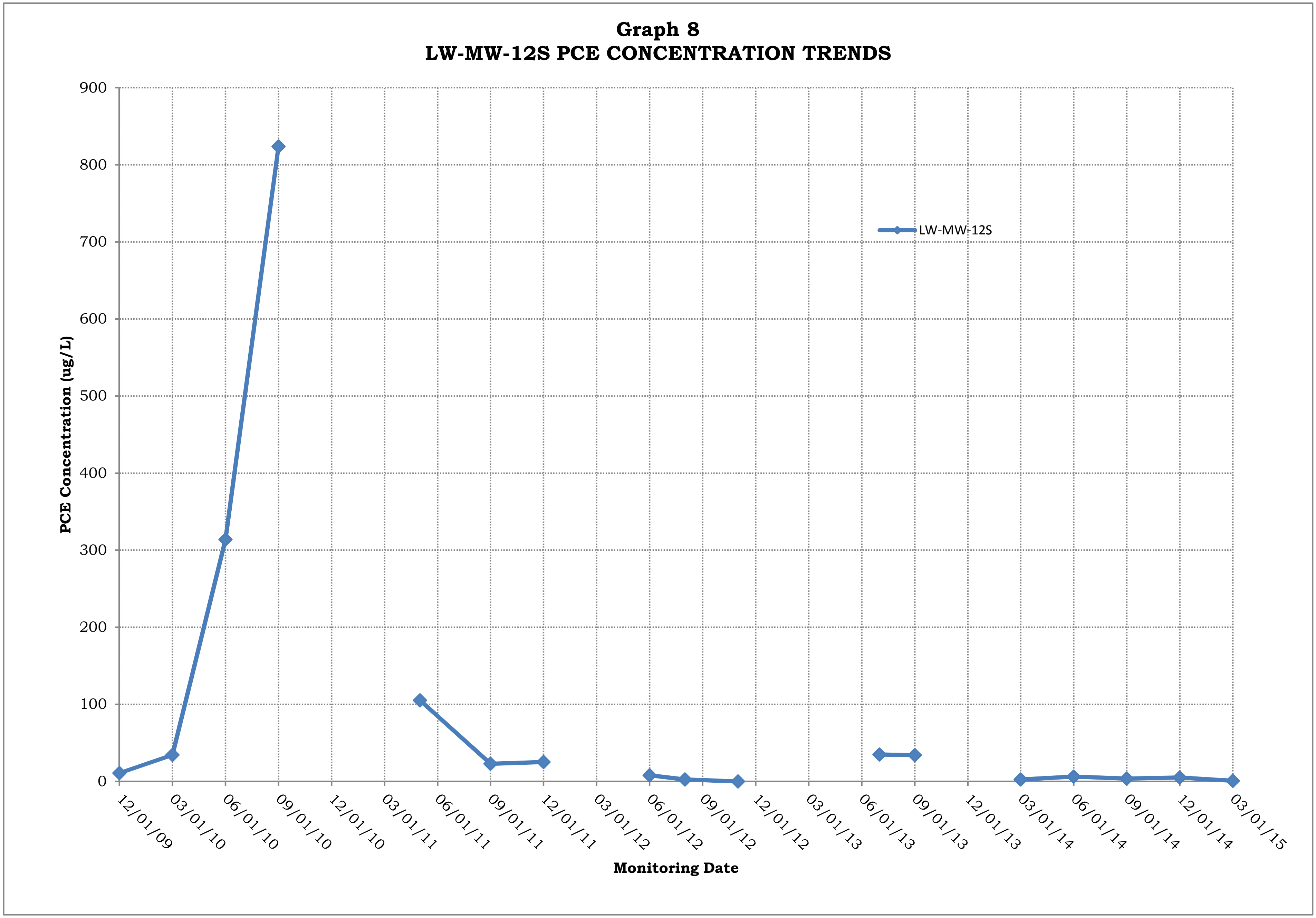

Graph 4
LW-MW-5S PCE CONCENTRATION TRENDS
1600
1400
1200
1000
800
600
400
200
0
PCE Concentration (ug/L)
LW-MW-5S
Linear (LW-MW-5S)
08/01/08
11/01/08
02/01/09
05/01/09
08/01/09
11/01/09
02/01/10
05/01/10
08/01/10
11/01/10
02/01/11
05/01/11
08/01/11
11/01/11
02/01/12
05/01/12
08/01/12
11/01/12
02/01/13
05/01/13
08/01/13
11/01/13
02/01/14
05/01/14
08/01/14
11/01/14
02/01/15
05/01/15
Monitoring Date

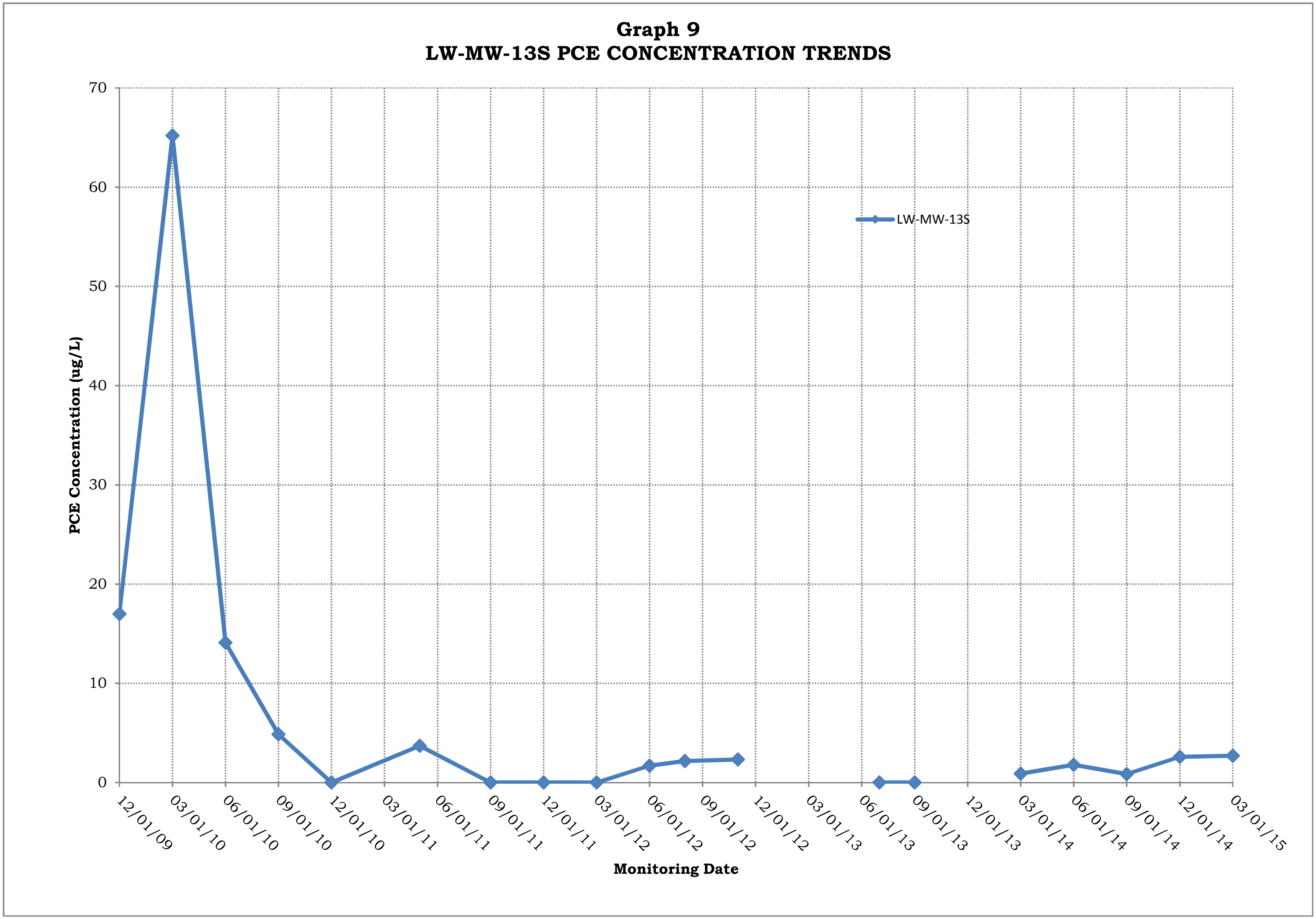

Graph 5
LW-MW-9S PCE CONCENTRATION TRENDS
LW-MW-9S
PCE Concentration (ug/L)
0
50
100
150
200
250
300
350
12/1/09
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
3/1/12
6/1/12
9/1/12
12/1/12
3/1/13
6/1/13
9/1/13
12/1/13
3/1/14
6/1/14
9/1/14
12/1/14
3/1/15
Monitoring Date

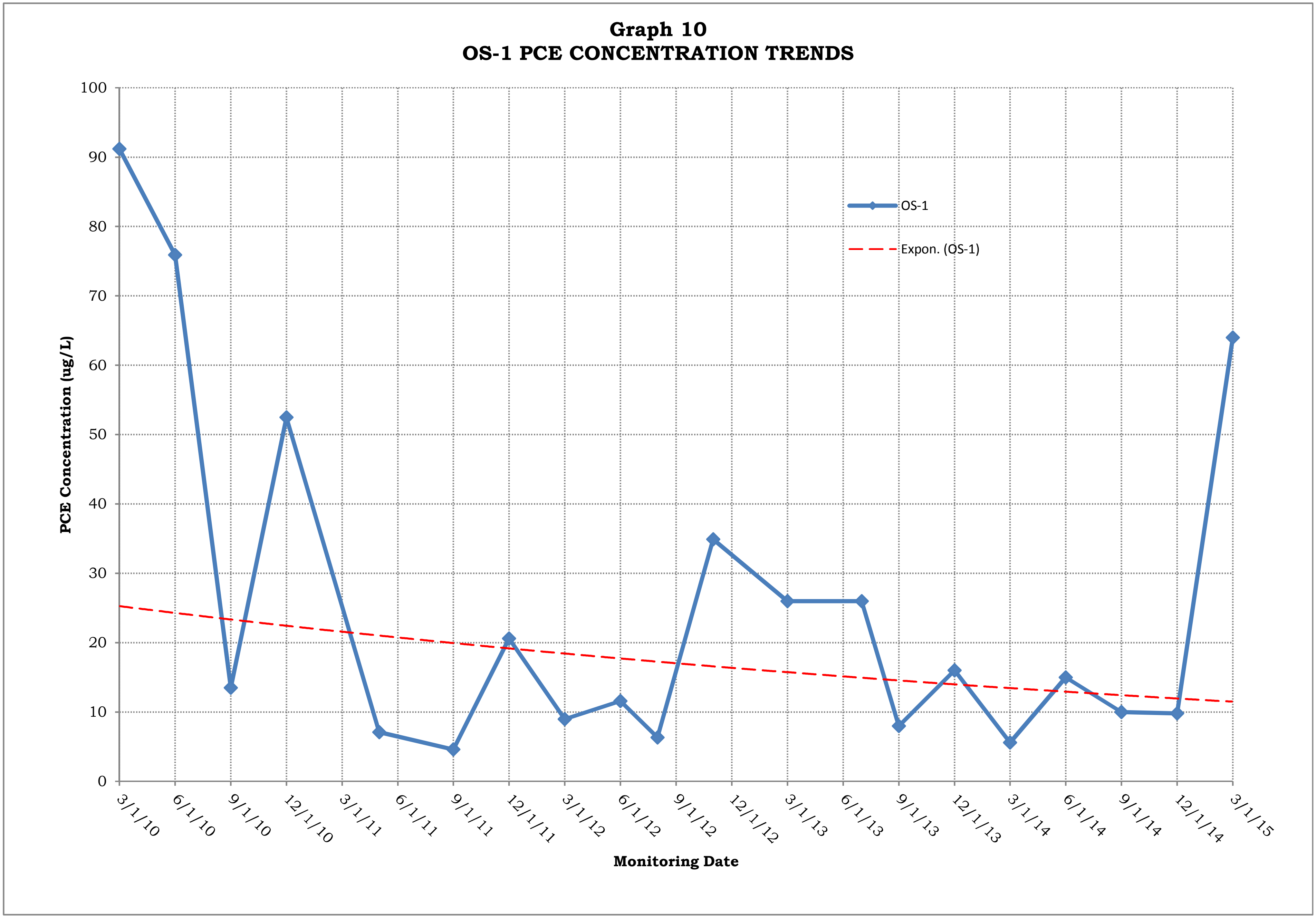

Graph 6
LW-MW-10S/10SR PCE CONCENTRATION TRENDS
LW-MW-10S/10SR
PCE Concentration (ug/L)
0
10
20
30
40
50
60
70
12/04/09
03/04/10
06/04/10
09/04/10
12/04/10
03/04/11
06/04/11
09/04/11
12/04/11
03/04/12
06/04/12
09/04/12
12/04/12
03/04/13
06/04/13
09/04/13
12/04/13
03/04/14
06/04/14
09/04/14
12/04/14
03/04/15
Monitoring Date



Graph 7
LW-MW-11S PCE CONCENTRATION TRENDS
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
LW-MW-11S
Expon. (LW-MW-11S)
12/01/09
03/01/10
06/01/10
09/01/10
12/01/10
03/01/11
06/01/11
09/01/11
12/01/11
03/01/12
06/01/12
09/01/12
12/01/12
03/01/13
06/01/13
09/01/13
12/01/13
03/01/14
06/01/14
09/01/14
12/01/14
03/01/15
Monitoring Date


Graph 8
LW-MW-12S PCE CONCENTRATION TRENDS
PCE Concentration (ug/L)
900
800
700
600
500
400
300
200
100
0
LW-MW-12S
12/01/09
03/01/10
06/01/10
09/01/10
12/01/10
03/01/11
06/01/11
09/01/11
12/01/11
03/01/12
06/01/12
09/01/12
12/01/12
03/01/13
06/01/13
09/01/13
12/01/13
03/01/14
06/01/14
09/01/14
12/01/14
03/01/15
Monitoring Date


Graph 9
LW-MW-13S PCE CONCENTRATION TRENDS
PCE Concentration (ug/L)
70
60
50
40
30
20
10
0
LW-MW-13S
12/01/09
03/01/10
06/01/10
09/01/10
12/01/10
03/01/11
06/01/11
09/01/11
12/01/11
03/01/12
06/01/12
09/01/12
12/01/12
03/01/13
06/01/13
09/01/13
12/01/13
03/01/14
06/01/14
09/01/14
12/01/14
03/01/15
Monitoring Date


Graph 10
OS-1 PCE CONCENTRATION TRENDS
PCE Concentration (ug/L)
100
90
80
70
60
50
40
30
20
10
0
OS-1
Expon. (OS-1)
3/1/10
6/1/10
9/1/10
12/1/10
3/1/11
6/1/11
9/1/11
12/1/11
3/1/12
6/1/12
9/1/12
12/1/12
3/1/13
6/1/13
9/1/13
12/1/13
3/1/14
6/1/14
9/1/14
12/1/14
3/1/15
Monitoring Date

APPENDICES

APPENDIX A

Groundwater Monitoring Field Data Sheets

E$_2$C Remediation

Groundwater Scientists : Environmental Consultants
1020 Winding Creek Road, Suite 110; Roseville, California 95678
Telephone: (916) 782-8700 / Facsimile: (916) 782-8750

Water Quality Sampling Record and Well Development Data

SAMPLE ID / WELL #:	OS-1	DEPTH TO WATER:	12.85
E$_2$C REM. PROJECT #:	1950 RY-15	TOTAL DEPTH OF WELL:	24.00
PROJECT NAME:	LTLW	WELL DIAMETER:	2"
DATE SAMPLED:	3-26-15	CASING VOLUME:	1.80
SAMPLED BY:	Daniel Anderson	PURGE METHOD:	BAILOR

TIME	PURGE CHARACTERISTICS INTAKE DEPTH	RATE (GPM)	CUM. VOL (GAL)	WELL VOL PUMPED	TEMP (F°)	pH (UNITS)	SEC (mmhos/cm)	DO (mg/L)	REMARKS (COLOR, TURBIDITY, ETC.)
0900		1/2 GAL	0		51.2	6.87	.41		CLEAR - NO ODOR
0908			4		54.1	6.45	.43		CLOUDY - NO ODOR
0912			6		56.3	6.43	.44	1.1	CLOUDY - NO ODOR
SAMPLED AT		0915							

Well Capacity:
2" - 0.1632 gallon/linear foot
4" - 0.6528 gallon/linear foot
6" - 1.4688 gallon/linear foot

ORP = 128

SAMPLED AT 16' FT. FINAL DEPTH TO WATER: 13.15 FT. 3 CASING VOLUMES = 5.41 GALS.

NOTES: Sample labeled and placed in cooler maintained at 4 Degrees Centrigrade ORP measured after sample collected

E$_2$C Remediation

Groundwater Scientists : Environmental Consultants
1020 Winding Creek Road, Suite 110; Roseville, California 95678
Telephone: (916) 782-8700 / Facsimile: (916) 782-8750

Water Quality Sampling Record and Well Development Data

SAMPLE ID / WELL #:	LLW-MW 9S	DEPTH TO WATER:	13.22
E$_2$C REM. PROJECT #:	1950 RV-15	TOTAL DEPTH OF WELL:	24.25
PROJECT NAME:	LTLW	WELL DIAMETER:	2"
DATE SAMPLED:	3-26-15	CASING VOLUME:	N/A
SAMPLED BY:	Daniel Anderson	PURGE METHOD:	LOW FLOW

TIME	PURGE CHARACTERISTICS INTAKE DEPTH	RATE (GPM)	CUM. VOL (GAL)	WELL VOL PUMPED	TEMP (F°)	pH (UNITS)	SEC (mmhos/cm)	DO (mg/L)	REMARKS (COLOR, TURBIDITY, ETC.)
0926		.250 ml/m	Ø		51.4	6.75	.15		CLOUDY - NO ODOR
0927					52.1	6.90	.14		CLOUDY - NO ODOR
0928					52.5	6.91	.14	Ø	CLOUDY - NO ODOR
SAMPLED AT 0931									

Well Capacity: 2" - 0.1632 gallon/linear foot
4" - 0.6528 gallon/linear foot
6" - 1.4688 gallon/linear foot

ORP = 167

SAMPLED AT — FT. FINAL DEPTH TO WATER: — FT. 3 CASING VOLUMES = N/A GALS.

NOTES: Sample labeled and placed in cooler maintained at 4 Degrees Centrigrade ORP measured after sample collected

E_2C Remediation

Groundwater Scientists : Environmental Consultants
1020 Winding Creek Road, Suite 110; Roseville, California 95678
Telephone: (916) 782-8700 / Facsimile: (916) 782-8750

Water Quality Sampling Record and Well Development Data

SAMPLE ID / WELL #: LW-MW-10SR
DEPTH TO WATER: 13.75
E_2C REM. PROJECT #: 1950 RV-15
TOTAL DEPTH OF WELL: 24.65
PROJECT NAME: LTLW
WELL DIAMETER: 2"
DATE SAMPLED: 3-26-15
CASING VOLUME: N/A
SAMPLED BY: Daniel Anderson
PURGE METHOD: LOW FLOW

TIME	PURGE CHARACTERISTICS INTAKE DEPTH	RATE (GPM)	CUM. VOL (GAL)	WELL VOL PUMPED	TEMP (F°)	pH (UNITS)	SEC (mmhos/cm)	DO (mg/L)	REMARKS (COLOR, TURBIDITY, ETC.)
0941		.250 ml/m	0		49.7	7.16	.31		CLOUDY-NO ODOR
0942					50.6	7.08	.30		CLOUDY-NO ODOR
0943					51.1	7.07	.30	0	CLOUDY-NO ODOR
SAMPLED AT		0947							

Well Capacity: 2" - 0.1632 gallon/linear foot
4" - 0.6528 gallon/linear foot
6" - 1.4688 gallon/linear foot

ORP = 145

SAMPLED AT — FT. FINAL DEPTH TO WATER: — FT. 3 CASING VOLUMES = N/A GALS.

NOTES: Sample labeled and placed in cooler maintained at 4 Degrees Centrigrade ORP measured after sample collected

E_2C Remediation

Groundwater Scientists : Environmental Consultants
1020 Winding Creek Road, Suite 110; Roseville, California 95678
Telephone: (916) 782-8700 / Facsimile: (916) 782-8750

Water Quality Sampling Record and Well Development Data

SAMPLE ID / WELL #:	LW-MW-13S	DEPTH TO WATER:	14.32
E_2C REM. PROJECT #:	1950 RV-15	TOTAL DEPTH OF WELL:	24.78
PROJECT NAME:	LTLW	WELL DIAMETER:	2"
DATE SAMPLED:	3-26-15	CASING VOLUME:	N/A
SAMPLED BY:	Daniel Anderson	PURGE METHOD:	LOW FLOW

TIME	PURGE CHARACTERISTICS INTAKE DEPTH	RATE (GPM)	CUM. VOL (GAL)	WELL VOL PUMPED	TEMP (F°)	pH (UNITS)	SEC (mmhos/cm)	DO (mg/L)	REMARKS (COLOR, TURBIDITY, ETC.)
0958		.250 ml/m	0		51.4	7.22	.20		CLOUDY - NO ODOR
0959					52.0	7.14	.19		CLOUDY - NO ODOR
1000					52.5	7.13	.19	0	CLOUDY - NO ODOR
SAMPLED AT 1003									

Well Capacity: 2" - 0.1632 gallon/linear foot
4" - 0.6528 gallon/linear foot
6" - 1.4688 gallon/linear foot

ORP = 137

SAMPLED AT — FT. FINAL DEPTH TO WATER: — FT. 3 CASING VOLUMES = N/A GALS.

NOTES: Sample labeled and placed in cooler maintained at 4 Degrees Centrigrade ORP measured after sample collected

E_2C Remediation

Groundwater Scientists : Environmental Consultants

1020 Winding Creek Road, Suite 110; Roseville, California 95678

Telephone: (916) 782-8700 / Facsimile: (916) 782-8750

Water Quality Sampling Record and Well Development Data

SAMPLE ID / WELL #:	LW-MW-2S	DEPTH TO WATER:	17.65
E_2C REM. PROJECT #:	1950 RV-15	TOTAL DEPTH OF WELL:	34.85
PROJECT NAME:	LTLW	WELL DIAMETER:	2"
DATE SAMPLED:	3-26-15	CASING VOLUME:	N/A
SAMPLED BY:	Daniel Anderson	PURGE METHOD:	LOW FLOW

TIME	PURGE CHARACTERISTICS				TEMP (F°)	pH (UNITS)	SEC (mmhos/cm)	DO (mg/L)	REMARKS (COLOR, TURBIDITY, ETC.)
	INTAKE DEPTH	RATE (GPM)	CUM. VOL (GAL)	WELL VOL PUMPED					
1013		.250 ml/m	0		51.7	7.04	.15		CLEAR NO ODOR
1014					52.1	6.98	.13		CLEAR NO ODOR
1015					52.5	6.97	.13	0	CLEAR NO ODOR
SAMPLED AT 1019									

Well Capacity: 2" - 0.1632 gallon/linear foot
4" - 0.6528 gallon/linear foot
6" - 1.4688 gallon/linear foot

ORP = 152

SAMPLED AT — FT. FINAL DEPTH TO WATER: — FT. 3 CASING VOLUMES = N/A GALS.

NOTES: Sample labeled and placed in cooler maintained at 4 Degrees Centrigrade ORP measured after sample collected

E$_2$C Remediation

Groundwater Scientists : Environmental Consultants
1020 Winding Creek Road, Suite 110; Roseville, California 95678
Telephone: (916) 782-8700 / Facsimile: (916) 782-8750

Water Quality Sampling Record and Well Development Data

SAMPLE ID / WELL #: LW-MW-12S

E$_2$C REM. PROJECT #: 1950 RV-15

PROJECT NAME: LTLW

DATE SAMPLED: 3-26-15

SAMPLED BY: Daniel Anderson

DEPTH TO WATER: 13.00

TOTAL DEPTH OF WELL: 23.80

WELL DIAMETER: 2"

CASING VOLUME: N/A

PURGE METHOD: LOW FLOW

TIME	PURGE CHARACTERISTICS INTAKE DEPTH	RATE (GPM)	CUM. VOL (GAL)	WELL VOL PUMPED	TEMP (F°)	pH (UNITS)	SEC (mmhos/cm)	DO (mg/L)	REMARKS (COLOR, TURBIDITY, ETC.)
1030		.250 ml/m	0		52.0	7.00	.17		CLOUDY - NO ODOR
1031					52.5	6.85	.16		CLOUDY - NO ODOR
1032					52.9	6.83	.16	0	CLOUDY - NO ODOR
SAMPLED AT 1036									

Well Capacity: 2" - 0.1632 gallon/linear foot
4" - 0.6528 gallon/linear foot
6" - 1.4688 gallon/linear foot

ORP = 168

SAMPLED AT — FT. FINAL DEPTH TO WATER: — FT. 3 CASING VOLUMES = N/A GALS.

NOTES: Sample labeled and placed in cooler maintained at 4 Degrees Centrigrade ORP measured after sample collected

E$_2$C Remediation

Groundwater Scientists : Environmental Consultants
1020 Winding Creek Road, Suite 110; Roseville, California 95678
Telephone: (916) 782-8700 / Facsimile: (916) 782-8750

Water Quality Sampling Record and Well Development Data

SAMPLE ID / WELL #: LW-MW-5S
DEPTH TO WATER: 12.63
E$_2$C REM. PROJECT #: 1950 RV-15
TOTAL DEPTH OF WELL: 29.70
PROJECT NAME: LTLW
WELL DIAMETER: 2"
DATE SAMPLED: 3-26-15
CASING VOLUME: N/A
SAMPLED BY: Daniel Anderson
PURGE METHOD: LOW FLOW

TIME	PURGE CHARACTERISTICS INTAKE DEPTH	RATE (GPM)	CUM. VOL (GAL)	WELL VOL PUMPED	TEMP (F°)	pH (UNITS)	SEC (mmhos/cm)	DO (mg/L)	REMARKS (COLOR, TURBIDITY, ETC.)
1046		.250 ml/m	Ø		52.0	7.01	.12	Ø	CLEAR - NO ODOR
1047					52.5	6.92	.11		CLEAR - NO ODOR
1048					52.8	6.90	.11		CLOUDY - NO ODOR
SAMPLED AT 1052									

Well Capacity: 2" - 0.1632 gallon/linear foot
4" - 0.6528 gallon/linear foot
6" - 1.4688 gallon/linear foot

ORP = 175

SAMPLED AT — FT. FINAL DEPTH TO WATER: — FT. 3 CASING VOLUMES = N/A GALS.

NOTES: Sample labeled and placed in cooler maintained at 4 Degrees Centrigrade ORP measured after sample collected

LW-MW-14S IS THE DUPLICATE OF LW-MW-5S
SAMPLED AT (1108)

E_2C Remediation

Groundwater Scientists : Environmental Consultants
1020 Winding Creek Road, Suite 110; Roseville, California 95678
Telephone: (916) 782-8700 / Facsimile: (916) 782-8750

Water Quality Sampling Record and Well Development Data

SAMPLE ID / WELL #: LW-MW-15
DEPTH TO WATER: 13.54
E_2C REM. PROJECT #: 1950 RV-15
TOTAL DEPTH OF WELL: 23.15
PROJECT NAME: LTLW
WELL DIAMETER: 2"
DATE SAMPLED: 3-26-15
CASING VOLUME: N/A
SAMPLED BY: Daniel Anderson
PURGE METHOD: LOW FLOW

TIME	PURGE CHARACTERISTICS INTAKE DEPTH	RATE (GPM)	CUM. VOL (GAL)	WELL VOL PUMPED	TEMP (F°)	pH (UNITS)	SEC (mmhos/cm)	DO (mg/L)	REMARKS (COLOR, TURBIDITY, ETC.)
1118		.250 ml/m	-0-		51.8	7.13	.22	0	CLOUDY - NO ODOR
1119					52.4	7.05	.21		CLOUDY - NO ODOR
1120					52.8	7.04	.20		CLOUDY - NO ODOR
SAMPLED AT 1124									

Well Capacity: 2" - 0.1632 gallon/linear foot
4" - 0.6528 gallon/linear foot
6" - 1.4688 gallon/linear foot

ORP = 163

SAMPLED AT — FT. FINAL DEPTH TO WATER: — FT. 3 CASING VOLUMES = N/A GALS.

NOTES: Sample labeled and placed in cooler maintained at 4 Degrees Centrigrade ORP measured after sample collected

E₂C Remediation	Water Quality Sampling Record and Well Development Data

E_2C Remediation

Groundwater Scientists : Environmental Consultants
1020 Winding Creek Road, Suite 110; Roseville, California 95678
Telephone: (916) 782-8700 / Facsimile: (916) 782-8750

Water Quality Sampling Record and Well Development Data

SAMPLE ID / WELL #: LW-MW-11S
E_2C REM. PROJECT #: 1950 RV-15
PROJECT NAME: LTLW
DATE SAMPLED: 3-26-15
SAMPLED BY: Daniel Anderson

DEPTH TO WATER: —
TOTAL DEPTH OF WELL: 24.00
WELL DIAMETER: 2"
CASING VOLUME: N/A
PURGE METHOD: LOW FLOW

TIME	PURGE CHARACTERISTICS				TEMP (F°)	pH (UNITS)	SEC (mmhos/cm)	DO (mg/L)	REMARKS (COLOR, TURBIDITY, ETC.)
	INTAKE DEPTH	RATE (GPM)	CUM. VOL (GAL)	WELL VOL PUMPED					
—		.250 ml/m	0						
								0	
SAMPLED AT —									

Well Capacity:
2" - 0.1632 gallon/linear foot
4" - 0.6528 gallon/linear foot
6" - 1.4688 gallon/linear foot

ORP =

SAMPLED AT — FT. FINAL DEPTH TO WATER: — FT. 3 CASING VOLUMES = N/A GALS.

NOTES: Sample labeled and placed in cooler maintained at 4 Degrees Centrigrade ORP measured after sample collected

15/16"
(NOT SAMPLED) BOLT IN WELL BOX CAN'T GET OUT
NEEDS TO BE CUT OFF - TOOK PICTURE
+ WILL REPAIR AT A FURTHER DATE

APPENDIX B

Laboratory Groundwater Analytical Report

ProVera
Analytical Laboratories, Inc.

Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	Travel Blank	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-01
		Instrument:	GCMS#1
Date Analyzed:	03/30/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
Dichlorodifluoromethane	ND	0.50	1
Chloromethane	ND	0.50	1
Vinyl Chloride	ND	0.50	1
Bromomethane	ND	0.50	1
Chloroethane	ND	0.50	1
Trichlorofluoromethane	ND	0.50	1
Trans-1,2-Dichloroethene	ND	0.50	1
1,1-Dichloroethene	ND	0.50	1
Methyl Tert-Butyl Ether (MTBE)	ND	0.50	1
Methylene Chloride	ND	0.50	1
Diisopropyl Ether (DIPE)	ND	0.50	1
1,1-Dichloroethane	ND	0.50	1
Ethyl Tert-Butyl Ether (ETBE)	ND	0.50	1
Tert-Butyl Alcohol (TBA)	ND	5.0	1
1,1,1-Trichloroethane	ND	0.50	1
1,3-Dichloropropene	ND	0.50	1
1,1-Dichloropropene	ND	0.50	1
Carbon Tetrachloride	ND	0.50	1
Tert-Amyl Methyl Ether (TAME)	ND	0.50	1
Chloroform	ND	0.50	1
Benzene	ND	0.50	1
Bromochloromethane	ND	0.50	1
1,2-Dichloroethane	ND	0.50	1
Trichloroethene	ND	0.50	1
1,2-Dichlorpropane	ND	0.50	1
Dibromomethane	ND	0.50	1
Bromodichloromethane	ND	0.50	1
Toluene	ND	0.50	1
Trans-1,3-Dichloropropene	ND	0.50	1
Tetrachloroethene	ND	0.50	1
1,3-Dichloropropane	ND	0.50	1
1,1,2-Trichloroethane	ND	0.50	1
Ethlybenzene	ND	0.50	1
1,2-Dibromoethane	ND	0.50	1
Total Xylenes	ND	0.50	1
Dibromochloromethane	ND	0.50	1
Chlorobenzene	ND	0.50	1
2,2 Dichloropropane	ND	0.50	1
Cis-1,3-Dichloropropane	ND	0.50	1

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ProVera
Analytical Laboratories, Inc.

Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	Travel Blank	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-01
		Instrument:	GCMS#1
Date Analyzed:	03/30/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
1,1,1,2-Tetrachloroethane	ND	0.50	1
Styrene	ND	0.50	1
Isopropylbenzene	ND	0.50	1
Propylbenzene	ND	0.50	1
1,3,5-Trimethylbenzene	ND	0.50	1
2-Chlorotoluene	ND	0.50	1
Bromobenzene	ND	0.50	1
Bromoform	ND	0.50	1
4-Chlorotoluene	ND	0.50	1
Tert-Butylbenzene	ND	0.50	1
1,2,4-Trimethylbenzene	ND	0.50	1
1,2,3-Trichloropropane	ND	0.50	1
Sec-Butylbenzene	ND	0.50	1
1,1,2,2-Tetrachloroethane	ND	0.50	1
4-Isopopyltoluene	ND	0.50	1
1,3-Dichlorobenzene	ND	0.50	1
Butylbenzene	ND	0.50	1
1,4-Dichlorobenzene	ND	0.50	1
1,2-Dichlorobenzene	ND	0.50	1
1,2-dibromo-3-chloropropane	ND	0.50	1
1,1,2,3,4,4-hexachloro-1,3-butadiene	ND	0.50	1
1,2,4-Trichlorobenzene	ND	0.50	1
Napthalene	ND	0.50	1
1,2,3-Trichlorobenzene	ND	0.50	1
Cis-1,2-Dichloroethene	ND	0.50	1

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	*99%*	*70.0%*	*130%*
1,2-Dichloroethane-d4	*109%*	*70.0%*	*130%*
Toluene-d8	*99%*	*70.0%*	*130%*
4-Bromofluorobenzene	*103%*	*70.0%*	*130%*

RD

Report Date: 4/9/2015

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ProVera
Analytical Laboratories, Inc.

Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	OS-1	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-02
		Instrument:	GCMS#1
Date Analyzed:	03/30/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
Dichlorodifluoromethane	ND	0.50	1
Chloromethane	ND	0.50	1
Vinyl Chloride	ND	0.50	1
Bromomethane	ND	0.50	1
Chloroethane	ND	0.50	1
Trichlorofluoromethane	ND	0.50	1
Trans-1,2-Dichloroethene	ND	0.50	1
1,1-Dichloroethene	ND	0.50	1
Methyl Tert-Butyl Ether (MTBE)	ND	0.50	1
Methylene Chloride	ND	0.50	1
Diisopropyl Ether (DIPE)	ND	0.50	1
1,1-Dichloroethane	ND	0.50	1
Ethyl Tert-Butyl Ether (ETBE)	ND	0.50	1
Tert-Butyl Alcohol (TBA)	ND	5.0	1
1,1,1-Trichloroethane	ND	0.50	1
1,3-Dichloropropene	ND	0.50	1
1,1-Dichloropropene	ND	0.50	1
Carbon Tetrachloride	ND	0.50	1
Tert-Amyl Methyl Ether (TAME)	ND	0.50	1
Chloroform	ND	0.50	1
Benzene	ND	0.50	1
Bromochloromethane	ND	0.50	1
1,2-Dichloroethane	ND	0.50	1
Trichloroethene	1.4	0.50	1
1,2-Dichlorpropane	ND	0.50	1
Dibromomethane	ND	0.50	1
Bromodichloromethane	ND	0.50	1
Toluene	ND	0.50	1
Trans-1,3-Dichloropropene	ND	0.50	1
Tetrachloroethene	64	0.50	1
1,3-Dichloropropane	ND	0.50	1
1,1,2-Trichloroethane	ND	0.50	1
Ethlybenzene	ND	0.50	1
1,2-Dibromoethane	ND	0.50	1
Total Xylenes	ND	0.50	1
Dibromochloromethane	ND	0.50	1
Chlorobenzene	ND	0.50	1
2,2 Dichloropropane	ND	0.50	1
Cis-1,3-Dichloropropane	ND	0.50	1

ProVera
Analytical Laboratories, Inc.

Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	OS-1	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-02
		Instrument:	GCMS#1
Date Analyzed:	03/30/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
1,1,1,2-Tetrachloroethane	ND	0.50	1
Styrene	ND	0.50	1
Isopropylbenzene	ND	0.50	1
Propylbenzene	ND	0.50	1
1,3,5-Trimethylbenzene	ND	0.50	1
2-Chlorotoluene	ND	0.50	1
Bromobenzene	ND	0.50	1
Bromoform	ND	0.50	1
4-Chlorotoluene	ND	0.50	1
Tert-Butylbenzene	ND	0.50	1
1,2,4-Trimethylbenzene	ND	0.50	1
1,2,3-Trichloropropane	ND	0.50	1
Sec-Butylbenzene	ND	0.50	1
1,1,2,2-Tetrachloroethane	ND	0.50	1
4-Isopopyltoluene	ND	0.50	1
1,3-Dichlorobenzene	ND	0.50	1
Butylbenzene	ND	0.50	1
1,4-Dichlorobenzene	ND	0.50	1
1,2-Dichlorobenzene	ND	0.50	1
1,2-dibromo-3-chloropropane	ND	0.50	1
1,1,2,3,4,4-hexachloro-1,3-butadiene	ND	0.50	1
1,2,4-Trichlorobenzene	ND	0.50	1
Napthalene	ND	0.50	1
1,2,3-Trichlorobenzene	ND	0.50	1
Cis-1,2-Dichloroethene	ND	0.50	1

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	*101%*	*70.0%*	*130%*
1,2-Dichloroethane-d4	*111%*	*70.0%*	*130%*
Toluene-d8	*96%*	*70.0%*	*130%*
4-Bromofluorobenzene	*98%*	*70.0%*	*130%*

RD

Report Date: 4/9/2015

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ProVera
Analytical Laboratories, Inc.

Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-9s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-03
		Instrument:	GCMS#1
Date Analyzed:	03/30/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
Dichlorodifluoromethane	ND	0.50	1
Chloromethane	ND	0.50	1
Vinyl Chloride	ND	0.50	1
Bromomethane	ND	0.50	1
Chloroethane	ND	0.50	1
Trichlorofluoromethane	ND	0.50	1
Trans-1,2-Dichloroethene	ND	0.50	1
1,1-Dichloroethene	ND	0.50	1
Methyl Tert-Butyl Ether (MTBE)	ND	0.50	1
Methylene Chloride	ND	0.50	1
Diisopropyl Ether (DIPE)	ND	0.50	1
1,1-Dichloroethane	ND	0.50	1
Ethyl Tert-Butyl Ether (ETBE)	ND	0.50	1
Tert-Butyl Alcohol (TBA)	ND	5.0	1
1,1,1-Trichloroethane	ND	0.50	1
1,3-Dichloropropene	ND	0.50	1
1,1-Dichloropropene	ND	0.50	1
Carbon Tetrachloride	ND	0.50	1
Tert-Amyl Methyl Ether (TAME)	ND	0.50	1
Chloroform	ND	0.50	1
Benzene	ND	0.50	1
Bromochloromethane	ND	0.50	1
1,2-Dichloroethane	ND	0.50	1
Trichloroethene	ND	0.50	1
1,2-Dichlorpropane	ND	0.50	1
Dibromomethane	ND	0.50	1
Bromodichloromethane	ND	0.50	1
Toluene	ND	0.50	1
Trans-1,3-Dichloropropene	ND	0.50	1
Tetrachloroethene	ND	0.50	1
1,3-Dichloropropane	ND	0.50	1
1,1,2-Trichloroethane	ND	0.50	1
Ethlybenzene	ND	0.50	1
1,2-Dibromoethane	ND	0.50	1
Total Xylenes	ND	0.50	1
Dibromochloromethane	ND	0.50	1
Chlorobenzene	ND	0.50	1
2,2 Dichloropropane	ND	0.50	1
Cis-1,3-Dichloropropane	ND	0.50	1

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ProVera
Analytical Laboratories, Inc.

Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-9s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-03
		Instrument:	GCMS#1
Date Analyzed:	03/30/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
1,1,1,2-Tetrachloroethane	ND	0.50	1
Styrene	ND	0.50	1
Isopropylbenzene	ND	0.50	1
Propylbenzene	ND	0.50	1
1,3,5-Trimethylbenzene	ND	0.50	1
2-Chlorotoluene	ND	0.50	1
Bromobenzene	ND	0.50	1
Bromoform	ND	0.50	1
4-Chlorotoluene	ND	0.50	1
Tert-Butylbenzene	ND	0.50	1
1,2,4-Trimethylbenzene	ND	0.50	1
1,2,3-Trichloropropane	ND	0.50	1
Sec-Butylbenzene	ND	0.50	1
1,1,2,2-Tetrachloroethane	ND	0.50	1
4-Isopopyltoluene	ND	0.50	1
1,3-Dichlorobenzene	ND	0.50	1
Butylbenzene	ND	0.50	1
1,4-Dichlorobenzene	ND	0.50	1
1,2-Dichlorobenzene	ND	0.50	1
1,2-dibromo-3-chloropropane	ND	0.50	1
1,1,2,3,4,4-hexachloro-1,3-butadiene	ND	0.50	1
1,2,4-Trichlorobenzene	ND	0.50	1
Napthalene	ND	0.50	1
1,2,3-Trichlorobenzene	ND	0.50	1
Cis-1,2-Dichloroethene	ND	0.50	1

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	*98%*	*70.0%*	*130%*
1,2-Dichloroethane-d4	*108%*	*70.0%*	*130%*
Toluene-d8	*97%*	*70.0%*	*130%*
4-Bromofluorobenzene	*105%*	*70.0%*	*130%*

RD

Report Date: 4/9/2015

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Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-10SR	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-04
		Instrument:	GCMS#1
Date Analyzed:	03/30/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
Dichlorodifluoromethane	ND	0.50	1
Chloromethane	ND	0.50	1
Vinyl Chloride	ND	0.50	1
Bromomethane	ND	0.50	1
Chloroethane	ND	0.50	1
Trichlorofluoromethane	ND	0.50	1
Trans-1,2-Dichloroethene	ND	0.50	1
1,1-Dichloroethene	ND	0.50	1
Methyl Tert-Butyl Ether (MTBE)	ND	0.50	1
Methylene Chloride	ND	0.50	1
Diisopropyl Ether (DIPE)	ND	0.50	1
1,1-Dichloroethane	ND	0.50	1
Ethyl Tert-Butyl Ether (ETBE)	ND	0.50	1
Tert-Butyl Alcohol (TBA)	ND	5.0	1
1,1,1-Trichloroethane	ND	0.50	1
1,3-Dichloropropene	ND	0.50	1
1,1-Dichloropropene	ND	0.50	1
Carbon Tetrachloride	ND	0.50	1
Tert-Amyl Methyl Ether (TAME)	ND	0.50	1
Chloroform	ND	0.50	1
Benzene	ND	0.50	1
Bromochloromethane	ND	0.50	1
1,2-Dichloroethane	ND	0.50	1
Trichloroethene	ND	0.50	1
1,2-Dichlorpropane	ND	0.50	1
Dibromomethane	ND	0.50	1
Bromodichloromethane	ND	0.50	1
Toluene	ND	0.50	1
Trans-1,3-Dichloropropene	ND	0.50	1
Tetrachloroethene	ND	0.50	1
1,3-Dichloropropane	ND	0.50	1
1,1,2-Trichloroethane	ND	0.50	1
Ethlybenzene	ND	0.50	1
1,2-Dibromoethane	ND	0.50	1
Total Xylenes	ND	0.50	1
Dibromochloromethane	ND	0.50	1
Chlorobenzene	ND	0.50	1
2,2 Dichloropropane	ND	0.50	1
Cis-1,3-Dichloropropane	ND	0.50	1

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Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-10SR	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-04
		Instrument:	GCMS#1
Date Analyzed:	03/30/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
1,1,1,2-Tetrachloroethane	ND	0.50	1
Styrene	ND	0.50	1
Isopropylbenzene	ND	0.50	1
Propylbenzene	ND	0.50	1
1,3,5-Trimethylbenzene	ND	0.50	1
2-Chlorotoluene	ND	0.50	1
Bromobenzene	ND	0.50	1
Bromoform	ND	0.50	1
4-Chlorotoluene	ND	0.50	1
Tert-Butylbenzene	ND	0.50	1
1,2,4-Trimethylbenzene	ND	0.50	1
1,2,3-Trichloropropane	ND	0.50	1
Sec-Butylbenzene	ND	0.50	1
1,1,2,2-Tetrachloroethane	ND	0.50	1
4-Isopopyltoluene	ND	0.50	1
1,3-Dichlorobenzene	ND	0.50	1
Butylbenzene	ND	0.50	1
1,4-Dichlorobenzene	ND	0.50	1
1,2-Dichlorobenzene	ND	0.50	1
1,2-dibromo-3-chloropropane	ND	0.50	1
1,1,2,3,4,4-hexachloro-1,3-butadiene	ND	0.50	1
1,2,4-Trichlorobenzene	ND	0.50	1
Napthalene	ND	0.50	1
1,2,3-Trichlorobenzene	ND	0.50	1
Cis-1,2-Dichloroethene	ND	0.50	1

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	*98%*	*70.0%*	*130%*
1,2-Dichloroethane-d4	*106%*	*70.0%*	*130%*
Toluene-d8	*95%*	*70.0%*	*130%*
4-Bromofluorobenzene	*103%*	*70.0%*	*130%*

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Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-13s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-05
		Instrument:	GCMS#1
Date Analyzed:	03/30/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
Dichlorodifluoromethane	ND	0.50	1
Chloromethane	ND	0.50	1
Vinyl Chloride	ND	0.50	1
Bromomethane	ND	0.50	1
Chloroethane	ND	0.50	1
Trichlorofluoromethane	ND	0.50	1
Trans-1,2-Dichloroethene	ND	0.50	1
1,1-Dichloroethene	ND	0.50	1
Methyl Tert-Butyl Ether (MTBE)	ND	0.50	1
Methylene Chloride	ND	0.50	1
Diisopropyl Ether (DIPE)	ND	0.50	1
1,1-Dichloroethane	ND	0.50	1
Ethyl Tert-Butyl Ether (ETBE)	ND	0.50	1
Tert-Butyl Alcohol (TBA)	ND	5.0	1
1,1,1-Trichloroethane	ND	0.50	1
1,3-Dichloropropene	ND	0.50	1
1,1-Dichloropropene	ND	0.50	1
Carbon Tetrachloride	ND	0.50	1
Tert-Amyl Methyl Ether (TAME)	ND	0.50	1
Chloroform	1.2	0.50	1
Benzene	ND	0.50	1
Bromochloromethane	ND	0.50	1
1,2-Dichloroethane	ND	0.50	1
Trichloroethene	ND	0.50	1
1,2-Dichlorpropane	ND	0.50	1
Dibromomethane	ND	0.50	1
Bromodichloromethane	ND	0.50	1
Toluene	ND	0.50	1
Trans-1,3-Dichloropropene	ND	0.50	1
Tetrachloroethene	2.7	0.50	1
1,3-Dichloropropane	ND	0.50	1
1,1,2-Trichloroethane	ND	0.50	1
Ethlybenzene	ND	0.50	1
1,2-Dibromoethane	ND	0.50	1
Total Xylenes	ND	0.50	1
Dibromochloromethane	ND	0.50	1
Chlorobenzene	ND	0.50	1
2,2 Dichloropropane	ND	0.50	1
Cis-1,3-Dichloropropane	ND	0.50	1

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Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-13s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-05
		Instrument:	GCMS#1
Date Analyzed:	03/30/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
1,1,1,2-Tetrachloroethane	ND	0.50	1
Styrene	ND	0.50	1
Isopropylbenzene	ND	0.50	1
Propylbenzene	ND	0.50	1
1,3,5-Trimethylbenzene	ND	0.50	1
2-Chlorotoluene	ND	0.50	1
Bromobenzene	ND	0.50	1
Bromoform	ND	0.50	1
4-Chlorotoluene	ND	0.50	1
Tert-Butylbenzene	ND	0.50	1
1,2,4-Trimethylbenzene	ND	0.50	1
1,2,3-Trichloropropane	ND	0.50	1
Sec-Butylbenzene	ND	0.50	1
1,1,2,2-Tetrachloroethane	ND	0.50	1
4-Isopopyltoluene	ND	0.50	1
1,3-Dichlorobenzene	ND	0.50	1
Butylbenzene	ND	0.50	1
1,4-Dichlorobenzene	ND	0.50	1
1,2-Dichlorobenzene	ND	0.50	1
1,2-dibromo-3-chloropropane	ND	0.50	1
1,1,2,3,4,4-hexachloro-1,3-butadiene	ND	0.50	1
1,2,4-Trichlorobenzene	ND	0.50	1
Napthalene	ND	0.50	1
1,2,3-Trichlorobenzene	ND	0.50	1
Cis-1,2-Dichloroethene	ND	0.50	1

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	*96%*	*70.0%*	*130%*
1,2-Dichloroethane-d4	*104%*	*70.0%*	*130%*
Toluene-d8	*96%*	*70.0%*	*130%*
4-Bromofluorobenzene	*105%*	*70.0%*	*130%*

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Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-2s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-06
		Instrument:	GCMS#1
Date Analyzed:	04/03/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
Dichlorodifluoromethane	ND	0.50	1
Chloromethane	ND	0.50	1
Vinyl Chloride	ND	0.50	1
Bromomethane	ND	0.50	1
Chloroethane	ND	0.50	1
Trichlorofluoromethane	ND	0.50	1
Trans-1,2-Dichloroethene	ND	0.50	1
1,1-Dichloroethene	ND	0.50	1
Methyl Tert-Butyl Ether (MTBE)	ND	0.50	1
Methylene Chloride	ND	0.50	1
Diisopropyl Ether (DIPE)	ND	0.50	1
1,1-Dichloroethane	ND	0.50	1
Ethyl Tert-Butyl Ether (ETBE)	ND	0.50	1
Tert-Butyl Alcohol (TBA)	ND	5.0	1
1,1,1-Trichloroethane	ND	0.50	1
1,3-Dichloropropene	ND	0.50	1
1,1-Dichloropropene	ND	0.50	1
Carbon Tetrachloride	ND	0.50	1
Tert-Amyl Methyl Ether (TAME)	ND	0.50	1
Chloroform	ND	0.50	1
Benzene	ND	0.50	1
Bromochloromethane	ND	0.50	1
1,2-Dichloroethane	ND	0.50	1
Trichloroethene	ND	0.50	1
1,2-Dichlorpropane	ND	0.50	1
Dibromomethane	ND	0.50	1
Bromodichloromethane	ND	0.50	1
Toluene	ND	0.50	1
Trans-1,3-Dichloropropene	ND	0.50	1
Tetrachloroethene	1.3	0.50	1
1,3-Dichloropropane	ND	0.50	1
1,1,2-Trichloroethane	ND	0.50	1
Ethlybenzene	ND	0.50	1
1,2-Dibromoethane	ND	0.50	1
Total Xylenes	ND	0.50	1
Dibromochloromethane	ND	0.50	1
Chlorobenzene	ND	0.50	1
2,2 Dichloropropane	ND	0.50	1
Cis-1,3-Dichloropropane	ND	0.50	1

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Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-2s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-06
		Instrument:	GCMS#1
Date Analyzed:	04/03/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
1,1,1,2-Tetrachloroethane	ND	0.50	1
Styrene	ND	0.50	1
Isopropylbenzene	ND	0.50	1
Propylbenzene	ND	0.50	1
1,3,5-Trimethylbenzene	ND	0.50	1
2-Chlorotoluene	ND	0.50	1
Bromobenzene	ND	0.50	1
Bromoform	ND	0.50	1
4-Chlorotoluene	ND	0.50	1
Tert-Butylbenzene	ND	0.50	1
1,2,4-Trimethylbenzene	ND	0.50	1
1,2,3-Trichloropropane	ND	0.50	1
Sec-Butylbenzene	ND	0.50	1
1,1,2,2-Tetrachloroethane	ND	0.50	1
4-Isopopyltoluene	ND	0.50	1
1,3-Dichlorobenzene	ND	0.50	1
Butylbenzene	ND	0.50	1
1,4-Dichlorobenzene	ND	0.50	1
1,2-Dichlorobenzene	ND	0.50	1
1,2-dibromo-3-chloropropane	ND	0.50	1
1,1,2,3,4,4-hexachloro-1,3-butadiene	ND	0.50	1
1,2,4-Trichlorobenzene	ND	0.50	1
Napthalene	ND	0.50	1
1,2,3-Trichlorobenzene	ND	0.50	1
Cis-1,2-Dichloroethene	ND	0.50	1

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	*103%*	*70.0%*	*130%*
1,2-Dichloroethane-d4	*110%*	*70.0%*	*130%*
Toluene-d8	*101%*	*70.0%*	*130%*
4-Bromofluorobenzene	*112%*	*70.0%*	*130%*

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Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-12s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-07
		Instrument:	GCMS#1
Date Analyzed:	04/03/15	Operator:	Roy Diaz

Compounds:	**Concentration ug/L (ppb)**	**Reporting Limit ug/L (ppb)**	**Dilution Factor**
Dichlorodifluoromethane	ND	0.50	1
Chloromethane	ND	0.50	1
Vinyl Chloride	ND	0.50	1
Bromomethane	ND	0.50	1
Chloroethane	ND	0.50	1
Trichlorofluoromethane	ND	0.50	1
Trans-1,2-Dichloroethene	ND	0.50	1
1,1-Dichloroethene	ND	0.50	1
Methyl Tert-Butyl Ether (MTBE)	ND	0.50	1
Methylene Chloride	ND	0.50	1
Diisopropyl Ether (DIPE)	ND	0.50	1
1,1-Dichloroethane	ND	0.50	1
Ethyl Tert-Butyl Ether (ETBE)	ND	0.50	1
Tert-Butyl Alcohol (TBA)	ND	5.0	1
1,1,1-Trichloroethane	ND	0.50	1
1,3-Dichloropropene	ND	0.50	1
1,1-Dichloropropene	ND	0.50	1
Carbon Tetrachloride	ND	0.50	1
Tert-Amyl Methyl Ether (TAME)	ND	0.50	1
Chloroform	ND	0.50	1
Benzene	ND	0.50	1
Bromochloromethane	ND	0.50	1
1,2-Dichloroethane	ND	0.50	1
Trichloroethene	ND	0.50	1
1,2-Dichlorpropane	ND	0.50	1
Dibromomethane	ND	0.50	1
Bromodichloromethane	ND	0.50	1
Toluene	ND	0.50	1
Trans-1,3-Dichloropropene	ND	0.50	1
Tetrachloroethene	0.70	0.50	1
1,3-Dichloropropane	ND	0.50	1
1,1,2-Trichloroethane	ND	0.50	1
Ethlybenzene	ND	0.50	1
1,2-Dibromoethane	ND	0.50	1
Total Xylenes	ND	0.50	1
Dibromochloromethane	ND	0.50	1
Chlorobenzene	ND	0.50	1
2,2 Dichloropropane	ND	0.50	1
Cis-1,3-Dichloropropane	ND	0.50	1

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Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-12s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-07
		Instrument:	GCMS#1
Date Analyzed:	04/03/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
1,1,1,2-Tetrachloroethane	ND	0.50	1
Styrene	ND	0.50	1
Isopropylbenzene	ND	0.50	1
Propylbenzene	ND	0.50	1
1,3,5-Trimethylbenzene	ND	0.50	1
2-Chlorotoluene	ND	0.50	1
Bromobenzene	ND	0.50	1
Bromoform	ND	0.50	1
4-Chlorotoluene	ND	0.50	1
Tert-Butylbenzene	ND	0.50	1
1,2,4-Trimethylbenzene	ND	0.50	1
1,2,3-Trichloropropane	ND	0.50	1
Sec-Butylbenzene	ND	0.50	1
1,1,2,2-Tetrachloroethane	ND	0.50	1
4-Isopopyltoluene	ND	0.50	1
1,3-Dichlorobenzene	ND	0.50	1
Butylbenzene	ND	0.50	1
1,4-Dichlorobenzene	ND	0.50	1
1,2-Dichlorobenzene	ND	0.50	1
1,2-dibromo-3-chloropropane	ND	0.50	1
1,1,2,3,4,4-hexachloro-1,3-butadiene	ND	0.50	1
1,2,4-Trichlorobenzene	ND	0.50	1
Napthalene	ND	0.50	1
1,2,3-Trichlorobenzene	ND	0.50	1
Cis-1,2-Dichloroethene	ND	0.50	1

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	*106%*	*70.0%*	*130%*
1,2-Dichloroethane-d4	*112%*	*70.0%*	*130%*
Toluene-d8	*97%*	*70.0%*	*130%*
4-Bromofluorobenzene	*107%*	*70.0%*	*130%*

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Report Date: 4/9/2015

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Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-5s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-08
		Instrument:	GCMS#1
Date Analyzed:	04/03/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
Dichlorodifluoromethane	ND	0.50	1
Chloromethane	ND	0.50	1
Vinyl Chloride	ND	0.50	1
Bromomethane	ND	0.50	1
Chloroethane	ND	0.50	1
Trichlorofluoromethane	ND	0.50	1
Trans-1,2-Dichloroethene	ND	0.50	1
1,1-Dichloroethene	ND	0.50	1
Methyl Tert-Butyl Ether (MTBE)	ND	0.50	1
Methylene Chloride	ND	0.50	1
Diisopropyl Ether (DIPE)	ND	0.50	1
1,1-Dichloroethane	ND	0.50	1
Ethyl Tert-Butyl Ether (ETBE)	ND	0.50	1
Tert-Butyl Alcohol (TBA)	ND	5.0	1
1,1,1-Trichloroethane	ND	0.50	1
1,3-Dichloropropene	ND	0.50	1
1,1-Dichloropropene	ND	0.50	1
Carbon Tetrachloride	ND	0.50	1
Tert-Amyl Methyl Ether (TAME)	ND	0.50	1
Chloroform	ND	0.50	1
Benzene	ND	0.50	1
Bromochloromethane	ND	0.50	1
1,2-Dichloroethane	ND	0.50	1
Trichloroethene	ND	0.50	1
1,2-Dichlorpropane	ND	0.50	1
Dibromomethane	ND	0.50	1
Bromodichloromethane	ND	0.50	1
Toluene	ND	0.50	1
Trans-1,3-Dichloropropene	ND	0.50	1
Tetrachloroethene	1.4	0.50	1
1,3-Dichloropropane	ND	0.50	1
1,1,2-Trichloroethane	ND	0.50	1
Ethlybenzene	ND	0.50	1
1,2-Dibromoethane	ND	0.50	1
Total Xylenes	ND	0.50	1
Dibromochloromethane	ND	0.50	1
Chlorobenzene	ND	0.50	1
2,2 Dichloropropane	ND	0.50	1
Cis-1,3-Dichloropropane	ND	0.50	1

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Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-5s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-08
		Instrument:	GCMS#1
Date Analyzed:	04/03/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
1,1,1,2-Tetrachloroethane	ND	0.50	1
Styrene	ND	0.50	1
Isopropylbenzene	ND	0.50	1
Propylbenzene	ND	0.50	1
1,3,5-Trimethylbenzene	ND	0.50	1
2-Chlorotoluene	ND	0.50	1
Bromobenzene	ND	0.50	1
Bromoform	ND	0.50	1
4-Chlorotoluene	ND	0.50	1
Tert-Butylbenzene	ND	0.50	1
1,2,4-Trimethylbenzene	ND	0.50	1
1,2,3-Trichloropropane	ND	0.50	1
Sec-Butylbenzene	ND	0.50	1
1,1,2,2-Tetrachloroethane	ND	0.50	1
4-Isopopyltoluene	ND	0.50	1
1,3-Dichlorobenzene	ND	0.50	1
Butylbenzene	ND	0.50	1
1,4-Dichlorobenzene	ND	0.50	1
1,2-Dichlorobenzene	ND	0.50	1
1,2-dibromo-3-chloropropane	ND	0.50	1
1,1,2,3,4,4-hexachloro-1,3-butadiene	ND	0.50	1
1,2,4-Trichlorobenzene	ND	0.50	1
Napthalene	ND	0.50	1
1,2,3-Trichlorobenzene	ND	0.50	1
Cis-1,2-Dichloroethene	ND	0.50	1

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	*103%*	*70.0%*	*130%*
1,2-Dichloroethane-d4	*112%*	*70.0%*	*130%*
Toluene-d8	*96%*	*70.0%*	*130%*
4-Bromofluorobenzene	*103%*	*70.0%*	*130%*

RD

Report Date: 4/9/2015

1020 Winding Creek Rd, Suite 110, Roseville, CA 95678
Phone: (916) 782-8700 Fax: (916) 782-8750

ProVera
Analytical Laboratories, Inc.

Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-14s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-09
		Instrument:	GCMS#1
Date Analyzed:	04/03/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
Dichlorodifluoromethane	ND	0.50	1
Chloromethane	ND	0.50	1
Vinyl Chloride	ND	0.50	1
Bromomethane	ND	0.50	1
Chloroethane	ND	0.50	1
Trichlorofluoromethane	ND	0.50	1
Trans-1,2-Dichloroethene	ND	0.50	1
1,1-Dichloroethene	ND	0.50	1
Methyl Tert-Butyl Ether (MTBE)	ND	0.50	1
Methylene Chloride	ND	0.50	1
Diisopropyl Ether (DIPE)	ND	0.50	1
1,1-Dichloroethane	ND	0.50	1
Ethyl Tert-Butyl Ether (ETBE)	ND	0.50	1
Tert-Butyl Alcohol (TBA)	ND	5.0	1
1,1,1-Trichloroethane	ND	0.50	1
1,3-Dichloropropene	ND	0.50	1
1,1-Dichloropropene	ND	0.50	1
Carbon Tetrachloride	ND	0.50	1
Tert-Amyl Methyl Ether (TAME)	ND	0.50	1
Chloroform	ND	0.50	1
Benzene	ND	0.50	1
Bromochloromethane	ND	0.50	1
1,2-Dichloroethane	ND	0.50	1
Trichloroethene	ND	0.50	1
1,2-Dichlorpropane	ND	0.50	1
Dibromomethane	ND	0.50	1
Bromodichloromethane	ND	0.50	1
Toluene	ND	0.50	1
Trans-1,3-Dichloropropene	ND	0.50	1
Tetrachloroethene	1.5	0.50	1
1,3-Dichloropropane	ND	0.50	1
1,1,2-Trichloroethane	ND	0.50	1
Ethlybenzene	ND	0.50	1
1,2-Dibromoethane	ND	0.50	1
Total Xylenes	ND	0.50	1
Dibromochloromethane	ND	0.50	1
Chlorobenzene	ND	0.50	1
2,2 Dichloropropane	ND	0.50	1
Cis-1,3-Dichloropropane	ND	0.50	1

ProVera
Analytical Laboratories, Inc.

Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-14s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-09
		Instrument:	GCMS#1
Date Analyzed:	04/03/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
1,1,1,2-Tetrachloroethane	ND	0.50	1
Styrene	ND	0.50	1
Isopropylbenzene	ND	0.50	1
Propylbenzene	ND	0.50	1
1,3,5-Trimethylbenzene	ND	0.50	1
2-Chlorotoluene	ND	0.50	1
Bromobenzene	ND	0.50	1
Bromoform	ND	0.50	1
4-Chlorotoluene	ND	0.50	1
Tert-Butylbenzene	ND	0.50	1
1,2,4-Trimethylbenzene	ND	0.50	1
1,2,3-Trichloropropane	ND	0.50	1
Sec-Butylbenzene	ND	0.50	1
1,1,2,2-Tetrachloroethane	ND	0.50	1
4-Isopopyltoluene	ND	0.50	1
1,3-Dichlorobenzene	ND	0.50	1
Butylbenzene	ND	0.50	1
1,4-Dichlorobenzene	ND	0.50	1
1,2-Dichlorobenzene	ND	0.50	1
1,2-dibromo-3-chloropropane	ND	0.50	1
1,1,2,3,4,4-hexachloro-1,3-butadiene	ND	0.50	1
1,2,4-Trichlorobenzene	ND	0.50	1
Napthalene	ND	0.50	1
1,2,3-Trichlorobenzene	ND	0.50	1
Cis-1,2-Dichloroethene	ND	0.50	1

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	*102%*	*70.0%*	*130%*
1,2-Dichloroethane-d4	*111%*	*70.0%*	*130%*
Toluene-d8	*96%*	*70.0%*	*130%*
4-Bromofluorobenzene	*108%*	*70.0%*	*130%*

RD

Report Date: 4/9/2015

1020 Winding Creek Rd, Suite 110, Roseville, CA 95678
Phone: (916) 782-8700 Fax: (916) 782-8750

ProVera
Analytical Laboratories, Inc.

Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-1s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-10
		Instrument:	GCMS#1
Date Analyzed:	04/03/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
Dichlorodifluoromethane	ND	0.50	1
Chloromethane	ND	0.50	1
Vinyl Chloride	ND	0.50	1
Bromomethane	ND	0.50	1
Chloroethane	ND	0.50	1
Trichlorofluoromethane	ND	0.50	1
Trans-1,2-Dichloroethene	ND	0.50	1
1,1-Dichloroethene	ND	0.50	1
Methyl Tert-Butyl Ether (MTBE)	ND	0.50	1
Methylene Chloride	ND	0.50	1
Diisopropyl Ether (DIPE)	ND	0.50	1
1,1-Dichloroethane	ND	0.50	1
Ethyl Tert-Butyl Ether (ETBE)	ND	0.50	1
Tert-Butyl Alcohol (TBA)	ND	5.0	1
1,1,1-Trichloroethane	ND	0.50	1
1,3-Dichloropropene	ND	0.50	1
1,1-Dichloropropene	ND	0.50	1
Carbon Tetrachloride	ND	0.50	1
Tert-Amyl Methyl Ether (TAME)	ND	0.50	1
Chloroform	ND	0.50	1
Benzene	ND	0.50	1
Bromochloromethane	ND	0.50	1
1,2-Dichloroethane	ND	0.50	1
Trichloroethene	ND	0.50	1
1,2-Dichlorpropane	ND	0.50	1
Dibromomethane	ND	0.50	1
Bromodichloromethane	ND	0.50	1
Toluene	ND	0.50	1
Trans-1,3-Dichloropropene	ND	0.50	1
Tetrachloroethene	1.5	0.50	1
1,3-Dichloropropane	ND	0.50	1
1,1,2-Trichloroethane	ND	0.50	1
Ethlybenzene	ND	0.50	1
1,2-Dibromoethane	ND	0.50	1
Total Xylenes	ND	0.50	1
Dibromochloromethane	ND	0.50	1
Chlorobenzene	ND	0.50	1
2,2 Dichloropropane	ND	0.50	1
Cis-1,3-Dichloropropane	ND	0.50	1

ProVera
Analytical Laboratories, Inc.

Analysis For Volatile Compounds by EPA Method 8260B

Client Sample ID:	LW-MW-1s	Client:	E2C Remediation
Matrix:	Aqueous	Project:	Lake Tahoe-LW 1Q15 GWM
Date Sampled:	03/26/15	Lab ID:	15032601-10
		Instrument:	GCMS#1
Date Analyzed:	04/03/15	Operator:	Roy Diaz

Compounds:	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)	Dilution Factor
1,1,1,2-Tetrachloroethane	ND	0.50	1
Styrene	ND	0.50	1
Isopropylbenzene	ND	0.50	1
Propylbenzene	ND	0.50	1
1,3,5-Trimethylbenzene	ND	0.50	1
2-Chlorotoluene	ND	0.50	1
Bromobenzene	ND	0.50	1
Bromoform	ND	0.50	1
4-Chlorotoluene	ND	0.50	1
Tert-Butylbenzene	ND	0.50	1
1,2,4-Trimethylbenzene	ND	0.50	1
1,2,3-Trichloropropane	ND	0.50	1
Sec-Butylbenzene	ND	0.50	1
1,1,2,2-Tetrachloroethane	ND	0.50	1
4-Isopopyltoluene	ND	0.50	1
1,3-Dichlorobenzene	ND	0.50	1
Butylbenzene	ND	0.50	1
1,4-Dichlorobenzene	ND	0.50	1
1,2-Dichlorobenzene	ND	0.50	1
1,2-dibromo-3-chloropropane	ND	0.50	1
1,1,2,3,4,4-hexachloro-1,3-butadiene	ND	0.50	1
1,2,4-Trichlorobenzene	ND	0.50	1
Napthalene	ND	0.50	1
1,2,3-Trichlorobenzene	ND	0.50	1
Cis-1,2-Dichloroethene	ND	0.50	1

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	*104%*	*70.0%*	*130%*
1,2-Dichloroethane-d4	*112%*	*70.0%*	*130%*
Toluene-d8	*95%*	*70.0%*	*130%*
4-Bromofluorobenzene	*104%*	*70.0%*	*130%*

RD

Report Date: 4/9/2015

1020 Winding Creek Rd, Suite 110, Roseville, CA 95678
Phone: (916) 782-8700 Fax: (916) 782-8750

ProVera
Analytical Laboratories, Inc.

EPA 8260B QA-QC Report

ELAP Certification # 2606

CLIENT: **E2C Remediation**
1020 Winding Creek Rd., Suite 110
Roseville, CA 95678

Projects Covered by this QA-QC: 1024 Lake Tahoe Blvd., Laundry Works 1Q15 GWM 3/26/2015
Analysis Date: 3/30/2015
Matrix: AQ

BFB:

Internal Standards	**Results**	**% Recovery**
Benzene, fluoro	50.0	100%
Benzene-d5, chloro-	50.0	100%
1,4-Dichlorobenzene-d4	50.0	100%
Surrogate Standards		
Methane, dibromofluoro-	48.7	97%
1,2-Dichloroethane-d4	51.5	103%
Toluene-d8	48.4	97%
p-Bromofluorobenzene (BFB)	53.5	107%

Method Blank:

Internal Standards	**Results**	**% Recovery**
Benzene, fluoro	50.0	100%
Benzene-d5, chloro-	50.0	100%
1,4-Dichlorobenzene-d4	50.0	100%
Surrogate Standards		
Methane, dibromofluoro-	49.4	99%
1,2-Dichloroethane-d4	54.3	109%
Toluene-d8	49.8	100%
p-Bromofluorobenzene (BFB)	53.0	106%

Laboratory Control Sample:	**Results**	**% Recovery**
1,1-Dichloroethene	21.8	87%
Trichloroethene	23.7	95%
Chlorobenzene	24.7	99%
Toluene	23.3	93%
Benzene	24.2	97%
p-Bromofluorobenzene (BFB)	49.2	98%

LCS Duplicate:	**Results**	**% Recovery**
1,1-Dichloroethene	23.0	92%
Trichloroethene	22.6	90%
Chlorobenzene	24.6	99%
Toluene	24.8	99%
Benzene	24.0	96%
p-Bromofluorobenzene (BFB)	52.6	105%

PROVERA ANALYTICAL LABORATORIES

Chain of Custody Form

Client Name: E2C REMEDIATION

Project Name: LTLW

Client Address: 1020 Winding Creek Road Ste.110 Roseville, CA

Project Manager: Phil Goalwin

Sampler Name: Daniel Anderson

Sample Matrix: [X] Aqueous [ ] Soil [ ] Acidified

Sample Date	Sample Time	Sample Description and Container Type	BTEX (EPA 802lb)	MTBE (EPA 802lb)	TPH Gasoline (8015M)	TPH Diesel (8015M)	Volatiles (EPA 8260b)	5 Oxygenates (EPA 8260b)	7 Oxygenates (EPA 8260b)	MTBE (EPA 8260b)	Lead scavengers (8260b)	BTEX (8260b)		Comments
3-26-15	0600	TRAVEL BLANK # 1 VOA					X							1503260-01
	0915	OS-1 # 3 VOAs												-02
	0931	LW-MW-9S												-03
	0947	LW-MW-10SR												-04
	1003	LW-MW-13S												-05
	1019	LW-MW-2S												-06
	1036	LW-MW-12S												-07
	1052	LW-MW-5S												-08
	1108	LW-MW-14S												-09
3-26-15	1124	LW-MW-1S # 3 VOAs					X							-10

Sampling Event: 1st QTR GWM EDF Type: GW Monitoring Other 3°C

Turnaround Time Requested: 24 Hour ____ 48 Hour ____ 5-Day ____ Standard X

Relinquished By: [signature]	Date: 3-26-15	Relinquished By:	Date:
Received By: [signature]	Date: 3-26-15	Received By:	Date:

APPENDIX C

GeoTracker Upload Confirmation Reports

UPLOADING A EDF FILE

SUCCESS

Processing is complete. No errors were found!
Your file has been successfully submitted!

Submittal Type:	EDF
Report Title:	4Q 2014 Groundwater Monitoring Report and Current Site Remediation Status Report
Report Type:	Monitoring Report - Quarterly
Facility Global ID:	SL0601754315
Facility Name:	LAKE TAHOE LAUNDRY WORKS
File Name:	EDFCL.zip
Organization Name:	E2C Remediation, LLC
Username:	E2C REMEDIATION, LLC
IP Address:	66.60.184.162
Submittal Date/Time:	4/10/2015 12:43:15 PM
Confirmation Number:	4018900275

VIEW QC REPORT

VIEW DETECTIONS REPORT

UPLOADING A GEO_REPORT FILE

SUCCESS

Your GEO_REPORT file has been successfully submitted!

Submittal Type:	**GEO_REPORT**
Report Title:	**4Q 2014 Groundwater Monitoring Report and Current Site Remediation Status Report**
Report Type:	**Monitoring Report - Quarterly**
Report Date:	**3/27/2015**
Facility Global ID:	**SL0601754315**
Facility Name:	**LAKE TAHOE LAUNDRY WORKS**
File Name:	**LTLW 4Q14 QMR_RSR 3-27-15.pdf**
Organization Name:	**E2C Remediation, LLC**
Username:	**E2C REMEDIATION, LLC**
IP Address:	**66.60.184.162**
Submittal Date/Time:	**3/30/2015 5:24:26 PM**
Confirmation Number:	**1126289129**

SUCCESS

Processing is complete. No errors were found!
Your file has been successfully submitted!

Submittal Type:	GEO_WELL
Report Title:	Geo_Well 12-16-14
Facility Global ID:	SL0601754315
Facility Name:	LAKE TAHOE LAUNDRY WORKS
File Name:	GEO_WELL.zip
Organization Name:	E2C Remediation, LLC
Username:	E2C REMEDIATION, LLC
IP Address:	66.60.184.162
Submittal Date/Time:	3/31/2015 10:19:19 AM
Confirmation Number:	5216131627

APPENDIX D

Shallow Soil Vapor Sampling Field Data Sheets

E_2C REMEDIATION

SOIL GAS ASSESSMENT FIELD SHEET

SITE: LAKE TAHOE LAUNDRY WORKS

ADDRESS: 1024 EMERALD BAY DR.

SOUTH LAKE TAHOE, CA

DATE: 3-31-15

SAMPLE ID: VP-1 @ 10:40

FIELD CREW: NICK JENSEN

PURGE DATA

Purge Method: SYRINGE

Purge Duration: 3 min

Purge Volume: 600 ML

SAMPLING

Summa Canister Serial #: 83795

Initial Vacuum in Canister: -20 Hg

Leak Check Constituent: tetrafluoroethane

Was sampling tented: Yes No

Sampling Duration: 5 MIN.

Final Vacuum in Canister: Ø

E$_2$C REMEDIATION

SOIL GAS ASSESSMENT FIELD SHEET

SITE: LAKE TAHOE LAUNDRY WORKS

ADDRESS: 1024 EMERALD BAY DR.

SOUTH LAKE TAHOE, CA

DATE: 3-31-15

SAMPLE ID: VP-2 @ 10:57

FIELD CREW: NICK JENSEN

PURGE DATA

Purge Method: SYRINGE

Purge Duration: 3 min

Purge Volume: 600 ML

SAMPLING

Summa Canister Serial #: 83789

Initial Vacuum in Canister: -18 Hg

Leak Check Constituent: tetrafluoroethane

Was sampling tented: Yes No

Sampling Duration: 6 MIN

Final Vacuum in Canister: Ø

E$_2$C REMEDIATION

SOIL GAS ASSESSMENT FIELD SHEET

SITE:	LAKE TAHOE LAUNDRY WORKS
ADDRESS:	1024 EMERALD BAY DR.
	SOUTH LAKE TAHOE, CA
DATE:	3-31-15
SAMPLE ID:	VP-3 @ 11:14
FIELD CREW:	NICK JENSEN

PURGE DATA

Purge Method	SYRINGE
Purge Duration	3 min
Purge Volume	600 ML

SAMPLING

Summa Canister Serial #	83624
Initial Vacuum in Canister	-22 Hg
Leak Check Constituent	tetrafluoroethane
Was sampling tented	Yes No
Sampling Duration	6 MIN
Final Vacuum in Canister	Ø

E$_2$C REMEDIATION

SOIL GAS ASSESSMENT FIELD SHEET

SITE: LAKE TAHOE LAUNDRY WORKS

ADDRESS: 1024 EMERALD BAY DR.

SOUTH LAKE TAHOE, CA

DATE: 3-31-15

SAMPLE ID: VP-4 @ 11:27

FIELD CREW: NICK JENSEN

PURGE DATA

Purge Method: SYRINGE

Purge Duration: 3 min

Purge Volume: 600 ML

SAMPLING

Summa Canister Serial #: 8343

Initial Vacuum in Canister: -22 Hg

Leak Check Constituent: tetrafluoroethane

Was sampling tented: Yes No

Sampling Duration: 5 MIN

Final Vacuum in Canister: Ø

E_2C REMEDIATION

SOIL GAS ASSESSMENT FIELD SHEET

SITE: LAKE TAHOE LAUNDRY WORKS

ADDRESS: 1024 EMERALD BAY DR.

SOUTH LAKE TAHOE, CA

DATE: 3-31-15

SAMPLE ID: VP-5 @ 11:41

FIELD CREW: NICK JENSEN

PURGE DATA

Purge Method: SYRINGE

Purge Duration: 3 min

Purge Volume: 600 ML

SAMPLING

Summa Canister Serial #: 837354

Initial Vacuum in Canister: -22 Hg

Leak Check Constituent: tetrafluoroethane

Was sampling tented: Yes No

Sampling Duration: 5 MIN

Final Vacuum in Canister: Ø

E_2C REMEDIATION

SOIL GAS ASSESSMENT FIELD SHEET

SITE: LAKE TAHOE LAUNDRY WORKS

ADDRESS: 1024 EMERALD BAY DR.

SOUTH LAKE TAHOE, CA

DATE: 3-31-15

SAMPLE ID: VP-6 @ 11:57

FIELD CREW: NICK JENSEN

PURGE DATA

Purge Method: SYRINGE

Purge Duration: 3 min

Purge Volume: 600 ML

SAMPLING

Summa Canister Serial #: 5150

Initial Vacuum in Canister: -23 Hg

Leak Check Constituent: tetrafluoroethane

Was sampling tented: Yes No

Sampling Duration: 6 MIN

Final Vacuum in Canister: Ø

E_2C REMEDIATION

SOIL GAS ASSESSMENT FIELD SHEET

SITE:	LAKE TAHOE LAUNDRY WORKS
ADDRESS:	1024 EMERALD BAY DR.
	SOUTH LAKE TAHOE, CA
DATE:	3-31-15
SAMPLE ID:	VP-7 @ 12:12
FIELD CREW:	NICK JENSEN

PURGE DATA

Purge Method	SYRINGE
Purge Duration	3 min
Purge Volume	600 ML

SAMPLING

Summa Canister Serial #	83625
Initial Vacuum in Canister	-21 Hg
Leak Check Constituent	tetrafluoroethane
Was sampling tented	Yes No
Sampling Duration	5 MIN
Final Vacuum in Canister	Ø

E_2C REMEDIATION

SOIL GAS ASSESSMENT FIELD SHEET

SITE: LAKE TAHOE LAUNDRY WORKS

ADDRESS: 1024 EMERALD BAY DR.

SOUTH LAKE TAHOE, CA

DATE: 3-31-15

SAMPLE ID: VP-8 @ 12:26

FIELD CREW: NICK JENSEN

PURGE DATA

Purge Method: SYRINGE

Purge Duration: 3 min

Purge Volume: 600 ML

SAMPLING

Summa Canister Serial #: 83791

Initial Vacuum in Canister: -22 Hg

Leak Check Constituent: tetrafluoroethane

Was sampling tented: Yes No

Sampling Duration: 6 MIN

Final Vacuum in Canister: Ø

E_2C REMEDIATION

SOIL GAS ASSESSMENT FIELD SHEET

SITE:	LAKE TAHOE LAUNDRY WORKS
ADDRESS:	1024 EMERALD BAY DR.
	SOUTH LAKE TAHOE, CA
DATE:	3-31-15
SAMPLE ID:	VP-9 @ 12:41
FIELD CREW:	NICK JENSEN

PURGE DATA

Purge Method	SYRINGE
Purge Duration	3 min
Purge Volume	600 ML

SAMPLING

Summa Canister Serial #	83797
Initial Vacuum in Canister	-23 Hg
Leak Check Constituent	tetrafluoroethane
Was sampling tented	Yes No
Sampling Duration	6 MIN
Final Vacuum in Canister	Ø

E_2C REMEDIATION

SOIL GAS ASSESSMENT FIELD SHEET

SITE:	LAKE TAHOE LAUNDRY WORKS
ADDRESS:	1024 EMERALD BAY DR.
	SOUTH LAKE TAHOE, CA
DATE:	3-31-15
SAMPLE ID:	VP-10 @ 12:57
FIELD CREW:	NICK JENSEN

PURGE DATA

Purge Method	SYRINGE
Purge Duration	3 min
Purge Volume	600 ML

SAMPLING

Summa Canister Serial #	83796	
Initial Vacuum in Canister	-22 Hg	
Leak Check Constituent	tetrafluoroethane	
Was sampling tented	Yes	No
Sampling Duration	5 MIN	
Final Vacuum in Canister	Ø	

APPENDIX E

Soil-Gas Monitoring Procedures (From IRAWP)

APPENDIX E

S-G Monitoring Table of Contents

E. SOIL GAS MONITORING PROCEDURES

The following sections detail the methods and procedures that will be followed to monitor soil gas during the site remediation period.

E.1 Field Activities

Prior to installation of soil-gas probe points, all necessary permits and utility clearance(s) will be obtained. All work will be performed or supervised by a California Professional Geologist, in accordance with the Business and Professions Code, Chapters 7 and 12.5, and the California Code of Regulations, Title 16, Chapters 5 and 29. E_2C will make raw data available to California Regional Water Quality Control Board – Lahontan Region, South Lake Tahoe Branch (CRWQCB) staff, as requested. E_2C will accommodate adjustments, or modifications to the sampling program, mandated by evaluation of the data set or unforeseen site conditions, if required by the Regional Water Quality Control Board (CRWQCB) staff. Investigative-derived wastes (IDWs) will be handled and disposed in accordance with federal, state and local requirements.

To expedite the completion of field activities and to avoid potential project delays, contingencies have been proposed in the Interim Remedial Action Workplan (IRAWP) (e.g., soil matrix samples will also be collected if clayey soils [as defined in the Unified Soil Classification System (USCS)] are encountered during the proposed soil-gas investigation). The CRWQCB field staff will be informed of any problems, unforeseen site conditions, or deviations from the approved IRAWP. When it becomes necessary to implement modifications to the approved IRAWP, the CRWQCB will be notified and a verbal approval will be obtained before implementing changes.

E.2 Soil-Gas Investigation Reports

Soil-gas monitoring data, including a discussion of field operations, deviations from the approved Workplan, data inconsistencies, and other significant operational details will be documented in the status reports. Each status report will contain soil-gas isoconcentration plots for constituents of concern (COCs) at a scale of 1 inch = 30 feet and summary tables for analytical data [in micrograms per liter (μg/L)], in accordance with the Active Soil Gas Investigation (ASGI) guidance (LARWQCB, 1997). E_2C will also provide legible copies of field and laboratory notes or logs, all analytical results and Quality Assurance/Quality Control (QA/QC) information, including tables and explanations of procedures, results, corrective actions and effect on the data.

E.3 Soil-Gas Vapor Monitoring Well Installation

E.3.a Additional Soil and Lithologic Investigations

Site soil and lithologic information will be obtained by collecting undisturbed soil samples from soil-gas sampling point VP-5. The soil samples will be collected with a slide-hammer in two (2) inch diameter brass liners from depths of two (2) and four (4) feet bgs. The samples will be submitted for physical parameter testing, which includes gradation, effective permeability, porosity, soil moisture, total organic carbon, and soil density. The results of the parameter testing will provide accurate soil input parameters to be used in an indoor air intrusion risk model. The results of the indoor air intrusion risk modeling will be presented in status reports under soil gas sections.

Low-flow or no-flow conditions (e.g., fine-grained soil, clay, soil with vacuum readings that exceed approximately ten (10) inches of mercury or 136 inches of water) are not expected to be encountered; however, if low-flow or no-flow conditions are encountered, soil matrix sampling using EPA Method 5035A will be conducted in those specific areas.

E.3.b Soil-Gas Vapor Monitoring Well Spacing

Refer to Figure 5 for a scaled site plan depicting proposed VP well locations. VP well spacing has been selected to provide soil vapor monitoring biased to optimize detecting and delineating volatile organic compounds (VOCs) in areas of occupied by humans (e.g., buildings) and monitor and assess the effectiveness of the soil vapor extraction (SVE) system on VOC-affected vadose zone soils. Based on these criteria E_2C will install five (5) VP wells (VP-1 through VP-5).

E.3.c VP Well Depth

All VP wells will be installed to a depth of approximately five (5) feet below ground surface (bgs).

E.3.d VP Well Installation Procedure

E_2C personnel will use a Bobcat with a four (4) inch diameter auger attachment to advance a boring to the design depth of approximately 5.0 feet below ground surface (bgs). If an asphalt or concrete surface is present, E_2C will utilize a coring machine to penetrate the surface material.

At the bottom of the boring, E_2C will emplace a one and one-half (1.5) inch vapor sampling screen in the center of a one-foot sand pack (#3 Lonestar sand or equivalent). 1/8 inch inside diameter Teflon® tubing will extend from the sampling screen to the surface. One (1) foot of dry granular bentonite will be emplaced on top of the sand pack to preclude the infiltration of hydrated bentonite grout. The borehole will then be grouted to approximately six (6) inches below the surface with hydrated bentonite. The surface completion will consist of a five (5) inch diameter, traffic-rated monitoring well box, set in concrete (See Figure 15).

E_2C field personnel will prepare detailed VP well installation boring logs, which will document the date and time of the installation activity, the depth of each VP well, the screen type and interval; material utilized, and surface completion details. VP well logs will be included in the subsequent status report.

E.4 Soil-Gas Monitoring Parameters

E.4.a Equilibration Time

Following the installation of the VP well, subsurface conditions will be disturbed. As delineated in the DTSC document, *Advisory – Active Soil Gas Investigations,* to allow subsurface conditions to equilibrate, the purge volume test, leak test, and soil-gas sampling will not be conducted for at least 48 hours following installation.

E.4.b Purge Volume

To ensure that stagnant or ambient air is removed from the sampling system and to assure samples collected are representative of subsurface conditions, E_2C will purge three (3) casing volumes from each VP well. Based on a well diameter of four (4) inches, a filter pack twelve (12) inches in height, and a porosity of 30%, E_2C estimates that one (1) casing volume will be approximately 200 milliliters. Therefore, three (3) casing volumes would equate to approximately 600 milliliters. At a purge rate of 200 ml/min, purging will be accomplished in approximately three (3) minutes. E_2C will use a purge pump, calibrated to pump 200 milliliters per minute. The purge pump will not be used for sampling purposes.

E.5 Leak Test

Leakage during soil gas sampling may dilute samples with ambient air and may produce results that underestimate actual site concentrations or contaminate the sample with external contaminants. Leak tests will be conducted to determine whether leakage is present (e.g., the leak check compound is detected and confirmed in the test sample after its application).

E.5.a Leak Test Frequency

Leak tests will be conducted at every SGA well location.

E.5.b Leak Check Compounds

The tracer compound tetrafluoroethane will be used as leak check compounds, if a detection limit (DL) of 10 μg/L or less can be achieved.

E.5.c Leak Test Protocol

The leak check compound (tetrafluoroethane) will be enclosed within a tent-type structure at each potential leak point to keep the potential leak areas at saturated concentrations throughout the test.

E.5.d Leak Test Analytical

The chemical analysis of the soil-gas sample will include an analysis for the leak check compound. If a leak check compound is detected in the sample, the cause of the leak will be evaluated, determined and corrected through confirmation sampling. If the leak check compound is suspected or detected as a site-specific contaminant, a new leak check compound will be used.

E.6 Purge/Sample Flow Rate

The sampling and purging flow rate of 100 ml/min to 200 ml/min was selected to minimize compound partitioning during soil-gas sampling. Samples will not be collected if field conditions, such as rainfall, irrigation, fine grained sediments, or drilling conditions affect the ability to collect soil-gas samples. If no-flow or low-flow conditions are caused by wet soils, the soil gas sampling will cease. In addition, the soil-gas sampling will not be conducted during or immediately after a significant rain event (e.g., 1/2 inch or greater), or onsite watering.

If low flow conditions are determined to be from a specific lithology, a new SGA well will be installed at a new lateral location selected after evaluation of the site lithologic logs and/or in consultation with the CRWQCB. If moisture or unknown material is observed, installation of the VP well will cease until the cause of the problem is identified and corrected. If refusal occurs during drilling, an alternate, nearby VP well location will be selected.

E.6.a No-Flow/Low-Flow Rates

The purging or sampling flow rate of 100 ml/min to 200 ml/min is expected to be attainable in the lithology adjacent to the VP well. To evaluate lithologic conditions adjacent to the VP well where no-flow or low-flow conditions are encountered, a vacuum gauge or similar device will be used between the soil-gas sample tubing and the soil-gas extraction devices. A gas tight syringe may also be used to qualitatively determine if a high vacuum soil condition exists, which is based on whether suction is felt while the plunger is being withdrawn.

E.6.b Purging/Sampling Rates

E2C will conduct purging/sampling at rates between 100 to 200 ml/min to limit stripping, prevent ambient air from diluting the soil-gas samples, and to reduce the variability of purging rates. The low flow purge rate increases the likelihood that representative samples may be collected. The purge/sample rate may be modified based on conditions encountered in individual VP wells. Modified rates will be documented in the report of findings.

E.7 Soil Gas Sampling Protocol

After the VP well is adequately purged, a soil-gas sample will be collected. A Summa canister equipped with a flow restrictor will be used at each location. A flow regulator will be placed between the probe and the Summa canister to ensure the canister is filled at the proper flow rate. Summa canisters will be stored in such a way as to avoid exposure to sunlight, and the samples will be analyzed within the prescribed hold time.

E.7.a Sample Container Cleanliness and Decontamination

Prior to its use at a site, each sample container will be assured clean by the analytical laboratory. New containers will be determined to be free of contaminants (e.g., lubricants) by either the supplier or the analytical laboratory; and the effectiveness of decontamination (and to detect any possible interference from ambient air) of reused/recycled containers will be verified with method blanks. After each use, reusable sample containers will be properly decontaminated. Glass syringes or bulbs will be disassembled and baked at 240° C for a minimum of 15 minutes or at 120° C for a minimum of 30 minutes, or be decontaminated by an equivalent method. Plastic syringes, if used, will be used only once and then properly discarded.

E2C personnel will connect new Teflon® tubing to the top of the existing VP well tubing, and will utilize a 60 cubic centimeter (cc) syringe and a 3-way valve to purge the previously determined purge volume. The purge volume will be calculated based on one (1) cc/ft for 1/8" outside diameter (OD) tubing and five (5) cc/ft for ¼" OD tubing.

The leak compound will be placed in tent-type structures at the connections on the sampling train, using a paper towel moistened with the leak compound wrapped with plastic sheeting taped tightly at each end to seal the structure. The sampling procedure will then commence as detailed above.

E.7.b Documentation of VP Well Sampling Protocol

E2C personnel will document the VP well sampling, and will include the sample identification, the probe location, date and time of sample collection, sampling depth, identity of on-Site personnel, weather conditions, sampling methods and devices, soil-gas purge volumes, volume of soil gas extracted, vacuum of canisters before and after samples are collected, chain of custody protocols.

E.7.c Chain of Custody Records

A chain of custody form will be completed to maintain the custodial integrity of samples. Probe installation times and sample collection times will be included on the chain of custody form, and in the report of findings.

E.8 Analysis of Soil-Gas Samples

E.8.a Quality Assurance/Quality Control (QA/QC)

The soil-gas analytical laboratory will comply with the project Quality Assurance Project Plan (QAPP) and will follow the QA/QC requirements of the most current ASGI and the employed EPA Method. If there is any inconsistency between the ASGI and the EPA Method, the most restrictive and specific requirements will prevail. The analytical data will be consistent with the Data Quality Objectives (DQOs) established for the project. Field QC samples will be collected, stored, transported and analyzed in a manner consistent with site samples.

QA/QC samples will be collected to support the sampling activity. Method blanks will be used to verify the effectiveness of decontamination procedures, as specified above, and to detect any possible interference from ambient air. For off-site shipments, a minimum of one (1) trip blank per day will be collected and analyzed for the target compounds. Trip blanks will contain laboratory grade ultra pure air. The trip blanks will be prepared to evaluate if the shipping and handling procedures are introducing contaminants into the samples, and to determine if cross contamination in the form of VOC migration has occurred between the collected VOC samples. Trip blank containers and media will be the same as site samples. At least one (1) duplicate sample per laboratory per day will be collected. Duplicate samples will be collected from areas of concern in separate sample containers, at the same location and depth. Duplicate samples will be collected immediately after the original sample. Laboratory control samples (LCS) and dilution procedure duplicates (DPD) will handled and analyzed in accordance with the most recent ASGI. E_2C will be prepared to collect split samples (for analysis by another laboratory) with the CRWQCB, if requested.

E.8.b Laboratory Certification and Analysis

E_2C will have the samples analyzed by EPA Method 8260b at a certified analytical laboratory.

E.8.c Detection Limits for Target Compounds

Analytical equipment calibration will be in accordance with the most current ASGI. Detection limits will be such that the Environmental Screening Levels (Soil Gas Screening Levels) (CCRWQCB, 2008) for evaluation of potential vapor intrusion into indoor air allow will be met, as follows:

CHEMICAL	Vapor Screening ESL's		
	Micrograms per cubic meter (μg/m3)	Parts per billion – volume (ppbV)	Micrograms per liter (μg/L)
PCE	1.4E+03	206.54	1.400
TCE	4.1E+03	0.74481	0.0040
Cis-1,2-DCE	1.2E+05	3.0285+04	120.00
VC	1.0E+02	39.144	0.1000

The DL for leak check compounds will be 10 μg/L or less. For results with a high DL reported (e.g., due to matrix interference or dilution), the laboratory will provide a written explanation. Re-sampling and analyses will be conducted at the appropriate DL for a specific compound if requested by CRWQCB staff.

E.8.d Sample Handling

Exposure to light and changes in temperature and pressure will accelerate sample degradation. To protect sample integrity soil-gas samples will not be chilled, will not be subjected to changes in ambient pressure, and shipping of sample containers by air will be avoided, if possible. If condensation is observed in the sample container, the sample will be discarded and a new sample will be collected.

E.8.e Holding Time

All soil gas samples will be collected in Summa canisters and will be analyzed at ProVera Analytical Laboratories, Inc. (State Certification #2606) in Bakersfield, California within 48 hours after collection.

E.8.f Analytical Methods

All VOC samples will be analyzed using only a Gas Chromatograph/Mass Spectrometer (GC/MS) by EPA Method 8260b, or equivalent.

E.8.g Target Compounds

The ASGI (dated February 25, 1997) includes twenty-three (23) primary and four (4) other target VOCs. All quantifiable results will be reported. The estimated results of all Tentatively Identified Compounds (TICs), or non-AGSI-targeted compounds detected, will be included in the status reports. If TICs, or non-ASGI targeted compounds are identified, E_2C will consult with the CRWQCB to determine whether additional action is required (e.g., running additional standards to quantify TICs, or non-ASGI compounds) and whether the use of these estimated data for risk evaluation is appropriate. All quantifiable results of Leak Check Compounds will be reported as specified in above.

APPENDIX F

Laboratory VP Well Vapor Analytical Report

ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date: 4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type: **EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN	

LAB ID: 15033101-01 Sample ID: **VP-1** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	10	ppbV	4/3/2015	TO-15
Dichlorodifluoromethane (Freon 12)	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichlorotetrafluoroethane(F-114)	ND	10	ppbV	4/3/2015	TO-15
Chloromethane	ND	10	ppbV	4/3/2015	TO-15
Vinyl Cloride	ND	10	ppbV	4/3/2015	TO-15
1,3 Butadiene	ND	10	ppbV	4/3/2015	TO-15
Bromomethane	ND	10	ppbV	4/3/2015	TO-15
Chloroethane	ND	10	ppbV	4/3/2015	TO-15
Trichlorofluoromethane (F 11)	ND	10	ppbV	4/3/2015	TO-15
Isopropyl alcohol	ND	10	ppbV	4/3/2015	TO-15
Freon 113	ND	10	ppbV	4/3/2015	TO-15
1,1 Dichloroethene	ND	10	ppbV	4/3/2015	TO-15
Acetone	ND	10	ppbV	4/3/2015	TO-15
Carbon Disulfide	ND	10	ppbV	4/3/2015	TO-15
Methylene Chloride	ND	10	ppbV	4/3/2015	TO-15
MTBE	ND	10	ppbV	4/3/2015	TO-15
trans-1,2 Dicloroethene	ND	10	ppbV	4/3/2015	TO-15
n-Hexane	ND	10	ppbV	4/3/2015	TO-15
Vinyl acetate	ND	10	ppbV	4/3/2015	TO-15
1,1-Dichloroethane	ND	10	ppbV	4/3/2015	TO-15
Methyl Ethyl Ketone	ND	10	ppbV	4/3/2015	TO-15
cis-1,2 Dichloroethene	ND	10	ppbV	4/3/2015	TO-15
Tetrahydrofuran	ND	10	ppbV	4/3/2015	TO-15
Chloroform	ND	10	ppbV	4/3/2015	TO-15
1,1,1-Tricloroethane	ND	10	ppbV	4/3/2015	TO-15
Cyclohexane	ND	10	ppbV	4/3/2015	TO-15
Carbon Tetrachloride	ND	10	ppbV	4/3/2015	TO-15
Ethyl Acetate	ND	10	ppbV	4/3/2015	TO-15
Benzene	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichloroethane	ND	0.030	ppbV	4/13/2015	TO-15

ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-01 Sample ID: **VP-1** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	10	ppbV	4/3/2015	TO-15
Trichloroethylene	0.99	0.030	ppbV	4/13/2015	TO-15
1,2-Dichloropropane	ND	10	ppbV	4/3/2015	TO-15
1,4 Dioxane	ND	10	ppbV	4/3/2015	TO-15
Bromodichloromethane	ND	10	ppbV	4/3/2015	TO-15
cis-1,3 Dichloropropene	ND	10	ppbV	4/3/2015	TO-15
MIBK (Methyl Isobutyl Ketone)	ND	10	ppbV	4/3/2015	TO-15
Toluene	ND	10	ppbV	4/3/2015	TO-15
trans-1,3 Dichloropropene	ND	10	ppbV	4/3/2015	TO-15
1,1,2-Trichloroethane	ND	10	ppbV	4/3/2015	TO-15
MBK	ND	10	ppbV	4/3/2015	TO-15
Tetrachloroethylene	13	10	ppbV	4/3/2015	TO-15
Dibromochloromethane	ND	10	ppbV	4/3/2015	TO-15
1,2-Dibromoethane (1,2 EDB)	ND	10	ppbV	4/3/2015	TO-15
Chlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Ethylbenzene	ND	10	ppbV	4/3/2015	TO-15
m,p-Xylene	ND	10	ppbV	4/3/2015	TO-15
o-Xylene	ND	10	ppbV	4/3/2015	TO-15
Styrene	ND	10	ppbV	4/3/2015	TO-15
Bromoform	ND	10	ppbV	4/3/2015	TO-15
1,1,2,2-Tetrachloroethane	ND	10	ppbV	4/3/2015	TO-15
4-Ethyltoluene	ND	10	ppbV	4/3/2015	TO-15
1,3,5-Trimethylbenzene	ND	10	ppbV	4/3/2015	TO-15
1,2,4-Trimethylbenzene	ND	10	ppbV	4/3/2015	TO-15
1,3-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
1,4-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Benzyl chloride	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
1,2,4-Trichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Hexachloro-1,3-butadiene	ND	10	ppbV	4/3/2015	TO-15
Naphthalene	ND	10	ppbV	4/3/2015	TO-15

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ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-02 Sample ID: **VP-2** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	10	ppbV	4/10/2015	TO-15
Dichlorodifluoromethane (Freon 12)	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichlorotetrafluoroethane(F-114)	ND	10	ppbV	4/10/2015	TO-15
Chloromethane	ND	10	ppbV	4/10/2015	TO-15
Vinyl Cloride	ND	10	ppbV	4/10/2015	TO-15
1,3 Butadiene	ND	10	ppbV	4/10/2015	TO-15
Bromomethane	ND	10	ppbV	4/10/2015	TO-15
Chloroethane	ND	10	ppbV	4/10/2015	TO-15
Trichlorofluoromethane (F 11)	ND	10	ppbV	4/10/2015	TO-15
Isopropyl alcohol	ND	10	ppbV	4/10/2015	TO-15
Freon 113	ND	10	ppbV	4/10/2015	TO-15
1,1 Dichloroethene	ND	10	ppbV	4/10/2015	TO-15
Acetone	ND	10	ppbV	4/10/2015	TO-15
Carbon Disulfide	ND	10	ppbV	4/10/2015	TO-15
Methylene Chloride	ND	10	ppbV	4/10/2015	TO-15
MTBE	ND	10	ppbV	4/10/2015	TO-15
trans-1,2 Dicloroethene	ND	10	ppbV	4/10/2015	TO-15
n-Hexane	ND	10	ppbV	4/10/2015	TO-15
Vinyl acetate	ND	10	ppbV	4/10/2015	TO-15
1,1-Dichloroethane	ND	10	ppbV	4/10/2015	TO-15
Methyl Ethyl Ketone	ND	10	ppbV	4/10/2015	TO-15
cis-1,2 Dichloroethene	15	10	ppbV	4/10/2015	TO-15
Tetrahydrofuran	ND	10	ppbV	4/10/2015	TO-15
Chloroform	ND	10	ppbV	4/10/2015	TO-15
1,1,1-Tricloroethane	ND	10	ppbV	4/10/2015	TO-15
Cyclohexane	ND	10	ppbV	4/10/2015	TO-15
Carbon Tetrachloride	ND	10	ppbV	4/10/2015	TO-15
Ethyl Acetate	ND	10	ppbV	4/10/2015	TO-15
Benzene	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichloroethane	ND	0.030	ppbV	4/13/2015	TO-15

ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-02 Sample ID: **VP-2** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	10	ppbV	4/10/2015	TO-15
Trichloroethylene	3.6	0.030	ppbV	4/13/2015	TO-15
1,2-Dichloropropane	ND	10	ppbV	4/10/2015	TO-15
1,4 Dioxane	ND	10	ppbV	4/10/2015	TO-15
Bromodichloromethane	ND	10	ppbV	4/10/2015	TO-15
cis-1,3 Dichloropropene	ND	10	ppbV	4/10/2015	TO-15
MIBK (Methyl Isobutyl Ketone)	ND	10	ppbV	4/10/2015	TO-15
Toluene	ND	10	ppbV	4/10/2015	TO-15
trans-1,3 Dichloropropene	ND	10	ppbV	4/10/2015	TO-15
1,1,2-Trichloroethane	ND	10	ppbV	4/10/2015	TO-15
MBK	ND	10	ppbV	4/10/2015	TO-15
Tetrachloroethylene	160	10	ppbV	4/10/2015	TO-15
Dibromochloromethane	ND	10	ppbV	4/10/2015	TO-15
1,2-Dibromoethane (1,2 EDB)	ND	10	ppbV	4/10/2015	TO-15
Chlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Ethylbenzene	ND	10	ppbV	4/10/2015	TO-15
m,p-Xylene	ND	10	ppbV	4/10/2015	TO-15
o-Xylene	ND	10	ppbV	4/10/2015	TO-15
Styrene	ND	10	ppbV	4/10/2015	TO-15
Bromoform	ND	10	ppbV	4/10/2015	TO-15
1,1,2,2-Tetrachloroethane	ND	10	ppbV	4/10/2015	TO-15
4-Ethyltoluene	ND	10	ppbV	4/10/2015	TO-15
1,3,5-Trimethylbenzene	ND	10	ppbV	4/10/2015	TO-15
1,2,4-Trimethylbenzene	ND	10	ppbV	4/10/2015	TO-15
1,3-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
1,4-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Benzyl chloride	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
1,2,4-Trichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Hexachloro-1,3-butadiene	ND	10	ppbV	4/10/2015	TO-15
Naphthalene	ND	10	ppbV	4/10/2015	TO-15

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Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-03 Sample ID: **VP-3** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	10	ppbV	4/3/2015	TO-15
Dichlorodifluoromethane (Freon 12)	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichlorotetrafluoroethane(F-114)	ND	10	ppbV	4/3/2015	TO-15
Chloromethane	ND	10	ppbV	4/3/2015	TO-15
Vinyl Cloride	ND	10	ppbV	4/3/2015	TO-15
1,3 Butadiene	ND	10	ppbV	4/3/2015	TO-15
Bromomethane	ND	10	ppbV	4/3/2015	TO-15
Chloroethane	ND	10	ppbV	4/3/2015	TO-15
Trichlorofluoromethane (F 11)	ND	10	ppbV	4/3/2015	TO-15
Isopropyl alcohol	ND	10	ppbV	4/3/2015	TO-15
Freon 113	ND	10	ppbV	4/3/2015	TO-15
1,1 Dichloroethene	ND	10	ppbV	4/3/2015	TO-15
Acetone	ND	10	ppbV	4/3/2015	TO-15
Carbon Disulfide	ND	10	ppbV	4/3/2015	TO-15
Methylene Chloride	ND	10	ppbV	4/3/2015	TO-15
MTBE	ND	10	ppbV	4/3/2015	TO-15
trans-1,2 Dicloroethene	ND	10	ppbV	4/3/2015	TO-15
n-Hexane	ND	10	ppbV	4/3/2015	TO-15
Vinyl acetate	ND	10	ppbV	4/3/2015	TO-15
1,1-Dichloroethane	ND	10	ppbV	4/3/2015	TO-15
Methyl Ethyl Ketone	ND	10	ppbV	4/3/2015	TO-15
cis-1,2 Dichloroethene	ND	10	ppbV	4/3/2015	TO-15
Tetrahydrofuran	ND	10	ppbV	4/3/2015	TO-15
Chloroform	ND	10	ppbV	4/3/2015	TO-15
1,1,1-Tricloroethane	ND	10	ppbV	4/3/2015	TO-15
Cyclohexane	ND	10	ppbV	4/3/2015	TO-15
Carbon Tetrachloride	ND	10	ppbV	4/3/2015	TO-15
Ethyl Acetate	ND	10	ppbV	4/3/2015	TO-15
Benzene	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichloroethane	ND	0.030	ppbV	4/13/2015	TO-15

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-03 Sample ID: **VP-3** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	10	ppbV	4/3/2015	TO-15
Trichloroethylene	ND	0.030	ppbV	4/13/2015	TO-15
1,2-Dichloropropane	ND	10	ppbV	4/3/2015	TO-15
1,4 Dioxane	ND	10	ppbV	4/3/2015	TO-15
Bromodichloromethane	ND	10	ppbV	4/3/2015	TO-15
cis-1,3 Dichloropropene	ND	10	ppbV	4/3/2015	TO-15
MIBK (Methyl Isobutyl Ketone)	ND	10	ppbV	4/3/2015	TO-15
Toluene	ND	10	ppbV	4/3/2015	TO-15
trans-1,3 Dichloropropene	ND	10	ppbV	4/3/2015	TO-15
1,1,2-Trichloroethane	ND	10	ppbV	4/3/2015	TO-15
MBK	ND	10	ppbV	4/3/2015	TO-15
Tetrachloroethylene	2.1	0.030	ppbV	4/13/2015	TO-15
Dibromochloromethane	ND	10	ppbV	4/3/2015	TO-15
1,2-Dibromoethane (1,2 EDB)	ND	10	ppbV	4/3/2015	TO-15
Chlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Ethylbenzene	ND	10	ppbV	4/3/2015	TO-15
m,p-Xylene	ND	10	ppbV	4/3/2015	TO-15
o-Xylene	ND	10	ppbV	4/3/2015	TO-15
Styrene	ND	10	ppbV	4/3/2015	TO-15
Bromoform	ND	10	ppbV	4/3/2015	TO-15
1,1,2,2-Tetrachloroethane	ND	10	ppbV	4/3/2015	TO-15
4-Ethyltoluene	ND	10	ppbV	4/3/2015	TO-15
1,3,5-Trimethylbenzene	ND	10	ppbV	4/3/2015	TO-15
1,2,4-Trimethylbenzene	ND	10	ppbV	4/3/2015	TO-15
1,3-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
1,4-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Benzyl chloride	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
1,2,4-Trichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Hexachloro-1,3-butadiene	ND	10	ppbV	4/3/2015	TO-15
Naphthalene	ND	10	ppbV	4/3/2015	TO-15

Roy Diaz

Senior Analytical Chemist: Roy Diaz

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-04 Sample ID: **VP-4** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	10	ppbV	4/3/2015	TO-15
Dichlorodifluoromethane (Freon 12)	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichlorotetrafluoroethane(F-114)	ND	10	ppbV	4/3/2015	TO-15
Chloromethane	ND	10	ppbV	4/3/2015	TO-15
Vinyl Cloride	ND	10	ppbV	4/3/2015	TO-15
1,3 Butadiene	ND	10	ppbV	4/3/2015	TO-15
Bromomethane	ND	10	ppbV	4/3/2015	TO-15
Chloroethane	ND	10	ppbV	4/3/2015	TO-15
Trichlorofluoromethane (F 11)	ND	10	ppbV	4/3/2015	TO-15
Isopropyl alcohol	ND	10	ppbV	4/3/2015	TO-15
Freon 113	ND	10	ppbV	4/3/2015	TO-15
1,1 Dichloroethene	ND	10	ppbV	4/3/2015	TO-15
Acetone	ND	10	ppbV	4/3/2015	TO-15
Carbon Disulfide	ND	10	ppbV	4/3/2015	TO-15
Methylene Chloride	ND	10	ppbV	4/3/2015	TO-15
MTBE	ND	10	ppbV	4/3/2015	TO-15
trans-1,2 Dicloroethene	ND	10	ppbV	4/3/2015	TO-15
n-Hexane	ND	10	ppbV	4/3/2015	TO-15
Vinyl acetate	ND	10	ppbV	4/3/2015	TO-15
1,1-Dichloroethane	ND	10	ppbV	4/3/2015	TO-15
Methyl Ethyl Ketone	ND	10	ppbV	4/3/2015	TO-15
cis-1,2 Dichloroethene	ND	10	ppbV	4/3/2015	TO-15
Tetrahydrofuran	ND	10	ppbV	4/3/2015	TO-15
Chloroform	ND	10	ppbV	4/3/2015	TO-15
1,1,1-Tricloroethane	ND	10	ppbV	4/3/2015	TO-15
Cyclohexane	ND	10	ppbV	4/3/2015	TO-15
Carbon Tetrachloride	ND	10	ppbV	4/3/2015	TO-15
Ethyl Acetate	ND	10	ppbV	4/3/2015	TO-15
Benzene	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichloroethane	ND	0.030	ppbV	4/13/2015	TO-15

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-04 Sample ID: **VP-4** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	10	ppbV	4/3/2015	TO-15
Trichloroethylene	ND	0.030	ppbV	4/13/2015	TO-15
1,2-Dichloropropane	ND	10	ppbV	4/3/2015	TO-15
1,4 Dioxane	ND	10	ppbV	4/3/2015	TO-15
Bromodichloromethane	ND	10	ppbV	4/3/2015	TO-15
cis-1,3 Dichloropropene	ND	10	ppbV	4/3/2015	TO-15
MIBK (Methyl Isobutyl Ketone)	ND	10	ppbV	4/3/2015	TO-15
Toluene	ND	10	ppbV	4/3/2015	TO-15
trans-1,3 Dichloropropene	ND	10	ppbV	4/3/2015	TO-15
1,1,2-Trichloroethane	ND	10	ppbV	4/3/2015	TO-15
MBK	ND	10	ppbV	4/3/2015	TO-15
Tetrachloroethylene	1.1	10	ppbV	4/13/2015	TO-15
Dibromochloromethane	ND	10	ppbV	4/3/2015	TO-15
1,2-Dibromoethane (1,2 EDB)	ND	10	ppbV	4/3/2015	TO-15
Chlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Ethylbenzene	ND	10	ppbV	4/3/2015	TO-15
m,p-Xylene	ND	10	ppbV	4/3/2015	TO-15
o-Xylene	ND	10	ppbV	4/3/2015	TO-15
Styrene	ND	10	ppbV	4/3/2015	TO-15
Bromoform	ND	10	ppbV	4/3/2015	TO-15
1,1,2,2-Tetrachloroethane	ND	10	ppbV	4/3/2015	TO-15
4-Ethyltoluene	ND	10	ppbV	4/3/2015	TO-15
1,3,5-Trimethylbenzene	ND	10	ppbV	4/3/2015	TO-15
1,2,4-Trimethylbenzene	ND	10	ppbV	4/3/2015	TO-15
1,3-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
1,4-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Benzyl chloride	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
1,2,4-Trichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Hexachloro-1,3-butadiene	ND	10	ppbV	4/3/2015	TO-15
Naphthalene	ND	10	ppbV	4/3/2015	TO-15

Roy Diaz

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-05 Sample ID: **VP-5** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	10	ppbV	4/10/2015	TO-15
Dichlorodifluoromethane (Freon 12)	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichlorotetrafluoroethane(F-114)	ND	10	ppbV	4/10/2015	TO-15
Chloromethane	ND	10	ppbV	4/10/2015	TO-15
Vinyl Cloride	ND	10	ppbV	4/10/2015	TO-15
1,3 Butadiene	ND	10	ppbV	4/10/2015	TO-15
Bromomethane	ND	10	ppbV	4/10/2015	TO-15
Chloroethane	ND	10	ppbV	4/10/2015	TO-15
Trichlorofluoromethane (F 11)	ND	10	ppbV	4/10/2015	TO-15
Isopropyl alcohol	ND	10	ppbV	4/10/2015	TO-15
Freon 113	ND	10	ppbV	4/10/2015	TO-15
1,1 Dichloroethene	ND	10	ppbV	4/10/2015	TO-15
Acetone	ND	10	ppbV	4/10/2015	TO-15
Carbon Disulfide	ND	10	ppbV	4/10/2015	TO-15
Methylene Chloride	ND	10	ppbV	4/10/2015	TO-15
MTBE	ND	10	ppbV	4/10/2015	TO-15
trans-1,2 Dicloroethene	ND	10	ppbV	4/10/2015	TO-15
n-Hexane	ND	10	ppbV	4/10/2015	TO-15
Vinyl acetate	ND	10	ppbV	4/10/2015	TO-15
1,1-Dichloroethane	ND	10	ppbV	4/10/2015	TO-15
Methyl Ethyl Ketone	ND	10	ppbV	4/10/2015	TO-15
cis-1,2 Dichloroethene	50	10	ppbV	4/10/2015	TO-15
Tetrahydrofuran	ND	10	ppbV	4/10/2015	TO-15
Chloroform	ND	10	ppbV	4/10/2015	TO-15
1,1,1-Tricloroethane	ND	10	ppbV	4/10/2015	TO-15
Cyclohexane	ND	10	ppbV	4/10/2015	TO-15
Carbon Tetrachloride	ND	10	ppbV	4/10/2015	TO-15
Ethyl Acetate	ND	10	ppbV	4/10/2015	TO-15
Benzene	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichloroethane	ND	0.030	ppbV	4/13/2015	TO-15

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-05 Sample ID: **VP-5** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	10	ppbV	4/10/2015	TO-15
Trichloroethylene	6.6	0.030	ppbV	4/13/2015	TO-15
1,2-Dichloropropane	ND	10	ppbV	4/10/2015	TO-15
1,4 Dioxane	ND	10	ppbV	4/10/2015	TO-15
Bromodichloromethane	ND	10	ppbV	4/10/2015	TO-15
cis-1,3 Dichloropropene	ND	10	ppbV	4/10/2015	TO-15
MIBK (Methyl Isobutyl Ketone)	ND	10	ppbV	4/10/2015	TO-15
Toluene	ND	10	ppbV	4/10/2015	TO-15
trans-1,3 Dichloropropene	ND	10	ppbV	4/10/2015	TO-15
1,1,2-Trichloroethane	ND	10	ppbV	4/10/2015	TO-15
MBK	ND	10	ppbV	4/10/2015	TO-15
Tetrachloroethylene	38	10	ppbV	4/10/2015	TO-15
Dibromochloromethane	ND	10	ppbV	4/10/2015	TO-15
1,2-Dibromoethane (1,2 EDB)	ND	10	ppbV	4/10/2015	TO-15
Chlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Ethylbenzene	ND	10	ppbV	4/10/2015	TO-15
m,p-Xylene	ND	10	ppbV	4/10/2015	TO-15
o-Xylene	13	10	ppbV	4/10/2015	TO-15
Styrene	ND	10	ppbV	4/10/2015	TO-15
Bromoform	ND	10	ppbV	4/10/2015	TO-15
1,1,2,2-Tetrachloroethane	ND	10	ppbV	4/10/2015	TO-15
4-Ethyltoluene	ND	10	ppbV	4/10/2015	TO-15
1,3,5-Trimethylbenzene	ND	10	ppbV	4/10/2015	TO-15
1,2,4-Trimethylbenzene	ND	10	ppbV	4/10/2015	TO-15
1,3-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
1,4-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Benzyl chloride	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
1,2,4-Trichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Hexachloro-1,3-butadiene	ND	10	ppbV	4/10/2015	TO-15
Naphthalene	ND	10	ppbV	4/10/2015	TO-15

Roy Diaz

Senior Analytical Chemist: Roy Diaz

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-06 Sample ID: **VP-6** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	10	ppbV	4/3/2015	TO-15
Dichlorodifluoromethane (Freon 12)	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichlorotetrafluoroethane(F-114)	ND	10	ppbV	4/3/2015	TO-15
Chloromethane	ND	10	ppbV	4/3/2015	TO-15
Vinyl Cloride	ND	10	ppbV	4/3/2015	TO-15
1,3 Butadiene	ND	10	ppbV	4/3/2015	TO-15
Bromomethane	ND	10	ppbV	4/3/2015	TO-15
Chloroethane	ND	10	ppbV	4/3/2015	TO-15
Trichlorofluoromethane (F 11)	ND	10	ppbV	4/3/2015	TO-15
Isopropyl alcohol	ND	10	ppbV	4/3/2015	TO-15
Freon 113	ND	10	ppbV	4/3/2015	TO-15
1,1 Dichloroethene	ND	10	ppbV	4/3/2015	TO-15
Acetone	ND	10	ppbV	4/3/2015	TO-15
Carbon Disulfide	ND	10	ppbV	4/3/2015	TO-15
Methylene Chloride	ND	10	ppbV	4/3/2015	TO-15
MTBE	ND	10	ppbV	4/3/2015	TO-15
trans-1,2 Dicloroethene	ND	10	ppbV	4/3/2015	TO-15
n-Hexane	ND	10	ppbV	4/3/2015	TO-15
Vinyl acetate	ND	10	ppbV	4/3/2015	TO-15
1,1-Dichloroethane	ND	10	ppbV	4/3/2015	TO-15
Methyl Ethyl Ketone	ND	10	ppbV	4/3/2015	TO-15
cis-1,2 Dichloroethene	ND	10	ppbV	4/3/2015	TO-15
Tetrahydrofuran	ND	10	ppbV	4/3/2015	TO-15
Chloroform	ND	10	ppbV	4/3/2015	TO-15
1,1,1-Tricloroethane	ND	10	ppbV	4/3/2015	TO-15
Cyclohexane	ND	10	ppbV	4/3/2015	TO-15
Carbon Tetrachloride	ND	10	ppbV	4/3/2015	TO-15
Ethyl Acetate	ND	10	ppbV	4/3/2015	TO-15
Benzene	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichloroethane	ND	0.030	ppbV	4/13/2015	TO-15

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-06 Sample ID: **VP-6** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	10	ppbV	4/3/2015	TO-15
Trichloroethylene	0.59	0.030	ppbV	4/13/2015	TO-15
1,2-Dichloropropane	ND	10	ppbV	4/3/2015	TO-15
1,4 Dioxane	ND	10	ppbV	4/3/2015	TO-15
Bromodichloromethane	ND	10	ppbV	4/3/2015	TO-15
cis-1,3 Dichloropropene	ND	10	ppbV	4/3/2015	TO-15
MIBK (Methyl Isobutyl Ketone)	ND	10	ppbV	4/3/2015	TO-15
Toluene	18	10	ppbV	4/3/2015	TO-15
trans-1,3 Dichloropropene	ND	10	ppbV	4/3/2015	TO-15
1,1,2-Trichloroethane	ND	10	ppbV	4/3/2015	TO-15
MBK	ND	10	ppbV	4/3/2015	TO-15
Tetrachloroethylene	12	10	ppbV	4/3/2015	TO-15
Dibromochloromethane	ND	10	ppbV	4/3/2015	TO-15
1,2-Dibromoethane (1,2 EDB)	ND	10	ppbV	4/3/2015	TO-15
Chlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Ethylbenzene	ND	10	ppbV	4/3/2015	TO-15
m,p-Xylene	ND	10	ppbV	4/3/2015	TO-15
o-Xylene	ND	10	ppbV	4/3/2015	TO-15
Styrene	ND	10	ppbV	4/3/2015	TO-15
Bromoform	ND	10	ppbV	4/3/2015	TO-15
1,1,2,2-Tetrachloroethane	ND	10	ppbV	4/3/2015	TO-15
4-Ethyltoluene	ND	10	ppbV	4/3/2015	TO-15
1,3,5-Trimethylbenzene	ND	10	ppbV	4/3/2015	TO-15
1,2,4-Trimethylbenzene	ND	10	ppbV	4/3/2015	TO-15
1,3-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
1,4-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Benzyl chloride	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
1,2,4-Trichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Hexachloro-1,3-butadiene	ND	10	ppbV	4/3/2015	TO-15
Naphthalene	ND	10	ppbV	4/3/2015	TO-15

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-07 Sample ID: **VP-7** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	10	ppbV	4/3/2015	TO-15
Dichlorodifluoromethane (Freon 12)	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichlorotetrafluoroethane(F-114)	ND	10	ppbV	4/3/2015	TO-15
Chloromethane	ND	10	ppbV	4/3/2015	TO-15
Vinyl Cloride	ND	10	ppbV	4/3/2015	TO-15
1,3 Butadiene	ND	10	ppbV	4/3/2015	TO-15
Bromomethane	ND	10	ppbV	4/3/2015	TO-15
Chloroethane	ND	10	ppbV	4/3/2015	TO-15
Trichlorofluoromethane (F 11)	ND	10	ppbV	4/3/2015	TO-15
Isopropyl alcohol	ND	10	ppbV	4/3/2015	TO-15
Freon 113	ND	10	ppbV	4/3/2015	TO-15
1,1 Dichloroethene	ND	10	ppbV	4/3/2015	TO-15
Acetone	ND	10	ppbV	4/3/2015	TO-15
Carbon Disulfide	ND	10	ppbV	4/3/2015	TO-15
Methylene Chloride	ND	10	ppbV	4/3/2015	TO-15
MTBE	ND	10	ppbV	4/3/2015	TO-15
trans-1,2 Dicloroethene	ND	10	ppbV	4/3/2015	TO-15
n-Hexane	ND	10	ppbV	4/3/2015	TO-15
Vinyl acetate	ND	10	ppbV	4/3/2015	TO-15
1,1-Dichloroethane	ND	10	ppbV	4/3/2015	TO-15
Methyl Ethyl Ketone	ND	10	ppbV	4/3/2015	TO-15
cis-1,2 Dichloroethene	ND	10	ppbV	4/3/2015	TO-15
Tetrahydrofuran	ND	10	ppbV	4/3/2015	TO-15
Chloroform	ND	10	ppbV	4/3/2015	TO-15
1,1,1-Tricloroethane	ND	10	ppbV	4/3/2015	TO-15
Cyclohexane	ND	10	ppbV	4/3/2015	TO-15
Carbon Tetrachloride	ND	10	ppbV	4/3/2015	TO-15
Ethyl Acetate	ND	10	ppbV	4/3/2015	TO-15
Benzene	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichloroethane	ND	0.030	ppbV	4/13/2015	TO-15

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-07 Sample ID: **VP-7** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	10	ppbV	4/3/2015	TO-15
Trichloroethylene	0.54	0.030	ppbV	4/13/2015	TO-15
1,2-Dichloropropane	ND	10	ppbV	4/3/2015	TO-15
1,4 Dioxane	ND	10	ppbV	4/3/2015	TO-15
Bromodichloromethane	ND	10	ppbV	4/3/2015	TO-15
cis-1,3 Dichloropropene	ND	10	ppbV	4/3/2015	TO-15
MIBK (Methyl Isobutyl Ketone)	ND	10	ppbV	4/3/2015	TO-15
Toluene	ND	10	ppbV	4/3/2015	TO-15
trans-1,3 Dichloropropene	ND	10	ppbV	4/3/2015	TO-15
1,1,2-Trichloroethane	ND	10	ppbV	4/3/2015	TO-15
MBK	ND	10	ppbV	4/3/2015	TO-15
Tetrachloroethylene	4.6	0.030	ppbV	4/13/2015	TO-15
Dibromochloromethane	ND	10	ppbV	4/3/2015	TO-15
1,2-Dibromoethane (1,2 EDB)	ND	10	ppbV	4/3/2015	TO-15
Chlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Ethylbenzene	ND	10	ppbV	4/3/2015	TO-15
m,p-Xylene	ND	10	ppbV	4/3/2015	TO-15
o-Xylene	ND	10	ppbV	4/3/2015	TO-15
Styrene	ND	10	ppbV	4/3/2015	TO-15
Bromoform	ND	10	ppbV	4/3/2015	TO-15
1,1,2,2-Tetrachloroethane	ND	10	ppbV	4/3/2015	TO-15
4-Ethyltoluene	ND	10	ppbV	4/3/2015	TO-15
1,3,5-Trimethylbenzene	ND	10	ppbV	4/3/2015	TO-15
1,2,4-Trimethylbenzene	ND	10	ppbV	4/3/2015	TO-15
1,3-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
1,4-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Benzyl chloride	ND	10	ppbV	4/3/2015	TO-15
1,2-Dichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
1,2,4-Trichlorobenzene	ND	10	ppbV	4/3/2015	TO-15
Hexachloro-1,3-butadiene	ND	10	ppbV	4/3/2015	TO-15
Naphthalene	ND	10	ppbV	4/3/2015	TO-15

Roy Diaz

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-08 Sample ID: **VP-8** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	10	ppbV	4/10/2015	TO-15
Dichlorodifluoromethane (Freon 12)	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichlorotetrafluoroethane(F-114)	ND	10	ppbV	4/10/2015	TO-15
Chloromethane	ND	10	ppbV	4/10/2015	TO-15
Vinyl Cloride	ND	10	ppbV	4/10/2015	TO-15
1,3 Butadiene	ND	10	ppbV	4/10/2015	TO-15
Bromomethane	ND	10	ppbV	4/10/2015	TO-15
Chloroethane	ND	10	ppbV	4/10/2015	TO-15
Trichlorofluoromethane (F 11)	ND	10	ppbV	4/10/2015	TO-15
Isopropyl alcohol	ND	10	ppbV	4/10/2015	TO-15
Freon 113	ND	10	ppbV	4/10/2015	TO-15
1,1 Dichloroethene	ND	10	ppbV	4/10/2015	TO-15
Acetone	ND	10	ppbV	4/10/2015	TO-15
Carbon Disulfide	ND	10	ppbV	4/10/2015	TO-15
Methylene Chloride	ND	10	ppbV	4/10/2015	TO-15
MTBE	ND	10	ppbV	4/10/2015	TO-15
trans-1,2 Dicloroethene	ND	10	ppbV	4/10/2015	TO-15
n-Hexane	ND	10	ppbV	4/10/2015	TO-15
Vinyl acetate	ND	10	ppbV	4/10/2015	TO-15
1,1-Dichloroethane	ND	10	ppbV	4/10/2015	TO-15
Methyl Ethyl Ketone	ND	10	ppbV	4/10/2015	TO-15
cis-1,2 Dichloroethene	ND	10	ppbV	4/10/2015	TO-15
Tetrahydrofuran	ND	10	ppbV	4/10/2015	TO-15
Chloroform	ND	10	ppbV	4/10/2015	TO-15
1,1,1-Tricloroethane	ND	10	ppbV	4/10/2015	TO-15
Cyclohexane	ND	10	ppbV	4/10/2015	TO-15
Carbon Tetrachloride	ND	10	ppbV	4/10/2015	TO-15
Ethyl Acetate	ND	10	ppbV	4/10/2015	TO-15
Benzene	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichloroethane	ND	0.030	ppbV	4/13/2015	TO-15

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-08 Sample ID: **VP-8** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	10	ppbV	4/10/2015	TO-15
Trichloroethylene	0.72	0.030	ppbV	4/13/2015	TO-15
1,2-Dichloropropane	ND	10	ppbV	4/10/2015	TO-15
1,4 Dioxane	ND	10	ppbV	4/10/2015	TO-15
Bromodichloromethane	ND	10	ppbV	4/10/2015	TO-15
cis-1,3 Dichloropropene	ND	10	ppbV	4/10/2015	TO-15
MIBK (Methyl Isobutyl Ketone)	ND	10	ppbV	4/10/2015	TO-15
Toluene	ND	10	ppbV	4/10/2015	TO-15
trans-1,3 Dichloropropene	ND	10	ppbV	4/10/2015	TO-15
1,1,2-Trichloroethane	ND	10	ppbV	4/10/2015	TO-15
MBK	ND	10	ppbV	4/10/2015	TO-15
Tetrachloroethylene	3.2	0.030	ppbV	4/13/2015	TO-15
Dibromochloromethane	ND	10	ppbV	4/10/2015	TO-15
1,2-Dibromoethane (1,2 EDB)	ND	10	ppbV	4/10/2015	TO-15
Chlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Ethylbenzene	ND	10	ppbV	4/10/2015	TO-15
m,p-Xylene	ND	10	ppbV	4/10/2015	TO-15
o-Xylene	13	10	ppbV	4/10/2015	TO-15
Styrene	ND	10	ppbV	4/10/2015	TO-15
Bromoform	ND	10	ppbV	4/10/2015	TO-15
1,1,2,2-Tetrachloroethane	ND	10	ppbV	4/10/2015	TO-15
4-Ethyltoluene	ND	10	ppbV	4/10/2015	TO-15
1,3,5-Trimethylbenzene	ND	10	ppbV	4/10/2015	TO-15
1,2,4-Trimethylbenzene	ND	10	ppbV	4/10/2015	TO-15
1,3-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
1,4-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Benzyl chloride	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
1,2,4-Trichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Hexachloro-1,3-butadiene	ND	10	ppbV	4/10/2015	TO-15
Naphthalene	12	10	ppbV	4/10/2015	TO-15

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-09 Sample ID: **VP-9** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	10	ppbV	4/10/2015	TO-15
Dichlorodifluoromethane (Freon 12)	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichlorotetrafluoroethane(F-114)	ND	10	ppbV	4/10/2015	TO-15
Chloromethane	ND	10	ppbV	4/10/2015	TO-15
Vinyl Cloride	ND	10	ppbV	4/10/2015	TO-15
1,3 Butadiene	ND	10	ppbV	4/10/2015	TO-15
Bromomethane	ND	10	ppbV	4/10/2015	TO-15
Chloroethane	ND	10	ppbV	4/10/2015	TO-15
Trichlorofluoromethane (F 11)	ND	10	ppbV	4/10/2015	TO-15
Isopropyl alcohol	ND	10	ppbV	4/10/2015	TO-15
Freon 113	ND	10	ppbV	4/10/2015	TO-15
1,1 Dichloroethene	ND	10	ppbV	4/10/2015	TO-15
Acetone	ND	10	ppbV	4/10/2015	TO-15
Carbon Disulfide	ND	10	ppbV	4/10/2015	TO-15
Methylene Chloride	ND	10	ppbV	4/10/2015	TO-15
MTBE	ND	10	ppbV	4/10/2015	TO-15
trans-1,2 Dicloroethene	ND	10	ppbV	4/10/2015	TO-15
n-Hexane	ND	10	ppbV	4/10/2015	TO-15
Vinyl acetate	ND	10	ppbV	4/10/2015	TO-15
1,1-Dichloroethane	ND	10	ppbV	4/10/2015	TO-15
Methyl Ethyl Ketone	ND	10	ppbV	4/10/2015	TO-15
cis-1,2 Dichloroethene	ND	10	ppbV	4/10/2015	TO-15
Tetrahydrofuran	ND	10	ppbV	4/10/2015	TO-15
Chloroform	ND	10	ppbV	4/10/2015	TO-15
1,1,1-Tricloroethane	ND	10	ppbV	4/10/2015	TO-15
Cyclohexane	ND	10	ppbV	4/10/2015	TO-15
Carbon Tetrachloride	ND	10	ppbV	4/10/2015	TO-15
Ethyl Acetate	ND	10	ppbV	4/10/2015	TO-15
Benzene	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichloroethane	ND	0.030	ppbV	4/13/2015	TO-15

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-09 Sample ID: **VP-9** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	10	ppbV	4/10/2015	TO-15
Trichloroethylene	2.4	0.030	ppbV	4/13/2015	TO-15
1,2-Dichloropropane	ND	10	ppbV	4/10/2015	TO-15
1,4 Dioxane	ND	10	ppbV	4/10/2015	TO-15
Bromodichloromethane	ND	10	ppbV	4/10/2015	TO-15
cis-1,3 Dichloropropene	ND	10	ppbV	4/10/2015	TO-15
MIBK (Methyl Isobutyl Ketone)	ND	10	ppbV	4/10/2015	TO-15
Toluene	ND	10	ppbV	4/10/2015	TO-15
trans-1,3 Dichloropropene	ND	10	ppbV	4/10/2015	TO-15
1,1,2-Trichloroethane	ND	10	ppbV	4/10/2015	TO-15
MBK	ND	10	ppbV	4/10/2015	TO-15
Tetrachloroethylene	520	10	ppbV	4/10/2015	TO-15
Dibromochloromethane	ND	10	ppbV	4/10/2015	TO-15
1,2-Dibromoethane (1,2 EDB)	ND	10	ppbV	4/10/2015	TO-15
Chlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Ethylbenzene	ND	10	ppbV	4/10/2015	TO-15
m,p-Xylene	ND	10	ppbV	4/10/2015	TO-15
o-Xylene	13	10	ppbV	4/10/2015	TO-15
Styrene	ND	10	ppbV	4/10/2015	TO-15
Bromoform	ND	10	ppbV	4/10/2015	TO-15
1,1,2,2-Tetrachloroethane	ND	10	ppbV	4/10/2015	TO-15
4-Ethyltoluene	ND	10	ppbV	4/10/2015	TO-15
1,3,5-Trimethylbenzene	ND	10	ppbV	4/10/2015	TO-15
1,2,4-Trimethylbenzene	ND	10	ppbV	4/10/2015	TO-15
1,3-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
1,4-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Benzyl chloride	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
1,2,4-Trichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Hexachloro-1,3-butadiene	ND	10	ppbV	4/10/2015	TO-15
Naphthalene	ND	10	ppbV	4/10/2015	TO-15

Roy Diaz

Senior Analytical Chemist: Roy Diaz

ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-10 Sample ID: **VP-10** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	10	ppbV	4/10/2015	TO-15
Dichlorodifluoromethane (Freon 12)	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichlorotetrafluoroethane(F-114)	ND	10	ppbV	4/10/2015	TO-15
Chloromethane	ND	10	ppbV	4/10/2015	TO-15
Vinyl Cloride	ND	10	ppbV	4/10/2015	TO-15
1,3 Butadiene	ND	10	ppbV	4/10/2015	TO-15
Bromomethane	ND	10	ppbV	4/10/2015	TO-15
Chloroethane	ND	10	ppbV	4/10/2015	TO-15
Trichlorofluoromethane (F 11)	ND	10	ppbV	4/10/2015	TO-15
Isopropyl alcohol	ND	10	ppbV	4/10/2015	TO-15
Freon 113	ND	10	ppbV	4/10/2015	TO-15
1,1 Dichloroethene	ND	10	ppbV	4/10/2015	TO-15
Acetone	ND	10	ppbV	4/10/2015	TO-15
Carbon Disulfide	ND	10	ppbV	4/10/2015	TO-15
Methylene Chloride	ND	10	ppbV	4/10/2015	TO-15
MTBE	ND	10	ppbV	4/10/2015	TO-15
trans-1,2 Dicloroethene	ND	10	ppbV	4/10/2015	TO-15
n-Hexane	ND	10	ppbV	4/10/2015	TO-15
Vinyl acetate	ND	10	ppbV	4/10/2015	TO-15
1,1-Dichloroethane	ND	10	ppbV	4/10/2015	TO-15
Methyl Ethyl Ketone	ND	10	ppbV	4/10/2015	TO-15
cis-1,2 Dichloroethene	ND	10	ppbV	4/10/2015	TO-15
Tetrahydrofuran	ND	10	ppbV	4/10/2015	TO-15
Chloroform	ND	10	ppbV	4/10/2015	TO-15
1,1,1-Tricloroethane	ND	10	ppbV	4/10/2015	TO-15
Cyclohexane	ND	10	ppbV	4/10/2015	TO-15
Carbon Tetrachloride	ND	10	ppbV	4/10/2015	TO-15
Ethyl Acetate	ND	10	ppbV	4/10/2015	TO-15
Benzene	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichloroethane	ND	0.030	ppbV	4/13/2015	TO-15

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E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 15033101-10 Sample ID: **VP-10** Date Sampled: 3/31/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	10	ppbV	4/10/2015	TO-15
Trichloroethylene	0.55	0.030	ppbV	4/13/2015	TO-15
1,2-Dichloropropane	ND	10	ppbV	4/10/2015	TO-15
1,4 Dioxane	ND	10	ppbV	4/10/2015	TO-15
Bromodichloromethane	ND	10	ppbV	4/10/2015	TO-15
cis-1,3 Dichloropropene	ND	10	ppbV	4/10/2015	TO-15
MIBK (Methyl Isobutyl Ketone)	ND	10	ppbV	4/10/2015	TO-15
Toluene	ND	10	ppbV	4/10/2015	TO-15
trans-1,3 Dichloropropene	ND	10	ppbV	4/10/2015	TO-15
1,1,2-Trichloroethane	ND	10	ppbV	4/10/2015	TO-15
MBK	ND	10	ppbV	4/10/2015	TO-15
Tetrachloroethylene	17	10	ppbV	4/10/2015	TO-15
Dibromochloromethane	ND	10	ppbV	4/10/2015	TO-15
1,2-Dibromoethane (1,2 EDB)	ND	10	ppbV	4/10/2015	TO-15
Chlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Ethylbenzene	ND	10	ppbV	4/10/2015	TO-15
m,p-Xylene	ND	10	ppbV	4/10/2015	TO-15
o-Xylene	13	10	ppbV	4/10/2015	TO-15
Styrene	ND	10	ppbV	4/10/2015	TO-15
Bromoform	ND	10	ppbV	4/10/2015	TO-15
1,1,2,2-Tetrachloroethane	ND	10	ppbV	4/10/2015	TO-15
4-Ethyltoluene	ND	10	ppbV	4/10/2015	TO-15
1,3,5-Trimethylbenzene	ND	10	ppbV	4/10/2015	TO-15
1,2,4-Trimethylbenzene	ND	10	ppbV	4/10/2015	TO-15
1,3-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
1,4-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Benzyl chloride	ND	10	ppbV	4/10/2015	TO-15
1,2-Dichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
1,2,4-Trichlorobenzene	ND	10	ppbV	4/10/2015	TO-15
Hexachloro-1,3-butadiene	ND	10	ppbV	4/10/2015	TO-15
Naphthalene	ND	10	ppbV	4/10/2015	TO-15

Roy Diaz

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E2C Remediation	Project:	**Lake Tahoe-Laundry Works**	Report Date:	4/20/2015
1020 Winding Creek Rd., Suite 110		VP Well Vapor Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LABORATORY CONTROL STANDARD

Analyte	Result	Units	Spike level	Method	Analysis Date	Percent Recovery
1,1 Dichloroethene	10.0	ppbV	12.5	TO-15	4/3/2015	80%
Benzene	10.0	ppbV	12.5	TO-15	4/3/2015	80%
Trichloroethylene	9.6	ppbV	12.5	TO-15	4/3/2015	77%
Toluene	9.7	ppbV	12.5	TO-15	4/3/2015	78%
Chlorobenzene	9.0	ppbV	12.5	TO-15	4/3/2015	72%
1,2-Dichloroethane	1.1	ppbV	1.3	TO-15	4/13/2015	88%
Trichloroethylene	1.1	ppbV	1.3	TO-15	4/13/2015	88%
Tetrachloroethylene	1.1	ppbV	1.3	TO-15	4/13/2015	87%

Roy Diaz

Senior Analytical Chemist: Roy Diaz

PROVERA ANALYTICAL LABORATORIES

Chain of Custody Form

Client Name: E_2C Remediation

Project Name: Lake Tahoe Laundry Works 1950BK26

Client Address: 1024 Lake Tahoe Blvd., South Lake Tahoe

Project Manager: Bill Lawson

Sampler Name: NICK JENSEN

Analysis Requested

Sample Matrix: [X] Air

Sample Date	Sample Time	Sample Description	Container Type	TO-15 Full Suite + Chlor	Comments
3-31-15	10:40	VP-1	Summa	X	15033101-01
	10:57	VP-2	Summa	X	-02
	11:14	VP-3	Summa	X	-03
	11:27	VP-4	Summa	X	-04
	11:41	VP-5	Summa	X	-05
	11:57	VP-6	Summa	X	-06
	12:12	VP-7	Summa	X	-07
	12:26	VP-8	Summa	X	-08
	12:41	VP-9	Summa	X	-09
3-31-15	12:57	VP-10	Summa	X	-10

Sampling Event: VP Well Vapor Samples **Report in µg/L and µg/m³ using Selected Ion Monitoring (SIM) ~~procedure to obtain an MRL of 0.1475 ppbV, or lower.~~**

Turnaround Time Requested: 24 Hour ____ 48 Hour ____ 5-Day ____ Standard X

Relinquished By:	Date: 3-31-15	Relinquished By:	Date:
Received By:	Date: 3-31-15	Received By:	Date:

APPENDIX G

SVE/GASS Influent and Effluent Vapor Analytical Laboratory Reports

ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date: 2/2/2015
1020 Winding Creek Rd. Suite 110		Monthly O&M	Analysis Type: **EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN	

LAB ID: 1512501-01 Sample ID: **Influent** Date Sampled: 1/22/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	0.010	ppmV	1/26/2015	TO-15
Dichlorodifluoromethane (Freon 12)	ND	0.010	ppmV	1/26/2015	TO-15
1,2-Dichlorotetrafluoroethane(F-114)	ND	0.010	ppmV	1/26/2015	TO-15
Chloromethane	ND	0.010	ppmV	1/26/2015	TO-15
Vinyl Cloride	ND	0.010	ppmV	1/26/2015	TO-15
1,3 Butadiene	ND	0.010	ppmV	1/26/2015	TO-15
Bromomethane	ND	0.010	ppmV	1/26/2015	TO-15
Chloroethane	ND	0.010	ppmV	1/26/2015	TO-15
Trichlorofluoromethane (F 11)	ND	0.010	ppmV	1/26/2015	TO-15
Isopropyl alcohol	ND	0.010	ppmV	1/26/2015	TO-15
Freon 113	ND	0.010	ppmV	1/26/2015	TO-15
1,1 Dichloroethene	ND	0.010	ppmV	1/26/2015	TO-15
Acetone	ND	0.010	ppmV	1/26/2015	TO-15
Carbon Disulfide	ND	0.010	ppmV	1/26/2015	TO-15
Methylene Chloride	ND	0.010	ppmV	1/26/2015	TO-15
MTBE	ND	0.010	ppmV	1/26/2015	TO-15
trans-1,2 Dicloroethene	ND	0.010	ppmV	1/26/2015	TO-15
n-Hexane	ND	0.010	ppmV	1/26/2015	TO-15
Vinyl acetate	ND	0.010	ppmV	1/26/2015	TO-15
1,1-Dichloroethane	ND	0.010	ppmV	1/26/2015	TO-15
Methyl Ethyl Ketone	ND	0.010	ppmV	1/26/2015	TO-15
cis-1,2 Dichloroethene	ND	0.010	ppmV	1/26/2015	TO-15
Tetrahydrofuran	ND	0.010	ppmV	1/26/2015	TO-15
Chloroform	ND	0.010	ppmV	1/26/2015	TO-15
1,1,1-Tricloroethane	ND	0.010	ppmV	1/26/2015	TO-15
Cyclohexane	ND	0.010	ppmV	1/26/2015	TO-15
Carbon Tetrachloride	ND	0.010	ppmV	1/26/2015	TO-15
Ethyl Acetate	ND	0.010	ppmV	1/26/2015	TO-15
Benzene	ND	0.010	ppmV	1/26/2015	TO-15
1,2-Dichloroethane	ND	0.010	ppmV	1/26/2015	TO-15

ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	2/2/2015
1020 Winding Creek Rd. Suite 110		Monthly O&M	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LAB ID: 1512501-01 Sample ID: **Influent** Date Sampled: 1/22/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	0.010	ppmV	1/26/2015	TO-15
Trichloroethylene	ND	0.010	ppmV	1/26/2015	TO-15
1,2-Dichloropropane	ND	0.010	ppmV	1/26/2015	TO-15
1,4 Dioxane	ND	0.010	ppmV	1/26/2015	TO-15
Bromodichloromethane	ND	0.010	ppmV	1/26/2015	TO-15
cis-1,3 Dichloropropene	ND	0.010	ppmV	1/26/2015	TO-15
MIBK (Methyl Isobutyl Ketone)	ND	0.010	ppmV	1/26/2015	TO-15
Toluene	ND	0.010	ppmV	1/26/2015	TO-15
trans-1,3 Dichloropropene	ND	0.010	ppmV	1/26/2015	TO-15
1,1,2-Trichloroethane	ND	0.010	ppmV	1/26/2015	TO-15
MBK	ND	0.010	ppmV	1/26/2015	TO-15
Tetrachloroethylene	0.12	0.010	ppmV	1/26/2015	TO-15
Dibromochloromethane	ND	0.010	ppmV	1/26/2015	TO-15
1,2-Dibromoethane (1,2 EDB)	ND	0.010	ppmV	1/26/2015	TO-15
Chlorobenzene	ND	0.010	ppmV	1/26/2015	TO-15
Ethylbenzene	ND	0.010	ppmV	1/26/2015	TO-15
m,p-Xylene	ND	0.010	ppmV	1/26/2015	TO-15
o-Xylene	ND	0.010	ppmV	1/26/2015	TO-15
Styrene	ND	0.010	ppmV	1/26/2015	TO-15
Bromoform	ND	0.010	ppmV	1/26/2015	TO-15
1,1,2,2-Tetrachloroethane	ND	0.010	ppmV	1/26/2015	TO-15
4-Ethyltoluene	ND	0.010	ppmV	1/26/2015	TO-15
1,3,5-Trimethylbenzene	ND	0.010	ppmV	1/26/2015	TO-15
1,2,4-Trimethylbenzene	ND	0.010	ppmV	1/26/2015	TO-15
1,3-Dichlorobenzene	ND	0.010	ppmV	1/26/2015	TO-15
1,4-Dichlorobenzene	ND	0.010	ppmV	1/26/2015	TO-15
Benzyl chloride	ND	0.010	ppmV	1/26/2015	TO-15
1,2-Dichlorobenzene	ND	0.010	ppmV	1/26/2015	TO-15
1,2,4-Trichlorobenzene	ND	0.010	ppmV	1/26/2015	TO-15
Hexachloro-1,3-butadiene	ND	0.010	ppmV	1/26/2015	TO-15
Naphthalene	ND	0.010	ppmV	1/26/2015	TO-15

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E2C Remediation	Project:	**Lake Tahoe-Laundry Works**	Report Date:	2/2/2015
1020 Winding Creek Rd. Suite 110		Monthly System Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LABORATORY CONTROL STANDARD

Analyte	Result	Units	Spike level	Method	Analysis Date	Percent Recovery
1,1 Dichloroethene	11.0	ppbV	12.5	TO-15	1/26/2015	88%
Benzene	10.5	ppbV	12.5	TO-15	1/26/2015	84%
Trichloroethylene	10.5	ppbV	12.5	TO-15	1/26/2015	84%
Toluene	10.6	ppbV	12.5	TO-15	1/26/2015	84%
Chlorobenzene	10.4	ppbV	12.5	TO-15	1/26/2015	84%

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PROVERA ANALYTICAL LABORATORIES

Chain of Custody Form

Client Name: E_2C Remediation

Project Name: Lake Tahoe Laundry Works 1950BK26

Client Address: 1024 Lake Tahoe Blvd., South Lake Tahoe

Project Manager: Bill Lawson

Sampler Name: J. Irwin

Sample Matrix: Air [X]

Sample Date	Sample Time	Sample Description	Container Type	TO-15 Full Suite + Chlor										Comments
1-22-15	1:00	Influent	Summa	X										15012501 -01

Sampling Event: O&M Vapor Sampling

Turnaround Time Requested: 24 Hour ____ 48 Hour ____ 5-Day ____ Standard _X_

Relinquished By:	Date: 1-22-15	Relinquished By:	Date:
Received By:	Date: 1-22-15	Received By:	Date:

ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/1/2015
5300 Woodmere Dr. Suite 105		Monthly System Samples	Analysis Type:	**EPA Method TO-15**
Bakersfield CA 93313	Project Mgr.	PHIL GOALWIN		

LAB ID: 15031802-01 Sample ID: **Influent** Date Sampled: 3/17/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
Propylene	ND	0.010	ppmV	3/26/2015	
Dichlorodifluoromethane (Freon 12)	ND	0.010	ppmV	3/26/2015	
1,2-Dichlorotetrafluoroethane(F-114)	ND	0.010	ppmV	3/26/2015	
Chloromethane	ND	0.010	ppmV	3/26/2015	
Vinyl Cloride	ND	0.010	ppmV	3/26/2015	
1,3 Butadiene	ND	0.010	ppmV	3/26/2015	
Bromomethane	ND	0.010	ppmV	3/26/2015	
Chloroethane	ND	0.010	ppmV	3/26/2015	
Trichlorofluoromethane (F 11)	ND	0.010	ppmV	3/26/2015	
Isopropyl alcohol	ND	0.010	ppmV	3/26/2015	
Freon 113	ND	0.010	ppmV	3/26/2015	
1,1 Dichloroethene	ND	0.010	ppmV	3/26/2015	
Acetone	ND	0.010	ppmV	3/26/2015	
Carbon Disulfide	ND	0.010	ppmV	3/26/2015	
Methylene Chloride	ND	0.010	ppmV	3/26/2015	
MTBE	ND	0.010	ppmV	3/26/2015	
trans-1,2 Dicloroethene	ND	0.010	ppmV	3/26/2015	
n-Hexane	ND	0.010	ppmV	3/26/2015	
Vinyl acetate	ND	0.010	ppmV	3/26/2015	
1,1-Dichloroethane	ND	0.010	ppmV	3/26/2015	
Methyl Ethyl Ketone	ND	0.010	ppmV	3/26/2015	
cis-1,2 Dichloroethene	ND	0.010	ppmV	3/26/2015	
Tetrahydrofuran	ND	0.010	ppmV	3/26/2015	
Chloroform	ND	0.010	ppmV	3/26/2015	
1,1,1-Tricloroethane	ND	0.010	ppmV	3/26/2015	
Cyclohexane	ND	0.010	ppmV	3/26/2015	
Carbon Tetrachloride	ND	0.010	ppmV	3/26/2015	
Ethyl Acetate	ND	0.010	ppmV	3/26/2015	
Benzene	ND	0.010	ppmV	3/26/2015	
1,2-Dichloroethane	ND	0.010	ppmV	3/26/2015	

ProVera
Analytical Laboratories, Inc.

E2C Remediation	Project:	Lake Tahoe-Laundry Works	Report Date:	4/1/2015
5300 Woodmere Dr. Suite 105		Monthly System Samples	Analysis Type:	**EPA Method TO-15**
Bakersfield CA 93313	Project Mgr.	PHIL GOALWIN		

LAB ID: 15031802-01 Sample ID: **Influent** Date Sampled: 3/17/2015

Analyte	Result	Reporting Limit	Units	Analysis Date	Notes
n-Heptane	ND	0.010	ppmV	3/26/2015	
Trichloroethylene	ND	0.010	ppmV	3/26/2015	
1,2-Dichloropropane	ND	0.010	ppmV	3/26/2015	
1,4 Dioxane	ND	0.010	ppmV	3/26/2015	
Bromodichloromethane	ND	0.010	ppmV	3/26/2015	
cis-1,3 Dichloropropene	ND	0.010	ppmV	3/26/2015	
MIBK (Methyl Isobutyl Ketone)	ND	0.010	ppmV	3/26/2015	
Toluene	ND	0.010	ppmV	3/26/2015	
trans-1,3 Dichloropropene	ND	0.010	ppmV	3/26/2015	
1,1,2-Trichloroethane	ND	0.010	ppmV	3/26/2015	
MBK	ND	0.010	ppmV	3/26/2015	
Tetrachloroethylene	0.079	0.010	ppmV	3/26/2015	
Dibromochloromethane	ND	0.010	ppmV	3/26/2015	
1,2-Dibromoethane (1,2 EDB)	ND	0.010	ppmV	3/26/2015	
Chlorobenzene	ND	0.010	ppmV	3/26/2015	
Ethylbenzene	ND	0.010	ppmV	3/26/2015	
m,p-Xylene	ND	0.010	ppmV	3/26/2015	
o-Xylene	ND	0.010	ppmV	3/26/2015	
Styrene	ND	0.010	ppmV	3/26/2015	
Bromoform	ND	0.010	ppmV	3/26/2015	
1,1,2,2-Tetrachloroethane	ND	0.010	ppmV	3/26/2015	
4-Ethyltoluene	ND	0.010	ppmV	3/26/2015	
1,3,5-Trimethylbenzene	ND	0.010	ppmV	3/26/2015	
1,2,4-Trimethylbenzene	ND	0.010	ppmV	3/26/2015	
1,3-Dichlorobenzene	ND	0.010	ppmV	3/26/2015	
1,4-Dichlorobenzene	ND	0.010	ppmV	3/26/2015	
Benzyl chloride	ND	0.010	ppmV	3/26/2015	
1,2-Dichlorobenzene	ND	0.010	ppmV	3/26/2015	
1,2,4-Trichlorobenzene	ND	0.010	ppmV	3/26/2015	
Hexachloro-1,3-butadiene	ND	0.010	ppmV	3/26/2015	
Naphthalene	ND	0.010	ppmV	3/26/2015	

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E2C Remediation	Project:	**Lake Tahoe-Laundry Works**	Report Date:	4/1/2015
1020 Winding Creek Rd. Suite 110		Monthly System Samples	Analysis Type:	**EPA Method TO-15**
Roseville, CA 95678	Project Mgr.	PHIL GOALWIN		

LABORATORY CONTROL STANDARD

Analyte	Result	Units	Spike level	Method	Analysis Date	Percent Recovery
1,1 Dichloroethene	10.9	ppbV	12.5	TO-15	3/26/2015	87%
Benzene	11.2	ppbV	12.5	TO-15	3/26/2015	90%
Trichloroethylene	11.0	ppbV	12.5	TO-15	3/26/2015	88%
Toluene	10.7	ppbV	12.5	TO-15	3/26/2015	86%
Chlorobenzene	10.7	ppbV	12.5	TO-15	3/26/2015	86%

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PROVERA ANALYTICAL LABORATORIES

Chain of Custody Form

Client Name: E_2C Remediation

Project Name: Lake Tahoe Laundry Works 1950BK26

Client Address: 1024 Lake Tahoe Blvd., South Lake Tahoe

Project Manager: Bill Lawson

Sampler Name: J. Irwin

Sample Matrix: X Air

Sample Date	Sample Time	Sample Description	Container Type	Analysis Requested: TO-15 Full Suite + Chlor	Comments
3-17-15	12:00	Influent	Summa	X	1503182-01

Sampling Event: O&M Vapor Sampling

Turnaround Time Requested: 24 Hour ____ 48 Hour ____ 5-Day ____ Standard X

Relinquished By:	Date: 3-17-15	Relinquished By:	Date:
Received By:	Date: 3-17-15	Received By:	Date:

APPENDIX H

SVE/GASS Field Data Sheets

LAKE TAHOE LAUNDRY WORKS
1024 EMERALD BAY DRIVE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 1-16-15 TECHNICIAN: J. Irwin/N. Jensen

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	Based on blower curve	
OPERATING TIME	(hr:mm)	7693.1	7694.8 (TIME)
ELECTRICAL USAGE	(KWhr)	—	26922
WELL FIELD VACUUM	("Hg)	24" wc	20.4" wc
SYSTEM VACUUM	("Hg)	34" wc	27.5" wc
blower temp.	(°F)	230°F	160°F
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	35 psi	35 psi
Air comp. hrs.	(hrs.)	42112	42113
WELL FIELD STATUS			

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO
INFLUENT (PRE-OXIDIZER)	(ppmv)	1.0ppm	1.1ppm
EFLUENT (STACK)	(ppmv)		
VAPOR SAMPLED	INFLUENT: YES / NO		EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
CLEAN UP COMPOUND	X		No changes made to
			VE manifold or AS manifold
AIR COMPRESSOR MOTOR BELT CHECKED	X		
CLEAN AIR FILTER		X	
INSPECT SPARGE WELLS	X		
OTHER (specify)		X	

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	
AIR COMPRESSOR OIL CHANGED		X	Changed blower ~~motor~~ motor
AIR COMPRESSOR MOTOR LUBED		X	pulley to smaller size (7")
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)		X	(motor ran to hot with larger pulley)

LAKE TAHOE LAUNDRY WORKS
1024 EMERALD BAY DRIVE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 1-22-15 TECHNICIAN: J. Irwin

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	Based on	blower curve
OPERATING TIME	(hr:mm)	7837.7	7838.9 (TIME)
ELECTRICAL USAGE	(KWhr)	—	
WELL FIELD VACUUM	(~~Hg~~)	21" H_2O	21" H_2O
SYSTEM VACUUM	(~~Hg~~)	27.5" H_2O	27.3" H_2O
blower temp.		152°F	150°
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	35 psi	35 psi
Air comp. hrs.	hrs	42257	42258
WELL FIELD STATUS			

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO
INFLUENT (PRE-OXIDIZER)	(ppmv)	1.1 ppm	
EFLUENT (STACK)	(ppmv)		
VAPOR SAMPLED	INFLUENT :	YES / NO	EFFLUENT : YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
CLEAN UP COMPOUND	X		
AIR COMPRESSOR MOTOR BELT CHECKED		X	
CLEAN AIR FILTER		X	
INSPECT SPARGE WELLS	X		
OTHER (specify)		X	

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	
AIR COMPRESSOR OIL CHANGED		X	
AIR COMPRESSOR MOTOR LUBED		X	
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)		X	

LAKE TAHOE LAUNDRY WORKS
1024 EMERALD BAY DRIVE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 1-30-15 TECHNICIAN: J. Irwin

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO: Air comp. off for repairs

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	Based on	blower curve
OPERATING TIME	(hr:mm)	8027.8	8029.3 (TIME)
ELECTRICAL USAGE	(KWhr)	—	27360 KWH
WELL FIELD VACUUM	~~()~~	21.1" H_2O	21.3" H_2O
SYSTEM VACUUM	~~()~~	28.5" H_2O	28.7" H_2O
Blower Temp.	(F°)	152°.	152°
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	35 PSI	—
AC hrs		42447	42447
WELL FIELD STATUS			

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID	Calibrated: YES / NO	
INFLUENT (PRE-OXIDIZER)	(ppmv)	2.3 ppm	2.1 ppm
EFLUENT (STACK)	(ppmv)		
VAPOR SAMPLED	INFLUENT :	YES / NO	EFFLUENT : YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			•NEED oil for Air comp.
CLEAN UP COMPOUND	X		•Air compressor leaking oil from hose
			took hose off to get a new one
AIR COMPRESSOR MOTOR BELT CHECKED	X		made. left Air comp. off
CLEAN AIR FILTER	X		
INSPECT SPARGE WELLS	X		•No changes made to manifold (VE or AS.)
OTHER (specify) (SEE NOTES)	X	—	

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	
AIR COMPRESSOR OIL CHANGED		X	
AIR COMPRESSOR MOTOR LUBED		X	
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)		X	

LAKE TAHOE LAUNDRY WORKS
1024 EMERALD BAY DRIVE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 1-8-15 TECHNICIAN: J. Irwin / B. Henderson

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)		
OPERATING TIME	(hr:mm)	7505.9	7506.7 (TIME)
ELECTRICAL USAGE	(KWhr)	—	26576
WELL FIELD VACUUM	("Hg)	27.5" H_2O	27.5" H_2O
SYSTEM VACUUM	("Hg)	34.3" H_2O	27.5" H_2O
blower temp		230°F	200°F
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	30	30
Air comp. hrs		41925	41926
WELL FIELD STATUS			
VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO
INFLUENT (PRE-OXIDIZER)	(ppmv)	2.1	2.2
EFLUENT (STACK)	(ppmv)		
VAPOR SAMPLED		INFLUENT: YES / NO	EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
CLEAN UP COMPOUND	X		Effluent plumbing melted replumbed
			Stack to Exit straight up
AIR COMPRESSOR MOTOR BELT CHECKED		X	through roof
CLEAN AIR FILTER		X	
INSPECT SPARGE WELLS	X		No changes made to manifold
OTHER (specify)		X	

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	
AIR COMPRESSOR OIL CHANGED		X	
AIR COMPRESSOR MOTOR LUBED		X	
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)		X	

LAKE TAHOE LAUNDRY WORKS
1024 EMERALD BAY DRIVE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 2-17-15 TECHNICIAN: J. Irwin

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	BASED ON	BLOWER CURVE
OPERATING TIME	(hr:mm)	8458.7	8460.1 (TIME)
ELECTRICAL USAGE	(KWhr)	—	27757
WELL FIELD VACUUM	(~~"Hg~~)	26.6" H_2O	26.3" H_2O
SYSTEM VACUUM	(~~"Hg~~)	31.3" H_2O	31.5" H_2O
Blower Temp	(F°)	160°	160°
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	35 psi	35 psi
Air compressor hrs.		42697	42699
WELL FIELD STATUS	No Changes made to well Field		
VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO
INFLUENT (PRE-OXIDIZER)	(ppmv)	1.8 ppm	2.0 ppm
EFLUENT (STACK)	(ppmv)		
VAPOR SAMPLED	INFLUENT :	YES / NO	EFFLUENT : YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
CLEAN UP COMPOUND	X		appx: 200 Gal. in H_2O storage tank
AIR COMPRESSOR MOTOR BELT CHECKED	X		
CLEAN AIR FILTER		X	
INSPECT SPARGE WELLS	X		
OTHER (specify)		X	

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	
AIR COMPRESSOR OIL CHANGED		X	
AIR COMPRESSOR MOTOR LUBED		X	
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)		X	

LAKE TAHOE LAUNDRY WORKS
1024 EMERALD BAY DRIVE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 2-24-15 TECHNICIAN: J. Irwin

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	SEE BLOWER CURVE	
OPERATING TIME	(hr:mm)	8629.0	8630.1 (TIME)
ELECTRICAL USAGE	(KWhr)	—	27984
WELL FIELD VACUUM	("Hg)	1.87"	1.88"
SYSTEM VACUUM	("Hg)	2.36"	2.37"
BLOWER TEMP.		164°F	164°F
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	35 psi	
Air compressor hrs.		42867	42868
WELL FIELD STATUS			

VAPOR CONCENTRATIONS OVA Instrument used: PID / FID Calibrated: YES / NO

INFLUENT (PRE-OXIDIZER)	(ppmv)	1.2ppm	1.1ppm
EFLUENT (STACK)	(ppmv)		
VAPOR SAMPLED		INFLUENT: YES / NO	EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			No changes made to well field
CLEAN UP COMPOUND	X		
			Air compressor needs new wire to
AIR COMPRESSOR MOTOR BELT CHECKED	X		the thermal [illegible].
CLEAN AIR FILTER		X	
INSPECT SPARGE WELLS	X		
OTHER (specify)		X	

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	
AIR COMPRESSOR OIL CHANGED		X	
AIR COMPRESSOR MOTOR LUBED		X	
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)		X	

LAKE TAHOE LAUNDRY WORKS
1024 EMERALD BAY DRIVE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 2-3-15 TECHNICIAN: NICK JENSEN

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO: COMPRESSOR OFF - GOING TO REPLACE BROKEN HOSE - REFILL WITH OIL AND RE-START

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	SEE BLOWER CURVE	SEE BLOWER CURVE
OPERATING TIME	(hr:mm)	8123.5	8126.1 (TIME)
ELECTRICAL USAGE	(KWhr)	———	27424 KWH
WELL FIELD VACUUM	("Hg)	-22.0	-22.0 INWC
SYSTEM VACUUM	("Hg)	-29.0	-29.0 INWC
BLOWER TEMP	(F°)	150°	150°
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	N/A	35 PSI
COMPRESSOR HOURS			42448
WELL FIELD STATUS			

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID	Calibrated: YES / NO	MINI-RAE
INFLUENT (PRE-OXIDIZER)	(ppmv)	2.1 PPM	1.9 PPM
EFLUENT (STACK)	(ppmv)		
VAPOR SAMPLED	INFLUENT :	YES / NO	EFFLUENT : YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AIR SPARGE MANIFOLD: AS-2 = 21 PSI / 3 CFM
CLEAN UP COMPOUND	X		AS-3 = 16 PSI / 11 CFM
			AS-4 = 17 PSI / 10 CFM
AIR COMPRESSOR MOTOR BELT CHECKED	X		AS-9 = 18 PSI / 3 CFM
CLEAN AIR FILTER	X		AS-1 = 12 PSI / 11 CFM
INSPECT SPARGE WELLS	X		AS-8 = 15 PSI / 10 CFM
OTHER (specify)			AS-7 = 18 PSI / 3 CFM
			AS-13 = 18 PSI / 3 CFM

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	NO CHANGES MADE TO VAPOR MANIFOLD
AIR COMPRESSOR OIL CHANGED	X		
AIR COMPRESSOR MOTOR LUBED	X		
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)			

LAKE TAHOE LAUNDRY WORKS
1024 EMERALD BAY DRIVE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 2-9-15 TECHNICIAN: NICK JENSEN

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950

SYSTEM RUNNING UPON ARRIVAL? YES / NO *IF NO:* SYSTEM DOWN FROM POWER OUTAGE. STORM OVER THE WEEKEND CAUSED A POWER OUTAGE - RESTARTED

RUNNING UPON DEPARTURE? YES / NO *IF NO:*

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)		SEE BLOWER CURVE
OPERATING TIME	(hr:mm)	8268.7	8270.4 (TIME)
ELECTRICAL USAGE	(KWhr)		27504 KWH
WELL FIELD VACUUM	~~("Hg)~~	SYSTEM	~30.0 IN WC
SYSTEM VACUUM	~~("Hg)~~		~37.0 IN WC
BLOWER TEMP	(F°)	OFF	150°
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)		35 PSI
COMPRESSOR HOURS			42509
WELL FIELD STATUS			

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO MINI-RAE
INFLUENT (PRE-OXIDIZER)	(ppmv)	N/A	2.1 PPM
EFLUENT (STACK)	(ppmv)		
VAPOR SAMPLED	INFLUENT: YES / NO		EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AIR SPARGE: AS-2 = 21 PSI / 3 CFM
CLEAN UP COMPOUND	X		AS-3 = 15 PSI / 10 CFM
			AS-4 = 17 PSI / 11 CFM
AIR COMPRESSOR MOTOR BELT CHECKED	X		AS-9 = 18 PSI / 4 CFM
CLEAN AIR FILTER	X		AS-1 = 12 PSI / 12 CFM
INSPECT SPARGE WELLS	X		AS-8 = 15 PSI / 10 CFM
OTHER (specify)			AS-7 = 18 PSI / 3 CFM
			AS-13 = 17 PSI / 4 CFM

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	
AIR COMPRESSOR OIL CHANGED		X	-NO CHANGES MADE TO VAPOR MANIFOLD-
AIR COMPRESSOR MOTOR LUBED		X	
CONTROL PANEL INSPECTED/CLEANED	X		SYSTEM HAS NOT MADE ANY H_2O FROM LAST VISIT
OTHER (specify)			

LAKE TAHOE LAUNDRY WORKS
1024 EMERALD BAY DRIVE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 3-10-15 TECHNICIAN: J. ISwih

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	SEE curve	SEE curve
OPERATING TIME	(hr:mm)	8965.1	8966.3 (TIME)
ELECTRICAL USAGE	(KWhr)	—	28430 KWH
WELL FIELD VACUUM	("Hg)	1.75"	1.75"
SYSTEM VACUUM	("Hg)	2.26"	2.25"
Blower Temp		162°	162°
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	35 psI	35 psI
Air comp hrs		43202	43203
WELL FIELD STATUS			

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID	Calibrated: YES / NO	
INFLUENT (PRE-OXIDIZER)	(ppmv)	1.0 ppm	1.0ppm
EFLUENT (STACK)	(ppmv)	—	—
VAPOR SAMPLED	INFLUENT : YES / NO	EFFLUENT : YES / NO	

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			No changes made to
CLEAN UP COMPOUND	X		manifold
AIR COMPRESSOR MOTOR BELT CHECKED	X		
CLEAN AIR FILTER		X	
INSPECT SPARGE WELLS	X		
OTHER (specify)		X	

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	
AIR COMPRESSOR OIL CHANGED		X	
AIR COMPRESSOR MOTOR LUBED		X	
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)		X	

LAKE TAHOE LAUNDRY WORKS
1024 EMERALD BAY DRIVE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 3-17-15 TECHNICIAN: J. Irwin

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	SEE curve	SEE curve
OPERATING TIME	(hr:mm)	9129.0	9132.0 (TIME)
ELECTRICAL USAGE	(KWhr)	—	
WELL FIELD VACUUM	("Hg)	1.72" Hg	1.75" Hg
SYSTEM VACUUM	("Hg)	2.04" Hg	2.07" Hg
Blower Temp		162°	162°
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	35 psi	35 psi
A/C hrs		43367	43369
WELL FIELD STATUS			

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID		Calibrated: YES / NO
INFLUENT (PRE-OXIDIZER)	(ppmv)	1.2ppm	1.1ppm
EFLUENT (STACK)	(ppmv)	N/A	N/A
VAPOR SAMPLED	INFLUENT:	YES / NO	EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
CLEAN UP COMPOUND	X		No changes made to either Vapor or Air sparge Manifold
AIR COMPRESSOR MOTOR BELT CHECKED	X		
CLEAN AIR FILTER	X		
INSPECT SPARGE WELLS	X		
OTHER (specify)	X		added oil to A/c

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED	X		
AIR COMPRESSOR OIL CHANGED		X	
AIR COMPRESSOR MOTOR LUBED	X		
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)		X	

LAKE TAHOE LAUNDRY WORKS
1024 EMERALD BAY DRIVE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 3-2-15 TECHNICIAN: NICK JENSEN

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	SEE BLOWER CURVE	SEE BLOWER CURVE
OPERATING TIME	(hr:mm)	8772.8	8774.8 (TIME)
ELECTRICAL USAGE	(KWhr)	——	28175 KWH
WELL FIELD VACUUM	~~("Hg)~~	-25.2 INWC	-25.3 INWC
SYSTEM VACUUM	~~("Hg)~~	-32.0 INWC	-32.0 INWC
BLOWER TEMP	(F°)	165°	165°
COMPRESSOR TEMP	(F°)	175°	175°
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	35 PSI	35 PSI
COMPRESSOR HOURS		43010	43011
WELL FIELD STATUS			

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID	Calibrated: YES / NO MINI-RAE	
INFLUENT (PRE-OXIDIZER)	(ppmv)	1.9 PPM	2.0 PPM
EFLUENT (STACK)	(ppmv)		
VAPOR SAMPLED		INFLUENT: YES / NO	EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AIR SPARGE MANIFOLD: AS-2 = 18 PSI / 5 CFM
CLEAN UP COMPOUND	X		AS-3 = 13 PSI / 12 CFM
			AS-4 = 14 PSI / 12 CFM
AIR COMPRESSOR MOTOR BELT CHECKED	X		AS-9 = 15 PSI / 7 CFM
CLEAN AIR FILTER	X		AS-1 = 10 PSI / 11 CFM
INSPECT SPARGE WELLS	X		AS-8 = 11 PSI / 12 CFM
OTHER (specify)			AS-7 = 15 PSI / 4 CFM
			AS-13 = 14 PSI / 4 CFM

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	NO CHANGES MADE TO VAPOR MANIFOLD ~
AIR COMPRESSOR OIL CHANGED		X	
AIR COMPRESSOR MOTOR LUBED		X	SYSTEM HAS NOT MADE ANY H2O SINCE LAST VISIT ~
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)			

LAKE TAHOE LAUNDRY WORKS
1024 EMERALD BAY DRIVE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 3-27-15 TECHNICIAN: NICK JENSEN

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	SEE BLOWER CURVE	SEE BLOWER CURVE
OPERATING TIME	(hr:mm)	9369.6	9370.9 (TIME)
ELECTRICAL USAGE	(KWhr)	—	28966 KWH
WELL FIELD VACUUM	("Hg)	-23.0 INWC	-23.0 INWC
SYSTEM VACUUM	("Hg)	-29.0 INWC	-29.0 INWC
BLOWER TEMP	(F°)	160°	160°
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	40 PSI	40 PSI
COMPRESSOR HOURS		43605	43606
WELL FIELD STATUS			

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID	Calibrated: YES / NO	MINI-RAE
INFLUENT (PRE-OXIDIZER)	(ppmv)	2.0 PPM	1.8 PPM
EFLUENT (STACK)	(ppmv)		
VAPOR SAMPLED	INFLUENT:	YES / NO	EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AIR SPARGE MANIFOLD: AS-2 = 21 PSI / 4 CFM
CLEAN UP COMPOUND	X		AS-3 = 16 PSI / 12 CFM
CHECK H2O LEVEL IN TANK	X		AS-4 = 16 PSI / 12 CFM
AIR COMPRESSOR MOTOR BELT CHECKED	X		AS-9 = 18 PSI / 6 CFM
CLEAN AIR FILTER	X		AS-1 = 11 PSI / 11 CFM
INSPECT SPARGE WELLS	X		AS-8 = 12 PSI / 13 CFM
OTHER (specify)			AS-7 = 17 PSI / 4 CFM
			AS-13 = 16 PSI / 5 CFM

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	NO CHANGES MADE TO VAPOR MANIFOLD -
AIR COMPRESSOR OIL CHANGED		X	
AIR COMPRESSOR MOTOR LUBED		X	(APPROX 250 GALLONS H2O IN TANK)
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)			

LAKE TAHOE LAUNDRY WORKS
1024 EMERALD BAY DRIVE, CA
VAPOR EXTRACTION / AIR SPARGE SYSTEM DATA LOG
GENERAL MAINTENANCE LOG

DATE: 3-31-15 TECHNICIAN: NICK JENSEN

ARRIVAL TIME: DEPARTURE TIME: PROJECT #: 1950

SYSTEM RUNNING UPON ARRIVAL? YES / NO IF NO:

RUNNING UPON DEPARTURE? YES / NO IF NO:

DESCRIPTION	UNITS	UPON ARRIVAL	UPON DEPARTURE
FLOW RATE	(CFM)	SEE BLOWER CURVE	SEE BLOWER CURVE
OPERATING TIME	(hr:mm)	9465.2	9467.7 (TIME)
ELECTRICAL USAGE	(KWhr)	——	29097 KWH
WELL FIELD VACUUM	~~("Hg)~~	-22.3 INWC	-22.3 INWC
SYSTEM VACUUM	~~("Hg)~~	-30.0 INWC	-30.0 INWC
BLOWER TEMP	(F°)	175°	165°
AIR COMPRESSOR DUTY CYCLE	(seconds)	ON OFF	ON OFF
AIR COMPRESSOR SETTING	(psi)	40 PSI	40 PSI
COMPRESSOR HOURS		43701	43704
WELL FIELD STATUS			

VAPOR CONCENTRATIONS	OVA Instrument used: PID / FID	Calibrated: YES / NO	MINI-RAE
INFLUENT (PRE-OXIDIZER)	(ppmv)	1.8 PPM	1.7 PPM
EFLUENT (STACK)	(ppmv)		
VAPOR SAMPLED	INFLUENT: YES / NO		EFFLUENT: YES / NO

WEEKLY SERVICE RENDERED	YES	NO	COMMENTS
			AIR SPARGE MANIFOLD: AS-2 = 21 PSI / 6 CFM
CLEAN UP COMPOUND	X		AS-3 = 16 PSI / 12 CFM
			AS-4 = 15 PSI / 13 CFM
AIR COMPRESSOR MOTOR BELT CHECKED	X		AS-9 = 17 PSI / 6 CFM
CLEAN AIR FILTER	X		AS-1 = 11 PSI / 11 CFM
INSPECT SPARGE WELLS	X		AS-8 = 12 PSI / 12 CFM
OTHER (specify)			AS-7 = 17 PSI / 5 CFM
			AS-13 = 17 PSI / 4 CFM

QUARTERLY SERVICE RENDERED	YES	NO	COMMENTS
AIR COMPRESSOR LUBED		X	NO CHANGES MADE TO VAPOR MANIFOLD -
AIR COMPRESSOR OIL CHANGED		X	
AIR COMPRESSOR MOTOR LUBED		X	SYSTEM HAS NOT MADE ANY H2O SINCE LAST VISIT
CONTROL PANEL INSPECTED/CLEANED	X		
OTHER (specify)			

EXHIBIT OO

Stantec

Stantec Consulting Inc.
6980 Sierra Center Parkway Suite 100
Reno NV 89511
Tel: (775) 850-0777
Fax: (775) 850-0787

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El Dorado
T65044

December 10, 2008

California Regional Water Quality Control Board, Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, California 96150

Reference: Third Quarter 2008 Water Quality Report
Former Dry Cleaning Business
949 Emerald Bay Drive
South Lake Tahoe, CA 96150

Dear Ms. Dernbach:

On behalf of Hurzel Properties, LLC, Stantec Consulting Ltd. (Stantec) is providing this third quarter 2008 groundwater monitoring report for the former dry cleaning business located in South Lake Tahoe, California (Figure 1). The building that formerly occupied the dry cleaning business is currently occupied by a laundromat.

The third quarter 2008 quarterly groundwater monitoring and sampling event was conducted on September 30, 2008. Monitoring wells MW-1, MW-3, MW-4, and MW-5 were monitored for water level and field parameters and then sampled for the analysis of tetrachloroethene (PCE) during this event.

PROBABLE RELEASE HISTORY

Based on a review of previous reports prepared as a result of site investigations and historical research conducted at the site, the probable release history is most likely the result of PCE residue that was generated during the dry cleaning process and the method used to deliver the dry cleaning solvent to the dry cleaning machine located in the building. An interview conducted with the former owner of the dry cleaning establishment, Ms. Norma Thayer (MACTEC, August 2003), indicated that the facility operated one dry cleaning machine from approximately 1969 to 1977. Residue from the dry cleaning process was collected by draining to a sealed plastic bucket that was located on the floor next to the dry cleaning machine. Disposal of the residue included either being placed into the trash dumpster for disposal with normal trash products, or occasionally the PCE vendor would take the residue if the bucket was full when the PCE delivery was made. The dry cleaning machine was re-filled with PCE on an as-needed basis. A private PCE supplier would refill the PCE tank about once every three months. A volume of five to ten gallons would be required to recharge the machine. Re-filling the dry cleaning machine with PCE was performed by the supplier. The refilling routine included running a hose from the supply truck to the machine and pumping PCE into the holding tank. The pump was located on the supply truck, and a meter was present on the supply truck to record the volume delivered. The supply truck had a mounted bulk PCE tank with a distribution hose that was hard plumbed to the meter and tank. The supply truck typically parked in the vicinity of the boiler room exterior door on the northwest side of the facility. The hose was run

Reference: Third Quarter 2008 Water Quality Report
Former Dry Cleaning Business
949 Emerald Bay Drive
South Lake Tahoe, CA 96150

QUARTERLY GROUNDWATER SAMPLING

Each monitoring well was purged using a disposable bailer until three well volumes of water were removed from the well. Temperature, conductivity, and pH readings were taken in the monitoring wells. Purge water from the wells was stored in 55 gallon drums pending disposal.

Following purging, a disposable bailer was used to collect the groundwater samples from the monitoring wells. Samples were transferred to volatile organic analysis (VOA) vials preserved with hydrochloric acid, stored on ice, and transported under chain-of-custody to Alpha Analytical, Inc. in Sparks, Nevada. The water samples were analyzed for PCE by EPA Method 8260B.

PCE was detected in MW-3 at 54 µg/L, MW-4 at 1,300 µg/L and MW-5 at 400 µg/L. PCE in MW-1 was reported below the laboratory reporting limit of 1.0 µg/L. The reporting limit was below the California Department of Health Services maximum contaminant level (MCL) for PCE of 5.0 µg/L.

A historical summary of the groundwater analytical results is provided in Table 1. A site plan with the chemical concentrations in groundwater is displayed in Figure 3. Field and laboratory procedures are included as Appendix A, and the well sampling field data sheet is included as Appendix B. Copies of the laboratory analytical report with chain-of-custody forms for samples collected during the reporting period are included as Appendix C.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this third quarter 2008 sampling event and the three preceding quarterly events, high concentrations of PCE in up-gradient to cross-gradient well MW-4 suggests that the groundwater beneath the property is being impacted by an up-gradient source. The four quarters of monitoring and sampling at the site indicates that there is a significant shift in groundwater flow direction from fall and winter of the year to spring and summer of the year. During the fall and winter when the groundwater is deeper, the predominant groundwater flow direction is to the west northwest and during the spring and summer shifts to the north. The hydraulic gradient during the fall and winter is also steeper than the hydraulic gradient in the spring and summer. In addition, based on the water levels recorded during the four quarters of groundwater sampling, it does not appear that groundwater beneath the site reaches an elevation that could potentially impact the remaining PCE-impacted soil on the east side of the building.

Based on the groundwater monitoring and sampling data provided during the last four quarters and the cleanup efforts that were conducted at the site in January and February 2008 (which effectively removed the highest concentrations of PCE in the soil) Stantec recommends that this site be considered for no further action at this time. Stantec is prepared to complete the CRWQCB Case Closure Summary and a report requesting closure of this project. If the CRWQCB will not authorize preparation of the Case Closure Summary at this time, please contact Stantec, so fourth quarter sampling can be conducted.

Reference: Third Quarter 2008 Water Quality Report
Former Dry Cleaning Business
949 Emerald Bay Drive
South Lake Tahoe, CA 96150

LIMITATIONS

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of Hurzel Properties, LLC, for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field work. No other warranties, expressed or implied, are made by Stantec.

Prepared by:

Eric Farrar
Environmental Scientist

Information, conclusions, and recommendations provided by Stantec in this document regarding the former dry cleaning business, 949 Emerald Bay Drive, South Lake Tahoe, California have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:

Name: Mark P. Bare P.G. #8435 **Signature:**

Date: December 10, 2008 **Stamp:**

PROFESSIONAL GEOLOGIST
Mark Paul
Bare
No. 8435
EXP 6.20.10
STATE OF CALIFORNIA

cc: Rick and Melinda Frost-Hurzel
Mrs. Virginia Huber, El Dorado County Environmental Health Department
Ms. Robin Eppard, Resource Concepts, Inc.
files

FORMER DRY CLEANING BUSINESS
THIRD QUARTER 2008 MONITORING REPORT

Site Location: Former Dry Cleaning Business	Address: 949 Emerald Bay Drive South Lake Tahoe, California 96150 (See Map)
Consultant./Contact Person/Phone No.:	Stantec Consulting Ltd. / Eric Farrar / (775) 850-0777 Ext. 138
Stantec Consulting Ltd. Project No.:	93OT.07412.01
Primary Agency/ ID No.:	California Regional Water Quality Control Board, Lahontan Region
Other Agencies to Receive Copies:	El Dorado County, Department of Environmental Management

WORK PERFORMED THIS QUARTER [Third 2008]:

1. Conducted quarterly groundwater monitoring and sampling.

WORK PROPOSED NEXT QUARTER [Fourth 2008]:

1. Submit a no further action request to the CRWQCB.

Current Phase of Project:	Groundwater Monitoring and Sampling	(Assessment, Remed. Etc.)
Frequency of Groundwater Sampling:	Quarterly	(Quarterly, etc.)
Frequency of Groundwater Monitoring:	Quarterly	(Monthly, etc.)
Date(s) of Groundwater Monitoring:	September 30, 2008	(Date(s), etc.)
Is Liquid Phase Hydrocarbon Present On-Site	No	(Yes/No)
Current Remediation Techniques:	None	(SVES, LPH Removal, etc.)
Average Depth to Groundwater:	10.3 feet	(Measured Feet)
Groundwater Gradient:	0.017 ft/ft (West)	(Magnitude/Direction)

ATTACHED:

Figure 1	Site Location Map
Figure 2	Groundwater Elevation Map
Figure 3	PCE Groundwater Concentration Map
Table 1	Groundwater Elevation and Analytical Data
Appendix A	Field and Laboratory Procedures
Appendix B	Well Sampling Field Data Sheets
Appendix C	Laboratory Analytical Report and Chain-of-Custody Records

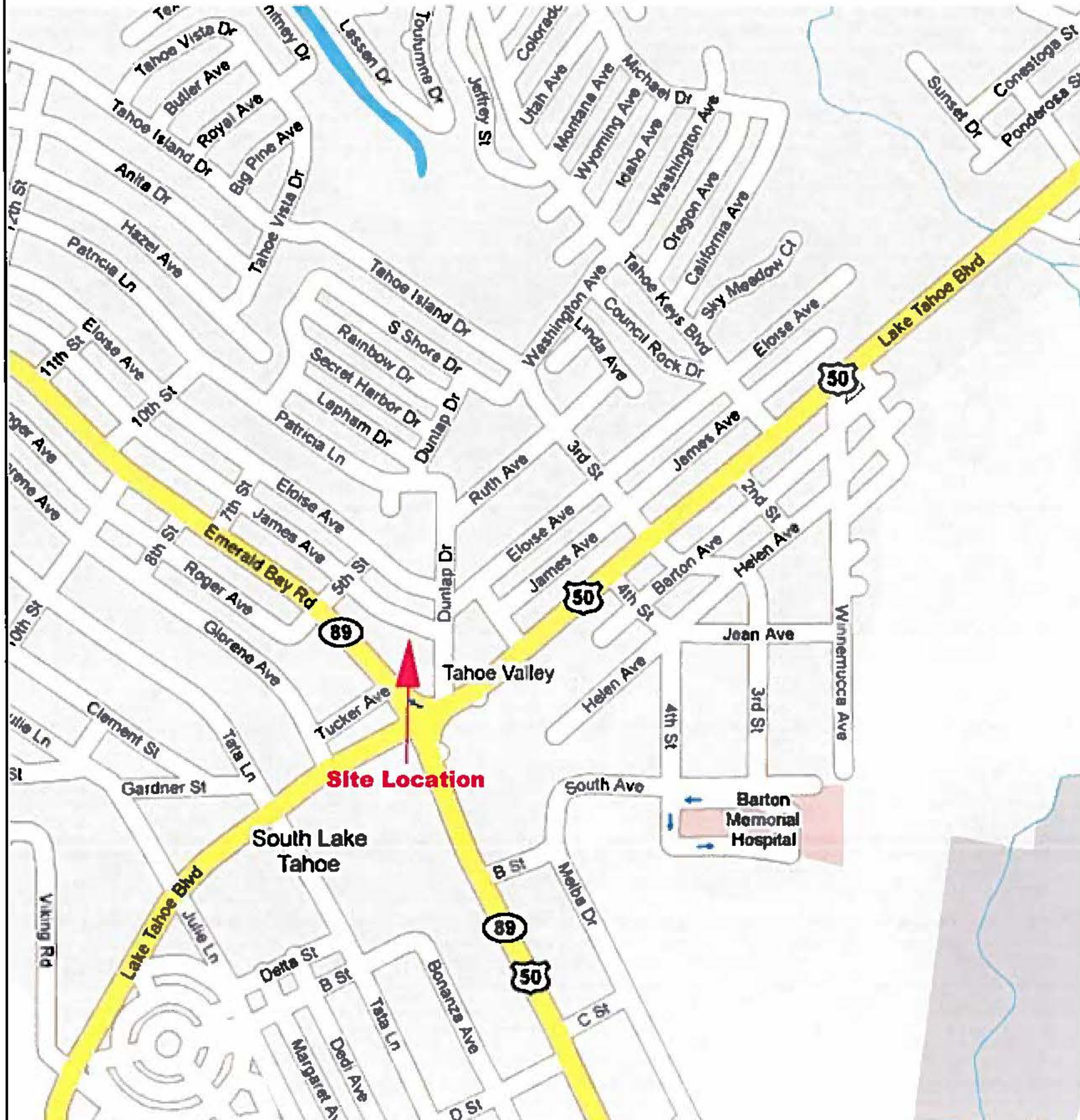
Stantec

Stantec Consulting Inc.
6980 Sierra Center Parkway Suite 100
Reno NV 89511
Tel: (775) 850-0777
Fax: (775) 850-0787

FIGURES

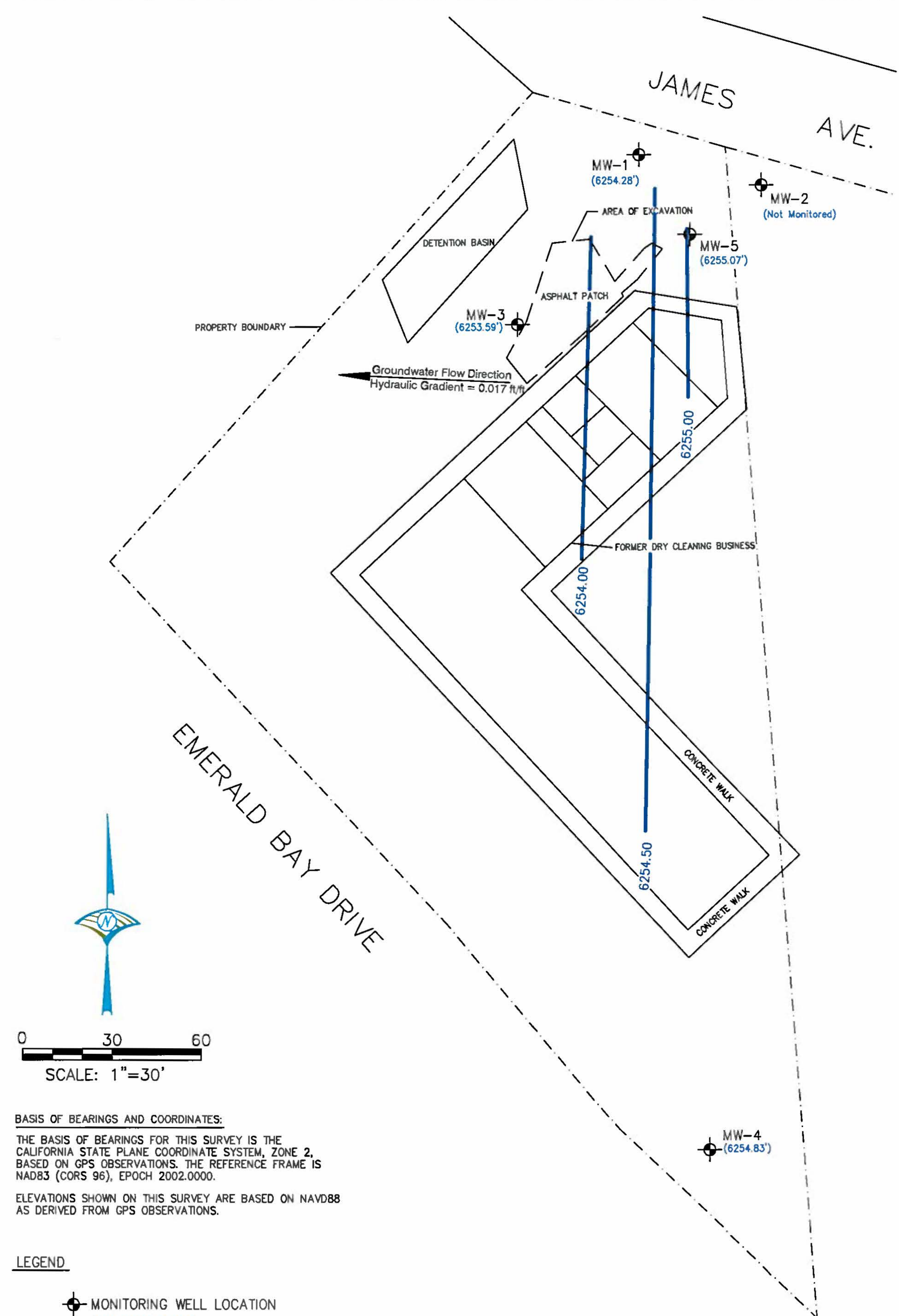
FIGURE 1: SITE LOCATION MAP
FIGURE 2: GROUNDWATER ELEVATION MAP
FIGURE 3: PCE GROUNDWATER CONCENTRATION MAP

THIRD QUARTER 2008 WATER QUALITY REPORT
FORMER DRY CLEANING BUSINESS
949 EMERALD BAY DRIVE
SOUTH LAKE TAHOE, CALIFORNIA 96150
Stantec Project #93OT.07412.01
December, 2008



NOT TO SCALE

Stantec	Stantec Consulting Inc. Suite 100, [illegible] Parkway Reno NV U.S.A. 89511 Tel. 775.850.0777 Fax. 775.850.0787 [illegible]	FOR: HURZEL PROPERTIES, LLC 949 EMERALD BAY DRIVE SOUTH LAKE TAHOE, CALIFORNIA	**Site Location Map**	FIGURE: **1**
		JOB NUMBER: / DRAWN BY:	CHECKED BY: / APPROVED BY:	DATE:



BASIS OF BEARINGS AND COORDINATES:

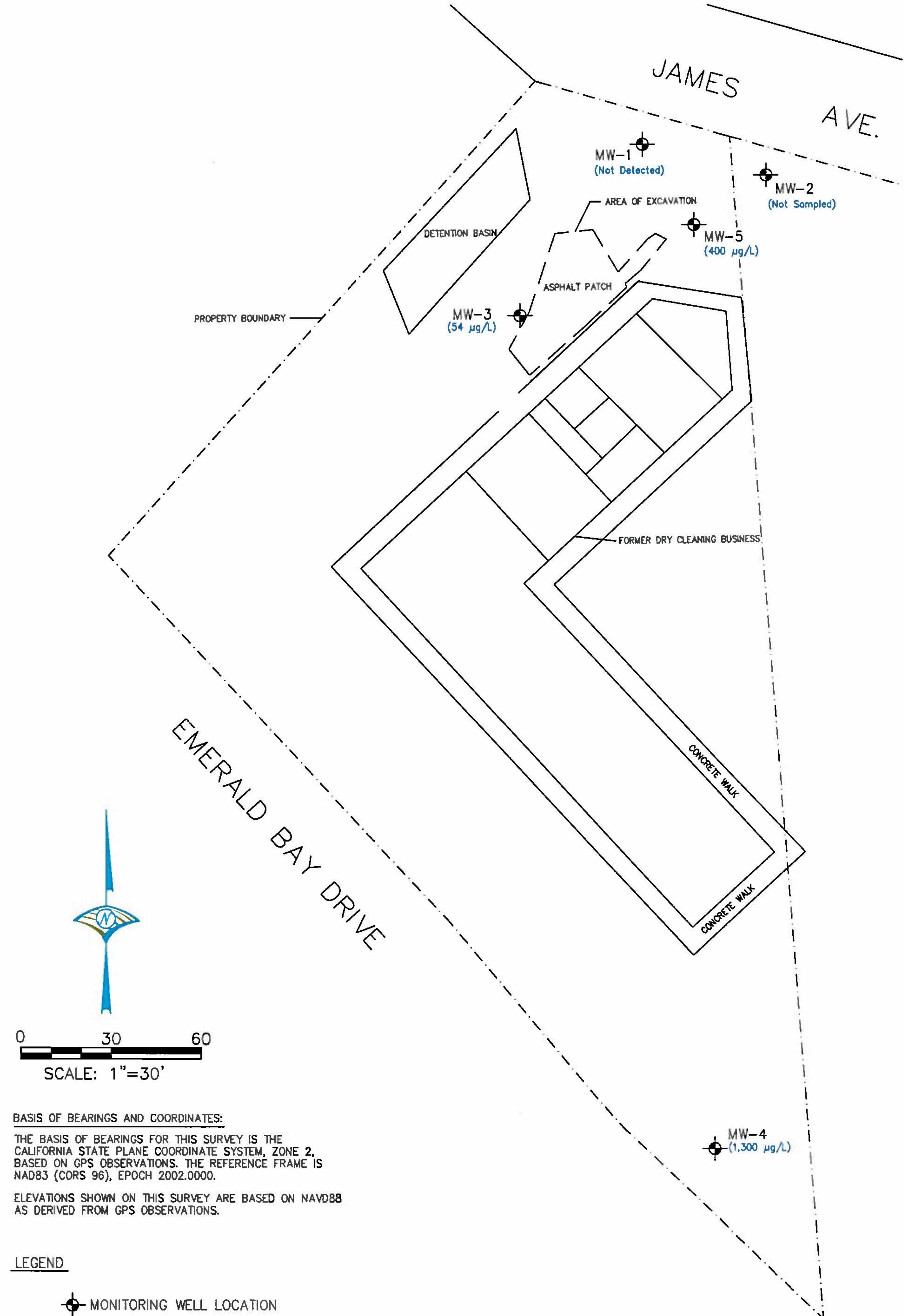
THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 2, BASED ON GPS OBSERVATIONS. THE REFERENCE FRAME IS NAD83 (CORS 96), EPOCH 2002.0000.

ELEVATIONS SHOWN ON THIS SURVEY ARE BASED ON NAVD88 AS DERIVED FROM GPS OBSERVATIONS.

LEGEND

MONITORING WELL LOCATION
(GW ELEVATION)

Stantec Consulting Inc. Suite 100, 6980 Sierra Center Parkway Reno NV U.S.A. 89511 Tel. 775.850.0777 Fax. 775.850.0787 www.stantec.com	FOR: HURZEL PROPERTIES, LLC 949 EMERALD BAY DRIVE SOUTH LAKE TAHOE, CALIFORNIA		GROUNDWATER ELEVATION MAP (September 30, 2008)		FIGURE: 2
	JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:



BASIS OF BEARINGS AND COORDINATES:

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 2, BASED ON GPS OBSERVATIONS. THE REFERENCE FRAME IS NAD83 (CORS 96), EPOCH 2002.0000.

ELEVATIONS SHOWN ON THIS SURVEY ARE BASED ON NAVD88 AS DERIVED FROM GPS OBSERVATIONS.

LEGEND

MONITORING WELL LOCATION
(PCE CONCENTRATION)

Stantec
Stantec Consulting Inc.
Suite 100, 6980 Sierra Center Parkway
Reno NV U.S.A.
89511
Tel. 775.850.0777
Fax. 775.850.0787
www.stantec.com

FOR:
HURZEL PROPERTIES, LLC
949 EMERALD BAY DRIVE
SOUTH LAKE TAHOE, CALIFORNIA

PCE Groundwater Concentration Map (September 30, 2008)

FIGURE: 3

JOB NUMBER: | DRAWN BY: | CHECKED BY: | APPROVED BY: | DATE:

Stantec

Stantec Consulting Inc.
6980 Sierra Center Parkway Suite 100
Reno NV 89511
Tel: (775) 850-0777
Fax: (775) 850-0787

TABLES

TABLE 1: GROUNDWATER ELEVATION AND ANALYTICAL DATA

THIRD QUARTER 2008 WATER QUALITY REPORT
FORMER DRY CLEANING BUSINESS
949 EMERALD BAY DRIVE
SOUTH LAKE TAHOE, CALIFORNIA 96150
Stantec Project #93OT.07412.01
December, 2008

Table 1
Groundwater Elevation and Analytical Data

Former Dry Cleaning Business
949 Emerald Bay Drive
South Lake Tahoe, California

Well ID	Date Sampled	Well Elevation (feet, amsl)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, amsl)	EPA Method 8260B PCE (µg/l)
MW-1	11/15/07	6263.56	10.68	6252.88	<1.0
	03/19/08		7.88	6255.68	<1.0
	06/30/08		8.96	6254.60	<1.0
	09/30/08		9.28	6254.28	<1.0
MW-2	11/15/07	Not Surveyed	10.58	NA	**39**
	03/19/08	Well no longer in use.			
MW-3	11/15/07	6265.13	12.34	6252.79	**6.5**
	03/19/08		9.44	6255.69	<1.0
	06/30/08		10.46	6254.67	<1.0
	09/30/08		11.54	6253.59	**54**
MW-4	11/15/07	6266.66	12.05	6254.61	**690**
	03/19/08		10.17	6256.49	**1,000**
	06/30/08		9.97	6256.69	**600**
	09/30/08		11.83	6254.83	**1,300**
MW-5	11/15/07	MW-5 had not been installed			
	03/19/08	6263.62	8.02	6255.60	**110**
	06/30/08		9.18	6254.44	**57**
	09/30/08		8.55	6255.07	**400**

Explanation:

EPA = Environmental Protection Agency
TOC = below top of well casing
amsl = above mean sea level
µg/l = micrograms per liter
NA = Not Available
NM = Not Measured
NS = Not Sampled
< = Denotes less than the specified laboratory reporting limit

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APPENDIX A

FIELD AND LABORATORY PROCEDURES

THIRD QUARTER 2008 WATER QUALITY REPORT
FORMER DRY CLEANING BUSINESS
949 EMERALD BAY DRIVE
SOUTH LAKE TAHOE, CALIFORNIA 96150
Stantec Project #93OT.07412.01
December, 2008

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Stantec Consulting Inc.
6980 Sierra Center Parkway Suite 100
Reno NV 89511
Tel: (775) 850-0777
Fax: (775) 850-0787

FIELD AND LABORATORY PROCEDURES

Groundwater Monitoring and Sampling Procedures

The sampling procedure for each well includes measuring the water level and checking for the presence of separate-phase hydrocarbons (SPH). Site-related monitoring wells are measured on one day and before any wells are purged to limit fluctuations in groundwater elevation. Equipment used to measure depth-to-water in each well is decontaminated in an Alconox detergent solution and rinsed between wells. If SPH are detected in a monitoring well, the well is not sampled. Monitoring wells in which no SPH is detected are purged using either a submersible pump or clean, disposable Teflon bailer, depending on depth-to-water, total depth of the well, and well diameter.

During purging, temperature, pH, and electric conductivity are monitored with a calibrated, portable field instrument. A minimum of three casing volumes is purged from each well. If a well is purged dry, it is allowed to recharge to 80% of its original depth-to-water, or for no more than 24 hours, before a sample is taken. After field readings have stabilized or at least three casing volumes have been removed, a groundwater sample is collected using a disposable bailer.

The sample is decanted into an appropriate sample container for the required analysis. Immediately following collection, samples are placed into an insulated cooler chilled with ice to an approximate temperature of four degrees centigrade. The samples are then transported to the analytical laboratory via overnight mail or personal delivery. Decontamination of purging equipment is performed between each well by submerging and scrubbing the equipment in an Alconox detergent bath, then twice rinsing in deionized water. Purged groundwater and decontamination solution collected during sampling is containerized in 55-gallon drums pending disposal by a licensed recycler.

Laboratory Procedures

The groundwater samples are analyzed for the presence of PCE by EPA Method 8260B. The methods of analysis for groundwater samples and chain-of-custody documentation are included in the certified analytical report.

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APPENDIX B

WELL SAMPLING FIELD DATA SHEET

THIRD QUARTER 2008 WATER QUALITY REPORT
FORMER DRY CLEANING BUSINESS
949 EMERALD BAY DRIVE
SOUTH LAKE TAHOE, CALIFORNIA 96150
Stantec Project #93OT.07412.01
December, 2008

MONITORING WELL DATA FORM

Client Name	Frost-Hurzel 93OT.07412.01	Sampler Name	Eric Farrar
Site Location	South Lake Tahoe, California	Date	30-Sep-08

	Well ID	Time	Depth to Water (feet)	Total Well Depth (feet)	Water column Thickness (feet)	Well ϕ (ft)	3 Purge Volume (gal)	Actual Purge Volume (gal)	Temp. (C)	pH (units)	Conductivity (uS/cm)	Purge /Sampling Method
1	MW-1		9.28	23.48	14.20	2	6.39	6.5	12.8	6.50	320	Disposable Bailer
	Comments:								12.1	6.28	341	
									11.9	6.20	375	
2	MW-5		8.55	22.68	14.13	2	6.35	6.5	13.1	6.38	1041	Disposable Bailer
	Comments:								12.5	6.32	1082	
									12.5	6.30	1105	
3	MW-3		11.54	23.32	11.78	2	5.30	5.5	11.7	6.71	560	Disposable Bailer
	Comments:								11.1	6.73	571	
									11.3	6.65	575	
4	MW-4		11.83	23.58	11.75	2	5.28	5.5	13.2	6.25	873	Disposable Bailer
	Comments:								13.0	6.20	875	
									12.8	6.17	870	

2"ϕ 0.16 gal/ft

2"ϕ 0.16 gal/ft * 3 = 0.45 gal/ft

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6980 Sierra Center Parkway Suite 100
Reno NV 89511
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Fax: (775) 850-0787

APPENDIX C

LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY RECORDS

THIRD QUARTER 2008 WATER QUALITY REPORT
FORMER DRY CLEANING BUSINESS
949 EMERALD BAY DRIVE
SOUTH LAKE TAHOE, CALIFORNIA 96150
Stantec Project #93OT.07412.01
December, 2008

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Stantec Consulting Corporation
6980 Sierra Center Parkway
Reno, NV 89511

Attn: Eric Farrar
Phone: (775) 850-0777
Fax: (775) 850-0787
Date Received : 10/02/08

Job#: 93OT.07412.01

Volatile Organic Compounds (VOCs) EPA Method SW8260B

		Parameter	Concentration	Reporting Limit	Date Sampled	Date Analyzed
Client ID :	MW-3F					
Lab ID :	STA08100265-01A	Tetrachloroethene	54	1.0 µg/L	09/30/08	10/06/08
Client ID :	MW-1F					
Lab ID :	STA08100265-02A	Tetrachloroethene	ND	1.0 µg/L	09/30/08	10/06/08
Client ID :	MW-5F					
Lab ID :	STA08100265-03A	Tetrachloroethene	400	5.0 µg/L	09/30/08	10/06/08
Client ID :	MW-4F					
Lab ID :	STA08100265-04A	Tetrachloroethene	1,300	20 µg/L	09/30/08	10/06/08

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com
Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV16.

10/9/08
Report Date

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: STA08100265 **Project:** 93OT.07412.01

Alpha's Sample ID	Client's Sample ID	Matrix	pH
08100265-01A	MW-3F	Aqueous	2
08100265-02A	MW-1F	Aqueous	2
08100265-03A	MW-5F	Aqueous	2
08100265-04A	MW-4F	Aqueous	2

10/9/08
Report Date

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 09-Oct-08

QC Summary Report

Work Order: 08100265

Method Blank

Type MBLK | Test Code: EPA Method SW8260B

File ID: 08100605.D | Batch ID: MS08W1006A | Analysis Date: 10/06/2008 11:20

Sample ID: MBLK MS08W1006A | Units : µg/L | Run ID: MSD_08_081006A | Prep Date: 10/06/2008

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Tetrachloroethene	ND	1								
Surr: 1,2-Dichloroethane-d4	9.52		10		95	75	128			
Surr: Toluene-d8	11.1		10		111	80	120			
Surr: 4-Bromofluorobenzene	9.23		10		92	80	120			

Laboratory Control Spike

Type LCS | Test Code: EPA Method SW8260B

File ID: 08100603.D | Batch ID: MS08W1006A | Analysis Date: 10/06/2008 10:33

Sample ID: LCS MS08W1006A | Units : µg/L | Run ID: MSD_08_081006A | Prep Date: 10/06/2008

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	9.7	1	10		97	80	120			
Methyl tert-butyl ether (MTBE)	9.74	0.5	10		97	70	130			
Benzene	9.4	0.5	10		94	70	130			
Trichloroethene	10.1	1	10		101	70	130			
Toluene	10.3	0.5	10		103	80	120			
Chlorobenzene	10.8	1	10		108	70	130			
Ethylbenzene	10.5	0.5	10		105	80	120			
m,p-Xylene	10.9	0.5	10		109	70	130			
o-Xylene	11.3	0.5	10		113	70	130			
Xylenes, Total	22.2	0.5	20		111	70	130			
Surr: 1,2-Dichloroethane-d4	10.1		10		101	75	128			
Surr: Toluene-d8	10.3		10		103	80	120			
Surr: 4-Bromofluorobenzene	10.1		10		101	80	120			

Sample Matrix Spike

Type MS | Test Code: EPA Method SW8260B

File ID: 08100606.D | Batch ID: MS08W1006A | Analysis Date: 10/06/2008 11:44

Sample ID: 08100265-01AMS | Units : µg/L | Run ID: MSD_08_081006A | Prep Date: 10/06/2008

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	52.1	2.5	50	0	104	66	132			
Methyl tert-butyl ether (MTBE)	54.5	1.3	50	0	109	62	139			
Benzene	51.3	1.3	50	0	103	70	130			
Trichloroethene	55.7	2.5	50	0	111	69	130			
Toluene	56.9	1.3	50	0	114	67	130			
Chlorobenzene	58.3	2.5	50	0	117	70	130			
Ethylbenzene	55.9	1.3	50	0	112	70	130			
m,p-Xylene	58.5	1.3	50	0	117	69	130			
o-Xylene	60.5	1.3	50	0	121	70	130			
Xylenes, Total	119	1.3	100	0	119	70	130			
Surr: 1,2-Dichloroethane-d4	49.1		50		98	75	128			
Surr: Toluene-d8	52.1		50		104	80	120			
Surr: 4-Bromofluorobenzene	48.1		50		96	80	120			

Sample Matrix Spike Duplicate

Type MSD | Test Code: EPA Method SW8260B

File ID: 08100607.D | Batch ID: MS08W1006A | Analysis Date: 10/06/2008 12:08

Sample ID: 08100265-01AMSD | Units : µg/L | Run ID: MSD_08_081006A | Prep Date: 10/06/2008

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	53.6	2.5	50	0	107	66	132	52.06	2.8(20)	
Methyl tert-butyl ether (MTBE)	57.2	1.3	50	0	114	62	139	54.45	4.9(20)	
Benzene	52.9	1.3	50	0	106	70	130	51.27	3.1(20)	
Trichloroethene	57.9	2.5	50	0	116	69	130	55.74	3.9(20)	
Toluene	58.7	1.3	50	0	117	67	130	56.9	3.1(20)	
Chlorobenzene	60	2.5	50	0	120	70	130	58.29	2.8(20)	
Ethylbenzene	58.2	1.3	50	0	116	70	130	55.9	4.0(20)	
m,p-Xylene	60.8	1.3	50	0	122	69	130	58.54	3.8(20)	
o-Xylene	63.4	1.3	50	0	127	70	130	60.5	4.6(20)	
Xylenes, Total	124	1.3	100	0	124	70	130	119	4.2(20)	
Surr: 1,2-Dichloroethane-d4	49		50		98	75	128			
Surr: Toluene-d8	51.3		50		103	80	120			
Surr: 4-Bromofluorobenzene	48.2		50		96	80	120			

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: *09-Oct-08*

QC Summary Report

Work Order: 08100265

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Billing Information :
Stantec Consulting Corporation
6980 Sierra Center Parkway
Suite 100
Reno, NV 89511

CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
TEL: (775) 355-1044 FAX: (775) 355-0406

NV
WorkOrder : STAR08100265
Report Due By : 5:00 PM On : 09-Oct-08

Client:
Stantec Consulting Corporation
6980 Sierra Center Parkway
Suite 100
Reno, NV 89511

Report Attention	Phone Number	EMail Address
Eric Farrar	(775) 850-0777 x	Eric.Farrar@stantec.com
Grace Jacoby	(775) 850-0777 x	Grace.Jacoby@stantec.com
Jeff Collins	(775) 850-0777 x	jcollins@stantec.com

EDD Required : Yes
Sampled by : Eric Farrar

PO : Frost-Hurzel
Client's COC # : none
Job : 93OT.07412.01

Cooler Temp	Samples Received	Date Printed
4 °C	02-Oct-08	02-Oct-08

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	No. of Bottles Sub	TAT	Requested Tests VOC_W								Sample Remarks
STA08100265-01A	MW-3F	AQ	09/30/08 08:30	3	0	5	PCE_C								
STA08100265-02A	MW-1F	AQ	09/30/08 08:00	3	0	5	PCE_C								
STA08100265-03A	MW-5F	AQ	09/30/08 09:00	3	0	5	PCE_C								
STA08100265-04A	MW-4F	AQ	09/30/08 09:30	3	0	5	PCE_C								

Comments: Samples brought in by client. Frozen ice. :

	Signature	Print Name	Company	Date/Time
Logged in by:	Tara Dickinson	Tara Dickinson	Alpha Analytical, Inc.	10/2/08 1601

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.
The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other)   Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information: Stantec
Address: 6980 Sierra Center Parkway, Ste 100
City, State, Zip: Reno, NV 89511
Samples Collected from which State? CA

EDD/EDF Required? Yes
Global ID # Pending
QC Level Required? I II III IV

Client:
P.O.: Frost-Hurzel
Job: 93OT.07412.01

Sampled by: Eric Farrar
Report Attention: Eric Farrar

Alpha Analytical, Inc.
255 Glendale Avenue
Suite 21
Sparks, NV 89431
(775) 355-1044
(775) 355-0406 Fax

Page # 1 of 1

STA08100265

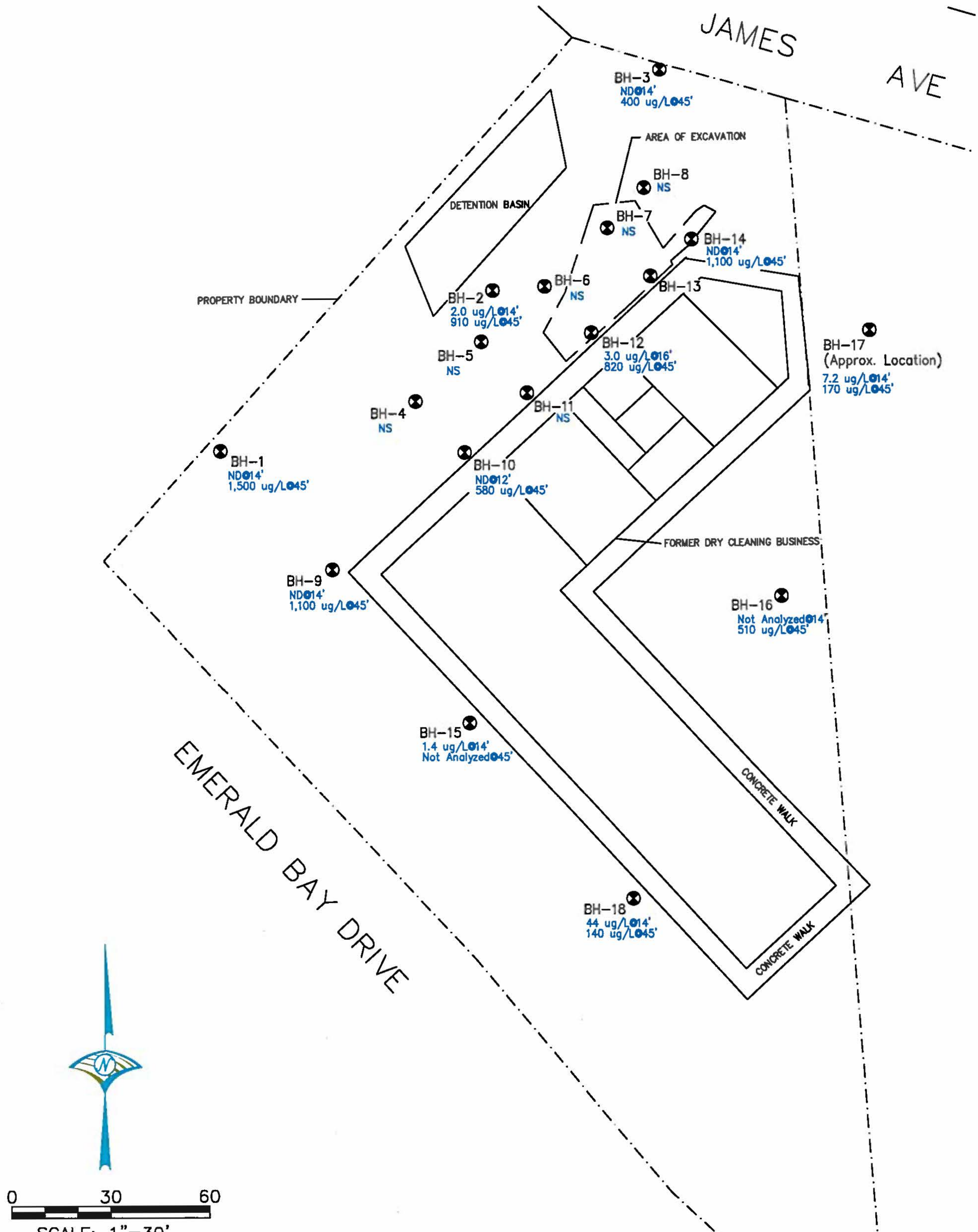
Time Sampled	Date Sampled	Matrix *	Lab ID (For Lab Use ONLY)	Sample Description	Containers **	TAT (Working Days)	PCE	Remarks
830	09/30/08	AQ		MW-3F	3V	Standard	X	-01
800	09/30/08	AQ		MW-1F	3V	Standard	X	-02
900	09/30/08	AQ		MW-5F	3V	Standard	X	-03
930	09/30/08	AQ		MW-4F	3V	Standard	X	-04

ADDITIONAL INSTRUCTIONS:
Please CC Jeff Collins Jcollins@secor.com

	Signature	Print Name	Company	Date	Time
Relinquished by:	Eric	Eric Farrar	Stantec	10/2/08	1400
Received by:	Tara Dickinson	Tara Dickinson	Alpha	10/2/08	1450
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

* Key: AQ - Aqueous WA - Waste OT - Other **: L - Liter V - VOA S-Soil Jar O - Orbo T - Tedlar B - Brass P - Plastic OT - Other

NOTE: Samples are discarded 60 days after sample receipt unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.



BASIS OF BEARINGS AND COORDINATES:

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 2, BASED ON GPS OBSERVATIONS. THE REFERENCE FRAME IS NAD83 (CORS 96), EPOCH 2002.0000.

ELEVATIONS SHOWN ON THIS SURVEY ARE BASED ON NAVD88 AS DERIVED FROM GPS OBSERVATIONS.

LEGEND

B-4 ⊗ SOIL SAMPLING LOCATION

NS = NOT SAMPLED

SECOR 1535 OLD HOT SPRINGS ROAD CARSON CITY, NEVADA PHONE: (775) 884-4561/884-4555 (FAX)	FOR: HURZEL PROPERTIES, LLC 949 EMERALD BAY DRIVE SOUTH LAKE TAHOE, CALIFORNIA		**PCE GROUNDWATER CONCENTRATION MAP (September 17-21, 2007)**		FIGURE: **5**
	JOB NUMBER: 93OT.07412.01	DRAWN BY: JRC	CHECKED BY: EF	APPROVED BY: MB	DATE: 5/27/08

EXHIBIT PP

United States
Environmental Protection
Agency

Office of Research and
Development
Washington DC 20460

EPA 625/6-90/016a
September 1990

EPA

Handbook

Ground Water

Volume I: Ground Water and Contamination

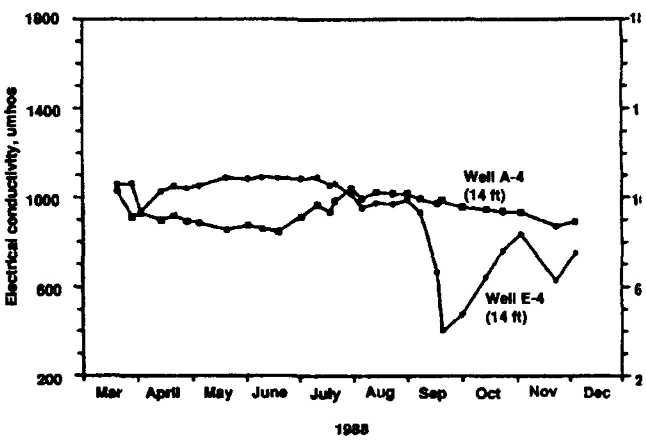


Figure 5-16. Runoff from a Roof Tends to Reduce the Electrical Conductivity of the Underlying Ground Water

monitoring and sampling. Since the natural quality of shallow ground water ranges fairly widely, background concentration is not a finite number but, rather, a range that may encompass an order of magnitude for major constituents, such as dissolved solids, and two or three orders of magnitude for minor forms, such as nitrate. In addition, the concentration might increase several fold a day or two after a rain, or decrease even more three to five or so days later. The question then arises as to the most appropriate time to sample. Available data suggest that the least biased sample could be obtained at least two weeks after a recharge event, but the interval is strongly influenced by the physical and chemical characteristics of the unsaturated zone and the depth to the water table.

In order to account for cyclic fluctuations in ground-water quality it is assumed that: (1) the unsaturated zone may store a considerable volume of water-soluble substances for long periods of time, and (2) the main paths along which contaminants rapidly move through the unsaturated zone to the water table consist largely of fractures and macropores.

Most macropores may be barely detectable without a close examination. Ritchie and others (1972) suggested that the interfaces between adjacent soil peds also serve as macropores. Moreover, these openings need not extend to the land surface in order for flow to occur in them (Quisenberry and Phillips, 1976). Nonetheless, water can flow below the root zone in a matter of minutes. Thomas and Phillips (1973) suggested that this type of flow does not appear to last more than a few minutes or perhaps, in unusual cases, more than a few hours after "cessation of irrigation or rain additions."

Even though there may be a considerable influx of contaminants through macropores and fractures to the water table following a rain, the concentration of solutes in the main soil matrix may change little, if at all. This is clearly indicated in studies by Shuford and others (1977) and again shows the major role of large openings. On the other hand, in the spring, when the soil-moisture content is high, some of the relatively immobile or stagnant soil water may percolate to the water table transporting salts with it. A similar widespread event may occur during the fall as a result of decreasing temperature and evapotranspiration, and of wet periods that might raise the soil-moisture content.

Ecologic conditions in fractures and macropores should be quite different from those in the main soil matrix, largely because of the greater abundance of oxygen and smaller moisture content. As a result, one might expect different microbial populations and densities, as well as chemical conditions in macropores and fractures than in the bulk soil matrix. Coupled with their far greater fracture permeability, this may help to explain why some biodegradable organic compounds or those that should be strongly sorbed actually reach the water table and move with the ground water.

Prediction of Contaminant Migration

In any ground-water contamination investigation it is essential to obtain the background concentration of the chemical constituents of concern, particularly those that might be common both to the local ground water and a contaminant. As mentioned previously, the water in shallow or surficial aquifers can undergo substantial fluctuations in chemical quality. Therefore, it is not always a simple task to determine background concentrations, particularly of the more conservative constituents, such as chloride or nitrate.

The severity of ground-water contamination is partly dependent on the characteristics of the waste or leachate, that is, its volume, composition, concentration of the various constituents, time rate of release of the contaminant, the size of the area from which the contaminants are derived, and the density of the leachate, among others. Data describing these parameters are difficult to obtain and commonly are lumped together into the term "mass flow rate," which is the product of the contaminant concentration and its volume and recharge rate, or leakage rate.

Once a leachate is formed it begins to migrate downward through the unsaturated zone where several physical, chemical, and biological forces act upon it. Eventually, however, the leachate may reach saturated strata where it will then flow primarily in a horizontal direction as defined by the hydraulic gradient. From this point on, the leachate will become diluted due to a number of phenomena, including filtration, sorption, chemical processes, microbial degradation, dispersion, time, and distance of travel.

Filtration removes suspended particles from the water mass, including particles of iron and manganese or other precipitates that may have been formed by chemical reaction. Dilution by sorption of chemical compounds is caused largely by clays, metal oxides and hydroxides, and organic matter, all of which function as sorptive material. The amount of sorption depends on the type of contaminant and the physical and chemical properties of the solution and the subsurface material.

Chemical processes are important when precipitation occurs as a result of excess quantities of ions in solution. Chemical processes also include volatization as well as radioactive decay. In many situations, particularly in the case of organic compounds, microbiological degradation effects are not well known, but it does appear, however, that a great deal of degradation can occur if the system is not overloaded and appropriate nutrients are available (see Chapter 7).

Dispersion of a leachate in an aquifer causes the concentration of the contaminants to decrease with increasing length of flow. It is caused by a combination of molecular diffusion, which is important only at very low velocities, and dispersion or hydrodynamic mixing, which occurs at higher velocities in laminar flow through porous media. In porous media, different macroscopic velocities and flow paths that have various lengths are to be expected. Leachate moving along a shorter flow path or at a higher velocity would arrive at an end point sooner than that part following a longer path or a lower velocity; this results in hydrodynamic dispersion.

Dispersion can be both longitudinal and transverse and the net result is a conic form downstream from a continuous contamination source. As Figure 5-17 shows, the concentration of the leachate is less at the margins of the cone and increases toward the source. Because dispersion is directly related to ground-water velocity, the size of a plume of contamination tends to increase with more rapid flow.

Since dispersion is affected by velocity and the configuration of the aquifer's pore spaces, coefficients must be determined experimentally or empirically for a given aquifer. There is considerable confusion regarding the quantification of the dispersion coefficient. Selection of dispersion coefficients that adequately reflect conditions that exist in an aquifer is a problem that can

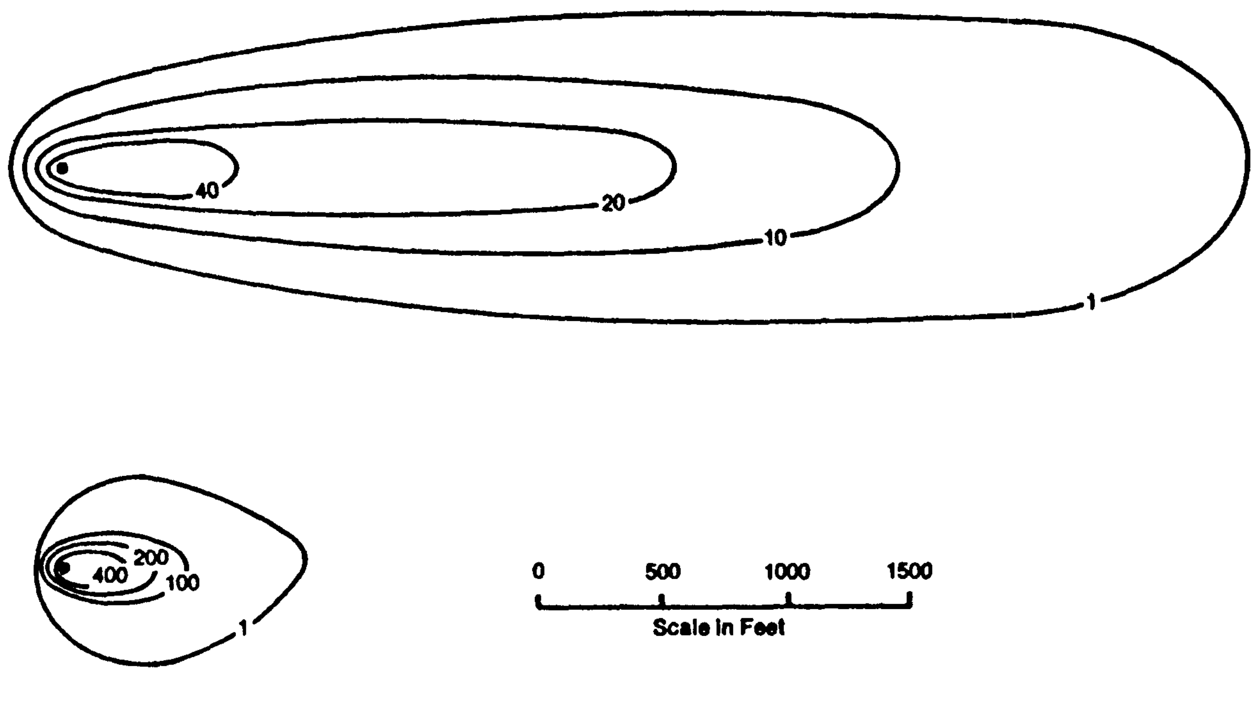


Figure 5-17. The Size and Concentration Distribution in a Contaminant Plume is Related to Ground-Water Velocity. Upper Plume Velocity is 1.5 feet/day; in lower Plume Velocity is 0.5 feet/day

not be readily solved and herein lies one of the major stumbling blocks of chemical transport models.

Often confused with the term dispersion (D_x = longitudinal dispersion and D_y = transverse dispersion) is dispersivity. Dispersion includes velocity: to transform from one to another requires either division or multiplication by velocity.

The rate of advance of a contaminant plume can be retarded if there is a reaction between its components and ground-water constituents or if sorption occurs. This is called retardation (R_d). The plume in which sorption and chemical reactions occur generally will expand more slowly and the concentration will be lower than the plume of an equivalent nonreactive leachate.

Hydrodynamic dispersion affects all solutes equally while sorption, chemical reactions, and microbial degradation affects specific constituents at different rates. As Figure 5-18 shows, a leachate source that contains a number of different solutes can have several solutes moving at different rates due to the attenuation processes.

The areal extent of plumes may range within rather wide extremes depending on the local geologic conditions, influences on the hydraulic gradient, such as pumping, ground-water velocity, and changes in the time rate of release of contaminants.

The many complex factors that control the movement of leachate and the overall behavior of contaminant plumes are difficult to assess because the final effect represents several factors integrated collectively. Likewise, concentrations for each constituent in a complex waste are difficult to obtain. Therefore, predictions of concentration and plume geometry, at best, can only be used as estimates, principally to identify whether or not a plume might develop at a site and, if so, to what extent. Models can be used to study plume migration, and as an aid in determining potential locations for monitoring wells, and to test various renovation or restoration schemes.

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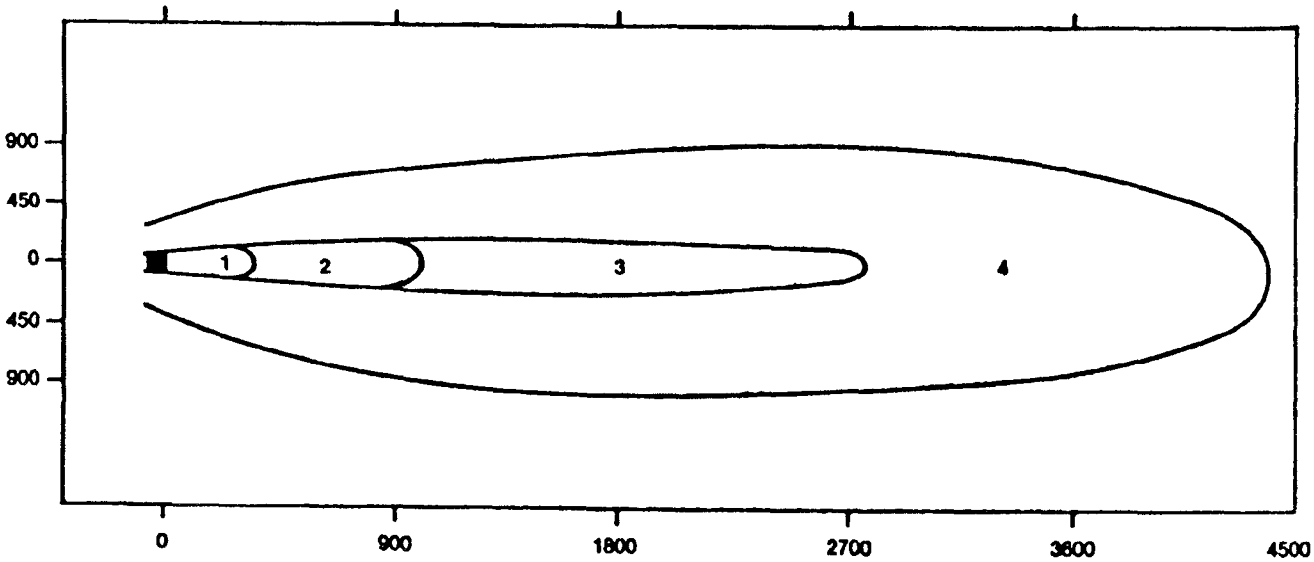

1. Chlorobenzene R_d = 35
2. Unknown = 15
3. Chloroform = 3
4. Chloride = 1

Plumes after 2800 days

Figure 5-18. Constituents Move at Different Rates Because of Retardation

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EXHIBIT QQ

Groundwater Contamination

Geophysics Study Committee
Geophysics Research Forum
Commission on Physical Sciences, Mathematics, and Resources
National Research Council

NATIONAL ACADEMY PRESS
Washington, D.C. 1984

2 Movement of Contaminants in Groundwater: Groundwater Transport—Advection and Dispersion

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Introduction

The relative success of attempts to model a process is a measure of how well it is understood. A first level of understanding produces a conceptual model and a higher level of understanding results in a quantitative model. Failure to understand dispersion in porous media at a level necessary for constructing reliable mathematical models has impeded progress in studying contaminant transport in groundwater. However, within the past 5 years there have been many attempts at improving our understanding of the nature of dispersion in porous media. As a result there has been significant progress in refining contaminant transport models. Some of this progress as well as background information on dispersion in porous media is reviewed in this chapter.

Dispersion in porous material refers to the spreading of a stream or discrete volume of contaminants as it flows through the subsurface. For example, if a spot of dye is injected into porous material through which groundwater is flowing, the spot will enlarge in size as it moves downgradient. More specifically, in a three-dimensional cartesian coordinate system where the average groundwater velocity is parallel to the x axis, a sphere of dye moving horizontally along the x axis will undergo longitudinal spreading or dispersion parallel to the x axis and transverse dispersion parallel to the y and z axes.

Dispersion causes mixing with uncontaminated groundwater, and hence dispersion is a mechanism for dilution. Moreover, dispersion causes the contaminant to spread over a greater volume of aquifer than would be predicted solely from an analysis of groundwater velocity vectors. This spreading effect will be of particular concern when toxic or hazardous wastes are involved. Dispersion is chiefly of importance in predicting transport away from point sources of contamination but is also influential in the spread of nonpoint-source contaminants, although of lesser importance. Contaminants introduced into the subsurface from nonpoint sources will be spread over a relatively large area because of the nature of the loading pattern. In this case, dispersion merely causes a relatively large zone of contaminated water to acquire some rough fringes. Dispersion is of interest because it causes contaminants to arrive at a discharge point (e.g., a stream or a water well) prior to the arrival time calculated from the average groundwater velocity. The accelerated arrival of contaminants at a discharge point is a characteristic feature of dispersion that is due to the fact that some parts of the contaminant plume move faster than the average groundwater velocity.

Dispersion is caused by both microscopic and macroscopic effects. Mechanical dispersion on a microscopic scale (Figure 2.1) is a result of deviations of velocity on a microscale from the average groundwater velocity. These velocity variations arise because water in the center of a pore space travels faster than the water near the wall and because diversion of flow paths around individual grains of porous material causes variations in average velocity among different pore spaces. These two factors create mechanical dispersion on a microscopic scale. In addition, it is customary to include molecular diffusion as a component of microscopic dispersion. Molecular diffusion occurs as species move from higher to lower concentrations. Thus, microscopic dispersion includes the effects of mechanical dispersion and molecular diffusion.

One of the first field and laboratory investigations of dispersion in porous media was performed by Slichter (1905). He obtained S-shaped breakthrough curves (concentration versus time curves), which are characteristic of flow affected by dis persion, during field tracer tests that he performed for the purpose of estimating groundwater velocity. He correctly attributed the effect to dispersion:

> The writer formerly supposed that the gradual appearance of the electrolyte at the downstream well was largely due to the diffusion of the dissolved salt, but it is now evident that diffusion plays but a small part in the result. The principal cause of the phenomena [sic] is now known to be due to the fact that the central thread of water in each capillary pore of the soil moves faster than the water at the walls of the capillary pore, just as the water near the central line of a river channel usually flows faster than the water near the banks. . .. Owing to the repeated branching and subdivision of the capillary pores around the grains of the sand and gravel, the stream of electrolyte issuing from the well will gradually broaden as it passes downstream. The actual width of this charged water varies somewhat with the velocity of the ground water. . .. (Slichter, 1905, p. 23).

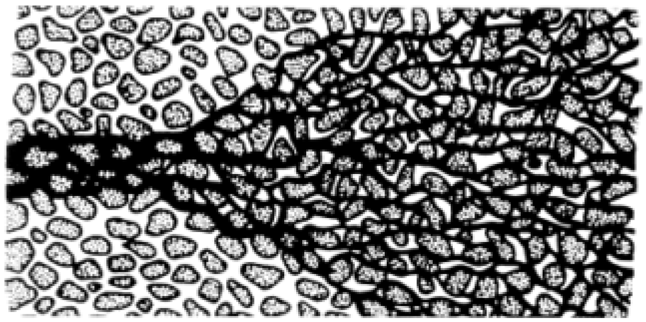

Figure 2.1
Microscopic dispersion (adapted from Freeze and Cherry, 1979).

In subsequent laboratory experiments Slichter (1905, p. 41) studied the phenomenon more carefully and concluded that "the spread of the electrolyte, as shown by these experiments, is not to be explained by the diffusion of the salt, but must be explained by the continued branching and subdivision of the capillary pores around the individual grains of the sand."

In fact, some of the dispersion observed by Slichter in field studies was probably a result of macroscopic dispersion. On a macroscopic scale, dispersion is caused by the presence of large-scale heterogeneities within the subsurface. For example, Skibitzkie and Robinson (1963) demonstrated that lenses of high-permeability material within a matrix of lower permeability caused the spreading of streams of dye as water and dye moved through a tank filled with sand (see Figure 2.2). It is now generally recognized that the presence of heterogeneities in the subsurface, rather than microscopic dispersion alone, is responsible for the appreciable spreading of contaminants documented in a number of field studies (e.g., Anderson, 1979).

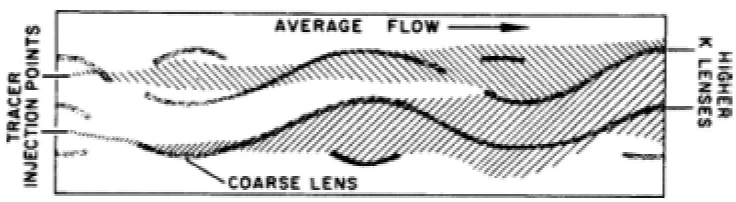

Figure 2.2
Macroscopic dispersion (adapted from Skibitzkie and Robinson, 1963).

Pioneering theoretical work on dispersion was done by Taylor (1921, 1953), and serious efforts at applying modified forms of this theory to field studies involving the transport of contaminants in groundwater have been under way since the early 1970s. However, there is still considerable uncertainty concerning methods for quantifying dispersion and for measuring dispersion in the field. To some extent this uncertainty has impeded progress in developing reliable contaminant-transport models. However, within the past 5 yr there has been much effort and some progress in quantifying macroscopic dispersion. These efforts are reviewed below.

Advection-Dispersion Equation

Most attempts at quantifying contaminant transport have relied on a solution of some form of a well-known governing equation referred to as the advection-dispersion equation. Advection refers to the transport of contaminants at the same speed as the average linear velocity of groundwater (v), where

$$v = KI/n \qquad (2.1)$$

and K is hydraulic conductivity, I is the head gradient, and n is effective porosity. The velocity defined by Eq. (2.1) has also been called the average pore velocity. The nomenclature used here (i.e., average linear velocity) was introduced by Freeze and Cherry (1979). Moreover, the term *advection* is used here in preference to the term *convection* because convection often carries the connotation of transport in response to temperature-induced density gradients.

The advection-dispersion equation is derived by combining a mass-balance equation with an expression for the gradient of the mass flux (see Bear, 1972; Wang and Anderson, 1982). The difficulties in quantifying dispersion are related to the fact that field studies of flow through porous media are by necessity conducted at a macroscopic rather than a microscopic level. For example, Darcy's law, the fundamental equation for describing flow through porous media, is a macroscopic equation. That is, *K, I*, and *n* in Eq. (2.1) are measured in some representative elementary volume (REV), and these values are assumed to represent an average of *K, I*, and *n* within the REV. Likewise, spatial averaging is routinely done when deriving the advection-dispersion equation. Fried (1975) noted that "The basis of dispersion theory is a *measurement* problem. . . . Theoretical macroscopic concentration, for instance, which appears in mathematical models, should correspond to the experimental concentration; this is not simple. . . ."

The standard approach in analyzing dispersion, which is embodied in the advection-dispersion equation, is to use an average linear velocity. A number of investigators maintain that this approach is reasonable because it will never be practical to define the velocity field in detail.

The key assumption in deriving a term to represent dispersion is that dispersion can be represented by an expression analogous to Fick's second law of diffusion:

$$\text{mass flux due to dispersion} = \frac{\partial}{\partial x_i}\left(D^*_{ij}\frac{\partial c}{\partial x_j}\right), \qquad (2.2)$$

where c is concentration and D^*_{ij} is the coefficient of dispersion (the *i, j* indices refer to cartesian coordinates). The coefficient of dispersion can be shown to be a second-rank tensor, where

$$D^*_{ij} = D_{ij} + D_d. \qquad (2.3)$$

Then, D_{ij} is the coefficient of mechanical dispersion and D_d is the coefficient of molecular diffusion (a scalar). An effective diffusion coefficient is generally taken to be equal to the diffusion coefficient of the ion in water (D_d) times a tortuosity factor. The tortuosity factor has a value less than 1 and is needed to correct for the obstructing effect of the porous medium. Effective diffusion coefficients are generally around 10^{-6} cm^2/ sec, although a range of 10^{-5} to 10^{-7} cm^2/sec is not inconceivable (Grisak and Pickens, 1981). Except for systems in which groundwater velocities are very low, the coefficient of mechanical dispersion generally will be one or more orders of magnitude larger than D_d. Therefore, in many practical applications the effects of molecular diffusion may be neglected ($D_d = 0$). The coefficient of mechanical dispersion is routinely taken to be the product of the magnitude of the velocity vector times a parameter known as dispersivity, which is commonly and somewhat vaguely referred to as a characteristic mixing length.

The advection-dispersion equation in its most general form is written

$$\underbrace{\frac{\partial}{\partial x_i}\left(D^*_{ij}\frac{\partial c}{\partial x_j}\right)}_{\text{dispersion term}} - \underbrace{\frac{\partial}{\partial x_i}(cv_i)}_{\text{advection term}} - \underbrace{\frac{c'W}{n}}_{\text{sink/source term}} + \underbrace{\sum_{k=1}^{s} R_k}_{\text{chemical-reaction term}} = \frac{\partial c}{\partial t}, \qquad (2.4)$$

where *c*' is the concentration of solute in a source or sink fluid, and W is the volume flow rate of the sink or source fluid per unit volume of porous material. In the chemical-reaction term, R_k is the rate of production of the solute in reaction *k* of *s* different reactions. The problems involved in quantifying the chemical-reaction term are discussed in Chapter 3 of this report.

If the advection-dispersion equation is to be used to evaluate dispersion in groundwater systems, two questions must be addressed:

1. Is it valid to assume that the dispersion component of Eq. (2.4) can be represented by a form of Fick's law [Eq. (2.2)]?
2. Can dispersivity be defined in terms of physically measurable parameters?

Is Dispersion a Fickian Process?

Much of the theory on which the analysis of dispersion in porous material and in rivers is based stems from the pioneering work of Taylor (1921, 1953), who suggested that dispersion could be represented as a Fickian process. This assumption as applied to porous media has since been questioned by several researchers. Fried (1975, pp. 17-27) cites several examples of laboratory experiments in which the experimental results did not fit theoretical curves derived from solutions of the advection-dispersion equation, and Dagan (1982) noted that "there is no *a priori* reason to believe that the diffusion type equation is valid at all" for contaminant transport through porous media.

Taylor and others (e.g., Fischer, 1973) who continued the development of the theory of dispersion clearly recognized that the Fickian assumption is valid only after a certain length of time has elapsed in which the dispersion process develops. A procedure for predicting the length of this initial development period has not yet been perfected. Indeed, until recently it was not recognized that for the heterogeneous systems encountered in the field this development process requires substantial transport from the source. For example, some researchers believe that dispersion becomes Fickian only at distances on the order of 10s to 100s of meters from the source in porous media (Matheron and DeMarsily, 1980; Gelhar and Axness, 1981; Dagan, 1982) and on the order of kilometers in rivers (Beltaos and Day, 1978). Furthermore, in certain hydrogeologic settings dispersion may never become Fickian (Matheron and DeMarsily, 1980; Smith and Schwartz, 1980).

After the initial development period, that is when dispersion has become Fickian, the concentration distribution and concentration-time profiles should behave according to particular solutions of Eq. (2.4). Specifically, the solution for instantaneous release of a contaminant from a point source predicts that concentration-distance curves will approximate a Gaussian distribution except for short times [Figure 2.3(a)]. However, concentration-time curves are typically skewed on the right except for long times or large distances from the source [Figure 2.3(b)].

The problems in applying Taylor dispersion theory to rivers are discussed in some detail by Beltaos and Day (1978). Most concentration-time curves obtained from tracer studies in rivers are skewed on the right, and Gaussian curves are rare (Day and Wood, 1976). Beltaos and Day (1978) noted that concentration-time curves in the Lesser Slave River deviated less from the Gaussian than did several mountain streams studied by Day (1975) and concluded that the Lesser Slave River is less "irregular" in that it deviates less from prismatic laboratory flumes where Gaussian curves are normally obtained relatively quickly. They also demonstrated that concentration-time curves for this river approximated Gaussian curves at a distance of about 14 km from the tracer release point. However, the growth of the variance of the concentration distribution during the non-Gaussian period did not follow a Fickian model. If dispersion is a Fickian process, then the variance of the concentration distribution should increase linearly with time or distance, and the longitudinal dispersion coefficient and the dispersivity will be a constant for constant velocity. However, the variance of the concentration distribution in the rivers considered by Beltaos and Day (1978) increased with the square of the distance and the dispersion coefficient, and the dispersivity also increased with distance for constant velocity. Based on these analyses it appears that the initial development period of non-Fickian behavior may be long for many rivers.

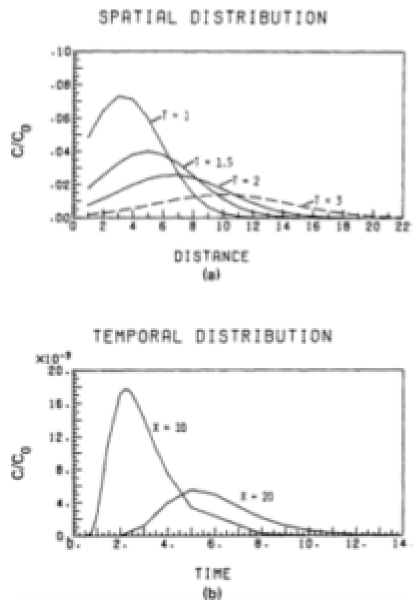

Figure 2.3 (a)
Concentration distribution in space; (b) concentration-time curves. C/C_o is a dimensionless concentration. The dimensions of distance and time and other variables and parameters are any consistent set of units (e.g., distance in meters, time in days, and velocity in meters/day). In this example, velocity and longitudinal dispersivity were set equal to 1.0 and transverse dispersivities were 1/20.

Similar behavior has been predicted for porous media on the basis of theoretical studies (Gelhar *et al.*, 1979; Matheron and DeMarsily, 1980; Dagan, 1982). Specifically, for long times or large travel distances, dispersion in some geologic settings can be accurately represented as a Fickian process. However, under certain conditions (e.g., flow parallel to bedding where lateral dispersion across bedding planes is negligible) theoretical studies suggest that the Fickian limit (also known as the Taylor limit) may never be reached and dispersion may never become Fickian (Mercado, 1967; Gelhar *et al.*, 1979; Matheron and DeMarsily, 1980). Similarly, Smith and Schwartz (1980), who conducted many numerical experiments of hypothetical aquifers, found that for most of the situations that they modeled the variance of the concentration distribution was highly irregular and did not approximate a Gaussian distribution within the lengths of the simulated flow paths.

Field evidence to corroborate these theoretical findings for porous media is sparse. Results from a field tracer test described by Sudicky and Cherry, (1979) suggested that the concentration patterns were somewhat irregular near the source of the tracer but became approximately Gaussian farther down-gradient. An analysis of the variance of the concentration distribution by Sudicky and Cherry. (1979) indicated that the growth of the variance was nonlinear and the dispersivity increased with distance. Several other investigators (Molinari *et al.*, 1977; Lee *et al.*, 1980; Pickens and Grisak, 1981a, 1981b) also noted an increase in dispersivity with distance from the tracer source, which indicates that dispersion was not Fickian within the distances in which the measurements were taken (see Figure 2.4).

Definition of Dispersivity

Contaminant transport models usually have been applied to existing waste-disposal sites where a contaminant plume had been identified during a field monitoring program. The standard modeling procedure has been to adjust values of dispersivity until the model correctly reproduces the observed concentration distribution. Anderson (1979), among others, noted that dispersivity values used in most applications of contaminant transport models through 1979 were calibration (or fitting) parameters. Values in the range of 3 to 200 m have been reported (see Anderson, 1979), but these values may not be physically meaningful. In order to obtain meaningful predictions of contaminant movement at existing sites and to apply advection-dispersion models to new or proposed sites, an accurate way of quantifying dispersivity needs to be developed.

Results from theoretical studies suggest that dispersion is non-Fickian near the source of the contaminant but that dispersion generally becomes Fickian at large times or travel distances, when a constant dispersivity value is achieved. Therefore, for large times, it should be possible to use the standard form of the advection-dispersion equation [Eq. (2.4)] if the dispersivity parameter in the coefficient of mechanical dispersion can be evaluated in terms of parameters that can be measured in the field.

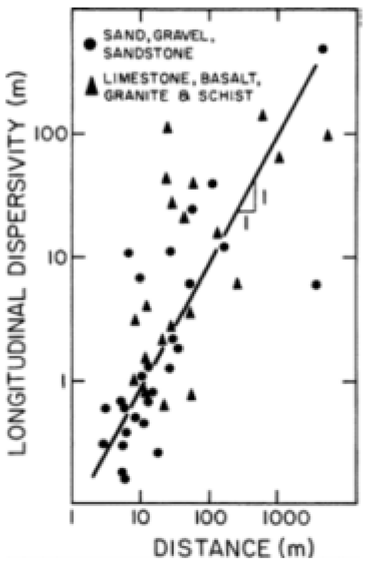

Figure 2.4
Variation of dispersivity with distance (adapted from Lallemand-Barres and Peaudecerf, 1978).

Gelhar *et al.* (1979) showed that near the source, dispersivity steadily increases with distance and at the Taylor limit approaches an asymptotic value. Gelhar *et al.* (1979) and Gelhar and Axness (1981, 1983) derived a variety of expressions for evaluating the asymptotic longitudinal and transverse dispersivities. In their analyses, the asymptotic dispersivity is expressed in terms of various statistical properties of the hydraulic conductivity distribution. For example, for the perfectly stratified aquifer considered by Gelhar *et al.* (1979), the asymptotic value for the longitudinal dispersivity is $\alpha_L + A_x$, where

$$A_x = \frac{1}{3\alpha_T}(\sigma_k\, l/\overline{K})^2, \qquad (2.5)$$

where σ_K is the standard deviation of the log normal hvdraulic conductivity distribution; l is a correlation length, and $\overline{K}$ is the mean hydraulic conductivity. The parameters α_L and α_T are, respectively, the local longitudinal and transverse dispersivities defined at the level of the representative elementary volume (REV) used in the spatial averaging that is routinely done when deriving the advection-dispersion equation. Local dispersivities are on the order of 10^{-2} to 1 cm for laboratory experiments and range from 10^{-1} to 10^{2} m for tracer tests in the more heterogeneous porous material typically encountered in the field (see Klotz *et al.*, 1980). However, it is likely that some of the dispersivities calculated on the basis of field tracer tests are biased by the so-called scale effect (see Figure 2.4). That is, because dispersivity increases with distance from the injection point, some of the values reported from tracer tests are too high to be representative of local dispersivities and in fact are equivalent dispersivities that represent dispersion between the measuring point and the injection point. Typical values for the local longitudinal dispersivity are probably on the order of 10^{-2} to 1 m (Gelhar *et al.*, 1979; Matheron and DeMarsily, 1980; Gelhar and Axness, 1981). Transverse dispersivity is smaller than longitudinal dispersivity; ratios of longitudinal to transverse dispersivity on the order of 10 to 100 have been suggested (see Anderson, 1979).

According to the general three-dimensional analysis of Gelhar and Axness (1981), dispersivity is a second-rank symmetric tensor (A_{ij}). Their result is in contrast to the somewhat alarming finding of de Josselin de Jong (1968), who concluded that dispersivity is a tensor of infinite rank in the anisotropic case. Gelhar and Axness (1981) showed that in the general three-dimensional case with random orientation of stratification, the longitudinal dispersivity is $\alpha_L + A_{II}$, where

$$A_{11} = \sigma_k^2\,\lambda_*/\gamma^2 \qquad (2.6)$$

and λ_* is a correlation scale; λ is a mean flow parameter that can be approximated by $1 + \sigma_K^2/6$ for small values of σ_K^2 or exp $(\sigma_K^2/6)$ for large σ_K^2. Gelhar and Axness (1981) also present more involved expressions for the other components of A_{ij}.

Matheron and DeMarsily (1980) analyzed dispersion for the case of two-dimensional flow through a stratified aquifer. According to their analysis the magnitude of the asymptotic longitudinal dispersivity is dependent on the magnitude of the ratio of vertical to horizontal velocities. As this ratio increases, the asymptotic dispersivity becomes small. They were pessimistic about predicting the asymptotic dispersivity *a priori* because the value will change with changes in the flow field. Gelhar and Axness (1981) analyzed three-dimensional dispersion in a stratified aquifer, and their expression for longitudinal dispersivity was also dependent on a mean flow parameter as is Eq. (2.6). However, they suggest that the mean flow parameter (γ) can be expressed in terms of the variance of the hydraulic conductivity distribution. Dagan (1982) showed that for a porous media having a three-dimensional isotropic but heterogeneous structure, the asymptotic value for the dispersivity is equal to $l\sigma_K^2$, where l is the length characterizing the exponential autocorrelation of the natural logarithm of the hydraulic conductivity and σ_K^2 is the variance of the natural logarithm of the hydraulic conductivity.

For large times or large distances it may be possible to use expressions like Eqs. (2.5) and (2.6) to calculate values for dispersivity for use in the advection-dispersion equation. If dispersion does in fact become Fickian at large times or distances, a key question is: What is the length of time that must elapse before the advection-dispersion equation is applicable and expressions such as Eqs. (2.5) and (2.6) are valid? Matheron and DeMarsily (1980) found that for a typical set of aquifer parameters, the Taylor limit would be reached after 140 days and 600 m of travel. Gelhar and Axness (1981) and Smith and Schwartz (1980) also suggested that the Taylor limit will not be reached until the contaminant has traveled on the order of tens or hundreds of meters from the source. According to a theoretical analysis by Dagan (1982), dispersion should be Fickian at a distance from the source approximately equal to 50 *L*, where *L* is the integral scale of the natural logarithm of the hydraulic conductivity distribution. For two-dimensional flow fields, *L* may be hundreds to thousands of meters, but for three-dimensional analyses L is expected to be on the order of meters.

While there has been much progress in defining dispersivity at large distances from the source, no clear consensus has emerged regarding the appropriate way to quantify dispersion near the source before the Taylor limit is reached. Gelhar *et al.* (1979) derived a revised form of the advection-dispersion equation, which includes several additional terms of higher order that are required to represent dispersion close to the source. They then analyzed the development of the dispersion process for early times and showed that the definition of the time-dependent dispersivity requires evaluation of an integral for which the small time limit for the case of one-dimensional flow through a stratified aquifer is $\alpha_L + A^*$, where

$$A^* = (\sigma_K/\bar{K})^2 x \qquad (2.7)$$

and x is the distance traveled ($x = vt$). The value of dispersivity given in Eq. (2.7) is equal to the value of dispersivity implied in an analysis of dispersion by Mercado (1967), where

$$\sigma_x = (v\sigma_K/K)t \qquad (2.8)$$

and then

$$A^* = (d\sigma_x^2/dt)/2v, \qquad (2.9)$$

from which Eq. (2.7) follows. Here, σ_K is the standard deviation of the hydraulic conductivity distribution and σ_K is the standard deviation of the concentration distribution.

According to Eq. (2.7), dispersivity should increase linearly with distance traveled. According to Mercado's result [Eq. (2.8)], the standard deviation of the concentration distribution increases linearly with time or distance. If dispersion is Fickian, the standard deviation increases with the square root of the distance traveled. Thus, the dispersed zone grows more rapidly before the Taylor limit is reached.

Pickens and Grisak (1981a) suggest using Eq. (2.7) or some similar equation in the standard advection-dispersion equation to describe the early portion of the dispersion process. Matheron and DeMarsily (1980) consider a similar approach based on the concept of an equivalent dispersivity:

$$\alpha_{L_1} = \sigma_{xi}^2/2vt, \qquad (2.10)$$

where σ_{xi}^2 is the variance of the concentration distribution at time *i*. Eq. (2.10) follows directly from Eq. (2.9) for a discrete time interval. The values of longitudinal dispersivity (α_{L_i}) are defined such that α_{L_1} represents dispersion for the time from $t = 0$ to $t = t_1$ and α_{L_1} represents dispersion for the time from $t = t_1$ to $t = t_2$, for example. However, Matheron and DeMarsily (1980) caution that because the use of Eq. (2.10) implies that dispersivity is really a constant and because the advection-dispersion equation is actually inapplicable for early times, the use of an equivalent dispersivity is not completely satisfactory. They conclude that, "A better mathematical formulation of the transport process in porous and fractured media, valid for all time, seems necessary." More specifically, according to Gill-ham and Cherry (1982): "The present challenge is to develop a physically based transport model that incorporates spatially and/or temporally variable dispersion parameters that can be determined in a practical manner and with an acceptable degree of certainty."

Summary and Discussion

The discussions of dispersion in the preceding sections focused on applications to continuous porous media; dispersion in fractured porous media will be considered in a later section of this chapter. The state of the art for quantifying dispersion in continuous porous media is summarized below.

Results from several studies suggest that dispersion is non-Fickian near the source of the contaminant and therefore the standard form of the advection-dispersion equation does not apply. A modified form could be derived for analyzing non-Fickian transport for small times. Gelhar *et al.* (1979) presented such an equation for one-dimensional flow in a perfectly stratified aquifer. However, they caution that the approach that they used to derive the equation requires certain restrictions that may not be valid at small times. Other approaches that rely on the standard form of the advection-dispersion equation call for use of time-dependent dispersivities (Gill and Sankarasubramanian, 1972; Matheron and DeMarsily, 1980; Pickens and Grisak, 1981b).

The standard approach in analyzing dispersion involves the use of an average linear velocity [Eq. (2.1)] and the use of a dispersion term [Eqs. (2.2) and (2.3)] to represent deviations of velocity from the average. The rationale for this approach is based on the premise that a dispersion term is necessary because it will never be practical to define the velocity field in detail. Moreover, according to Dagan (1982) it is inappropriate to assume that local dispersion does not influence advection. Hence, several investigators (Gelhar *et al.*, 1979; Gelhar and Axness 1981, Dagan, 1982) maintain that the key to a rational application of the advection-dispersion equation is to define the dispersivity in terms of various statistical properties of hydraulic conductivity.

Another approach, used by Schwartz (1977) and Smith and Schwartz (1980, 1981a, 1981b) among others, is based on attempts to represent the velocity field in detail by defining the hydraulic conductivity, in a stochastic manner and in this way to simulate the effects of macroscopic dispersion directly. Smith and Schwartz (1980) concluded that for their simulations local dispersion was negligible because most dispersion observed in their modeled systems occurred at a macroscopic scale. Therefore, in subsequent studies (Smith and Schwartz, 1981a, 1981b) they used an advective model to simulate contaminant transport in a number of hypothetical systems characterized by different arrangements and shapes of heterogeneities. Results of their numerical experiments demonstrated that the solution of the contaminant transport model is quite sensitive to the structure of the heterogeneities within the porous material. Consequently, detailed information on the arrangement and shapes of the heterogeneities, knowledge of the values of hydraulic conductivity for the various units, and information on head gradients (or direct measurements of velocities) are essential for accurate prediction. Although they demonstrated that it is theoretically possible to predict contaminant transport given sufficient hydrogeologic data, they remained pessimistic regarding the practical limitations of obtaining the detailed information needed (Smith and Schwartz, 1981b). In addition they concluded that ". . . large uncertainties can be associated with transport predictions in heterogeneous media. These uncertainties must be dealt with in order to develop confidence in the application of mathematical models of site-specific problems. Unfortunately, the variety of possible sources of uncertainty and the difficulty in controlling their size suggest that progress will be slow." Similarly, Dagan (1982) concluded that "longitudinal dispersion can be represented asymptotically by a Fickian equation, with dispersivity much larger than pore-scale dispersivity," but given the uncertainties involved in defining the hydrogeologic system a stochastic approach is necessary and "the traditional approach of predicting solute concentrations by solving deterministic partial differential equations is highly questionable in the case of heterogeneous formations."

The conclusion drawn from these studies is that although there has been considerable progress within the past 5 years in understanding the nature of macroscopic dispersion in porous media, to date, a credible, practical, and reliable model for analyzing contaminant transport near the source has not been identified. However, theoretical studies by several researchers suggest that for large times (or large travel distances) the dispersion component of the advection-dispersion equation can be represented by an expression analogous to Fick's second law of diffusion [Eq. (2.2)], and therefore the classical advection-dispersion equation will accurately simulate contaminant transport in porous media, provided that dispersivity can be quantified in a meaningful way.

Gelhar *et al.* (1979), Gelhar and Axness (1981), and Dagan (1982) present formulas for defining dispersivity at large times in terms of statistical parameters. However, several investigators suggest that the length of time that must elapse before the advection-dispersion equation is applicable may be appreciable. Specifically, the travel distance of the contaminant must be on the order of 10s or 100s of meters from the source before the advection-dispersion equation is valid. Simulations of contaminant transport by Piekens and Grisak (1981b) suggest that the scale dependence of dispersivity at early times may have little effect on results for large times or travel distances. Hence, the use of an asymptotic dispersivity may be adequate for these conditions provided that sufficient geologic data are available to characterize the statistical parameters of the hydraulic conductivity distribution (the variance and the correlation scales), as well as the orientation of the geologic units. More attention is needed in characterizing geologic systems in terms of these statistical parameters (e.g., see Smith, 1981; Neuman, 1982). Moreover, field data needed to corroborate the theory itself are lacking. There is also a need for carefully designed field tracer tests to determine whether the theory is generally applicable and to serve as a basis for estimating the length of time before the Taylor limit is reached and Eq. (2.4) is valid. Data from such tracer tests would allow an assessment of the reliability of recently derived expressions for dispersivity.

Dispersion in Fractured Rock

The discussion in previous sections focused on dispersion in continuous porous media. Application of dispersion analysis to contaminant transport in fractured rock is in its infancy, yet it is of considerable importance. Certain types of fractured rock, such as shale, granite, and salt, are likely candidates for repositories of high-level nuclear waste, and clay, which is also susceptible to fracturing, is currently used as a disposal medium for municipal, industrial, and low-level radioactive wastes.

Recent work on flow through fractured rock has emphasized laboratory investigations and development and testing of mathematical models, most of which are based on the concept of a dual porosity medium (e.g., Grisak and Pickens, 1980; Neretnieks, 1980) as shown in Figure 2.5. In a few cases, models have been used in conjunction with results from laboratory experiments (Grisak *et al.*, 1980; Tang *et al.*, 1981; Neretnieks *et al.*, 1982) and field data (Bibby, 1981). These results support the following conclusions:

1. Diffusion of contaminants from fractures to the rock matrix can serve as a significant retardation mechanism (see Grisak and Pickens, 1980; Neretnieks, 1980; Abelin *et al.*, 1982; Birgersson and Neretnieks, 1982). This phenomenon is illustrated schematically in Figure 2.5.
2. Dispersion in the fracture can significantly accelerate the arrival of contaminants at a discharge point when velocities in the fractures are relatively low.

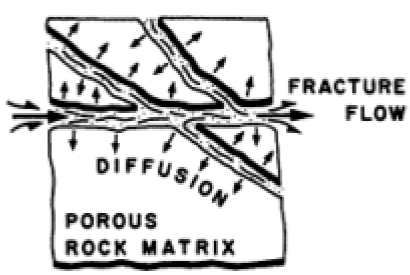

Figure 2.5
Schematic diagram representing flow through fractures and diffusion of contaminants from fractures into the rock matrix of a dual porosity medium.

Experimental results suggest that velocity in fractures can be represented using the so-called cubic law (see Witherspoon *et al*., 1980), which is a form of Darcy's law in which the equivalent hydraulic conductivity of the fracture (K_f) is

$$K_f = (\rho g/12\mu)b^2. \qquad (2.11)$$

where *b* is the aperture of the fracture, g is the constant of acceleration of gravity, ρ is the density of water, and μ is the dynamic viscosity. The cubic law for the volumetric flow rate through the fracture is

$$Q = (\rho g/12\mu)IWb^3. \qquad (2.12)$$

where *I* is the head gradient across the length of the fracture segment and *W* is the width of the fracture segment.

A number of models (Grisak and Pickens, 1980, Tang *et al*., 1981, Neretnieks *et al*., 1982) consider dispersion in the fracture. Tang *et al*. (1981) derived an analytical solution of the advection-dispersion equation for one-dimensional contaminant transport with longitudinal dispersion in the fracture, coupled to a solution of a model representing diffusion of solute from the fracture into the rock matrix. Grisak and Pickens (1980) solved a similar problem using a finite-element model. Both concluded that while longitudinal dispersion in the fracture can be important, little is known regarding the magnitude of dispersivity in fractures except that it is a function of the roughness of the fracture. Experiments under way (see Witherspoon, 1981) may help in quantifying fracture roughness, which is a first step toward quantifying dispersivity in fractures.

Analysis of flow of water through networks of fractures has been attempted (Bibby, 1981; Neuzil and Tracy, 1981, Sudicky and Frind, 1982). But much additional work is needed to test and to modify these types of models. A major impediment to testing of fracture flow models is the difficulty of obtaining field data that describe the hydrogeologic characteristics of fractured rock.

Conclusions

1. There has been significant progress in quantifying dispersion in porous material since 1978.
2. The consensus is that dispersion in porous material is non-Fickian near the source of the contaminant, and therefore for small times or small distances from the source, the standard form of the advection-dispersion equation does not apply.
3. There is no consensus regarding the best way to quantify dispersion near the source of the contaminant. Some researchers prefer to aim at attempting to describe the velocity field in sufficient detail so that contaminant transport can be simulated by advection alone. Others prefer to rely on refining the advection-dispersion equation to handle non-Fickian dispersion.
4. Theoretical studies suggest that for many hydrogeologic settings, dispersion should become Fickian for large times or large distances (on the order of 10s to 100s of meters). In this case it is possible to express the dispersion parameter known as dispersivity in terms of statistical properties of the hydraulic conductivity distribution.
5. Carefully designed field tracer tests are needed to evaluate the applicability of the theory for large times and to refine the theory for small times.
6. Detailed hydrogeologic information is needed to predict dispersion for both small and large times.
7. The concept of a dual porosity media (Figure 2.5) is currently used for modeling groundwater and contaminant flow through fractured rock. However, the difficulties involved in characterizing the geometry of a fractured-rock system in the field complicates the testing of the theory. As a result, none of the models developed to simulate dispersion and diffusion of contaminants in fractured rock have been verified by field experiment.

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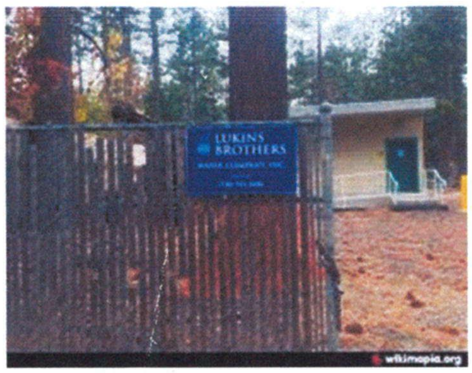
EXHIBIT RR

Meeting

Fall 2015 URS PCE Investigation



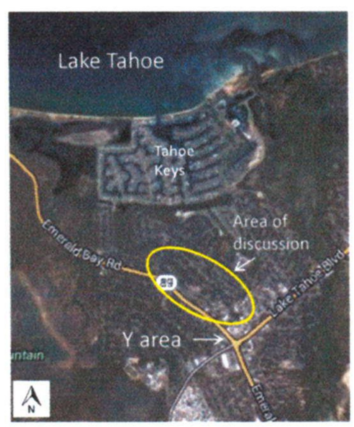
Water Boards

California Regional Water Quality Control Board, Lahontan Region

FEB. 5, 2016 1

Agenda

1. Introduction – *Lauri Kemper, RWQCB*
2. PCE Basics – *Lisa Dernbach, RWQCB*
3. PCE Investigation Report -- *Chani Hutto, URS*
4. Next Steps – *Water Board*
5. Lukins Well #4 Testing – *Ivo Bergsohn, STPUD*
6. Status of Lukins Supply Wells – *Jennifer Lukins*
7. Conclusion – *Lauri Kemper, RWQCB*



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PCE Found in Five Supply Wells 2014

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PCE Basics

Name: Perchloroethylene or Tetrachloroethene
Formula: C_2Cl_4
Properties: colorless, mildly sweet, chloroform- (i.e., ether) like odor
Uses: solvent used in dry cleaning, metal cleaning/degreasing, e.g., automotive parts and brakes.

Drinking Water Standard: 5 parts per billion
Taste and odor threshold: 170 ppb

Health:

- Considered a "probable" human carcinogen
- May lead to an increased likelihood of liver or kidney disease and other effects.

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PCE Properties

Dense Non-Aqueous Phase Liquid (DNAPL)—it sinks in water as free product or residual

Myth: Also sinks in the dissolved state—NO!

When released to the environment:

Air	PCE evaporates quickly from liquid into air
Soil	May evaporate from shallow soils or may filter through the soil and into the groundwater below. It is generally slow to break down in soil.
Groundwater	Slow to break down in water; can be recalcitrant for <u>decades</u>. In anaerobic conditions, breaks down to byproducts TCE, DCE, VC (vinyl chloride), ethene, ethane.

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PCE Phaseout

(adopted 2007 by the CA Air Resources Board)

- Starting 2008, no new PCE machines
- Retire machines which reach **15 years** old
- **2023**—All PCE machines are banned
  (>80% of PCE volume from 1980 has been discontinued)

Alternate Cleaning Chemicals:

- ✓ Water-based cleaning,
- ✓ Carbon dioxide (CO_2),
- ✓ Hydrocarbon solvent (DF-2000™ Fluid, EcoSolv®),
- ✓ GreenEarth® solvent (composed of volatile methyl siloxane)
- ✓ Propylene glycol ether (Rynex™ or Rynex3),
- ✓ Stoddard solvent, and
- ✓ PureDry® solvent (a blend of hydrocarbon and chemical additive).

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2015 PCE Investigation

Groundwater investigation to look at PCE extent in aquifer and potential sources:

- Early 2015--Applied for funds from the Cleanup and Abatement Account, State Water Resources Control Board
- June --Funds transferred to Dept of General Services:
  - Sept--Contracted with URS
    - ✓ Workplan
    - ✓ Field work
    - ✓ Report preparation

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URS Presentation

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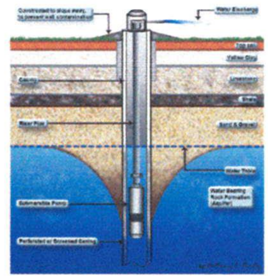
Water Board Next Steps

1. Review Lukins Well #4 test results (Spring 2016)
2. Prepare PCE investigation workplan phase II:
   a) Lukins #4 results
   b) Extend out sampling from MW-4A/B
   c) Other potential PCE sources
   d) Deeper aquifer samples
   e) Sample along Hwy 89
   f) Identify potential costs
3. Apply for additional funds from SWRCB:
   - Best scenario—funds approved, investigation next fall or spring 2017
   - Worst scenario—denied funds



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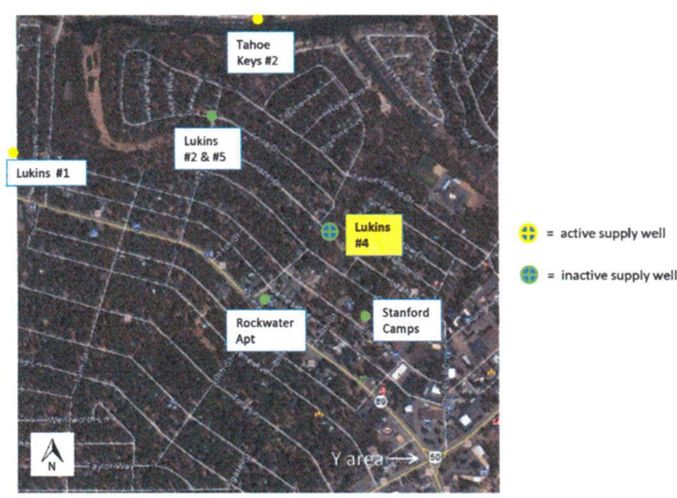
Lukins Well #4 Testing



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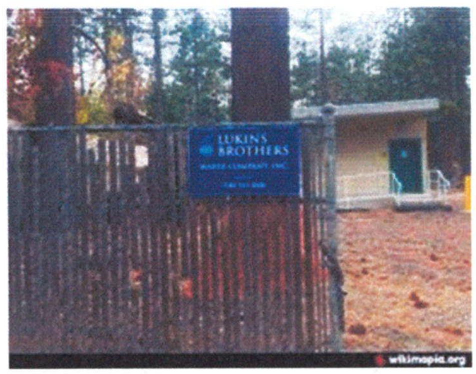
Lukins Wellhead Treatment System



FEB. 5, 2016 11

Next Steps (cont.)

4. All new information will be uploaded to Geotracker database:
   - Lukins Wells #2 & #5
   - Lake Tahoe Laundry Works
     (if Lukins #4 results indicate PCE contribution from this site)

FEB. 5, 2016 12

Conclusion

EXHIBIT SS

CALIFORNIA Water Boards

Media Release

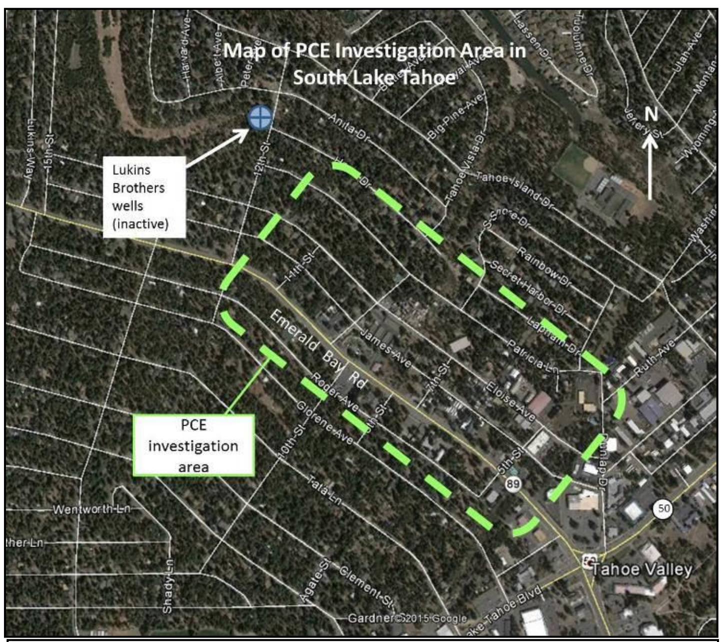
Lahontan Regional Water Quality Control Board
2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150
Phone (530) 542-5400 □ Fax (530) 544-2271
http://www.waterboards.ca.gov/lahontan

Lahontan Water Board to Conduct Groundwater Testing for PCE Contamination in South Lake Tahoe

For Immediate Release **Contact:** Lisa Dernbach
Oct. 21, 2015 **Phone:** (530) 542-5424

SOUTH LAKE TAHOE – The Lahontan Regional Water Quality Control Board (Lahontan Water Board) will be conducting an investigation to evaluate the spread of Tetrachloroethene, better known as PCE, after the solvent compound was detected in two municipal wells and three private domestic wells in the western portion of South Lake Tahoe.

The municipal wells, operated by Lukins Brothers Water Company, did not have a history of PCE detection and were closed down immediately upon the discovery. The new detections may be related to drought conditions and a lowered water table.



The PCE investigation area is located near the split of Highways 89 and 50, also known as the "Y" in South Lake Tahoe.

With only one clean municipal well left in operation, Lukins is receiving additional water supplies from the South Tahoe Public Utility District. Ongoing testing has verified no residences or businesses are currently exposed to PCE levels above the drinking water standard of 5 micrograms per liter.

PCE is normally associated with dry cleaning activities, but the solvent compound can also be used for metal degreasing and is an ingredient in paint strippers. The compound is classified as a probable carcinogen that has the ability to increase the risk of cancer after consumption over many years. If PCE contact is made through the respiratory system or skin exposure, it can depress the central nervous system and increase the risk of Parkinson's disease.

The investigation is being completed using $125,000 in grant money from the State Water Resources Control Board. During the week of Oct. 26, Lahontan's consultant, URS, will be collecting groundwater samples from temporary borings.

"The public can expect to see a small drilling rig and support truck along residential streets between 5th and 11th streets for approximately five days," said Lisa Dernbach, a senior engineering geologist for the Lahontan Water Board. "Drilling will be moved every day, so the noise period will be short at each location. We appreciate everyone's cooperation while we try to determine just how widespread this contamination problem is."

Once the laboratory results for the samples are received, URS will compile a technical report and interpret the data. The report, due by the end of 2015, will be posted on the Lahontan Water Board's website. If the results show more groundwater contamination than expected, a supplemental investigation may be proposed.

The Lahontan Regional Water Quality Control Board is a California state agency responsible for the preservation and enhancement of the quality of California's water resources in eastern California. For more information about the Lahontan Water Board visit its website.

###

EXHIBIT TT

URS | **PCE Investigation South Lake Tahoe**

Summary of Findings

February 5, 2016 10am-12pm

Lahontan Water Board

Annex Office, 971 Silver Dollar Ave, South Lake Tahoe, CA

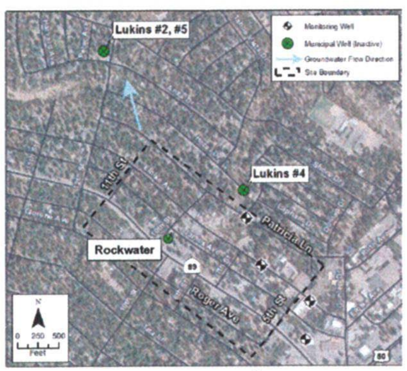
Presented by: Chani Hutto, URS

Introduction

- Objectives
- Scope of Work
- Results
- Summary
- Conclusions and Recommendations
- Contact Information

Objectives

- Determine PCE extent within site
- Identify potential sources
  - Review public databases



* Estimated groundwater flow

Scope of Work

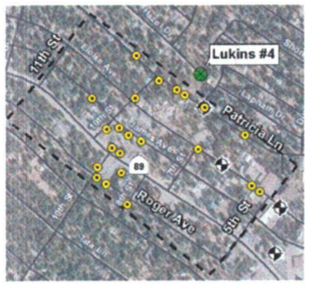
- Develop work plan
- Obtain permits
- Secure access agreements
- Initiate fieldwork
  - Utility clearance
  - Testing
  - Laboratory analysis
- Prepare Report

USA NORTH 811 Call 811 Before You Dig

GPRS GROUND PENETRATING RADAR SYSTEMS, INC.

Scope of Work- Implement Field Work

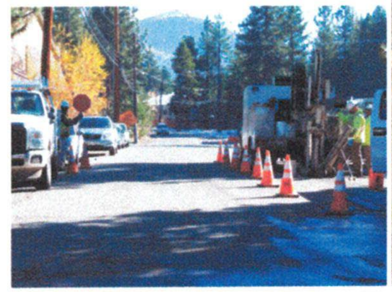
- Cited borings upgradient, adjacent, and downgradient to potential sources and impacted supply wells



URS 5

Scope of Work- Implement Field Work

- Advanced 22 borings to 24-40 feet bgs
  - Geoprobe 5410



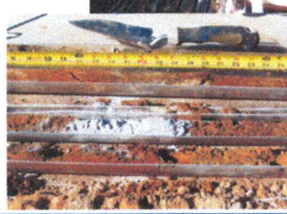
URS 6

Scope of Work- Implement Field Work continued

- Identified soil types from cores ➡ coarse-grained

USCS

- Weathered granitic rock
- Consistant with alluvium deposits and geologic setting
  - Mostly well-sorted sand with thin silt interbeds



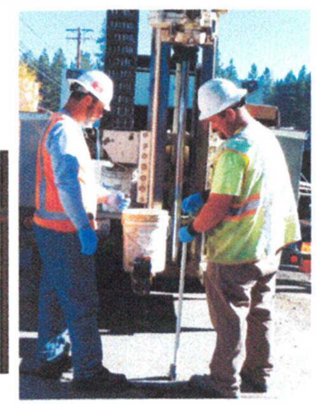
URS 7

Scope of Work- Implement Field Work continued

- Collected GW samples

  @ water table (14-17 feet bgs)

  @ 10 feet below water table



URS 8

Scope of Work- Monitoring Well Sampling

- **URS**- Patricia Lane well
- **LWB**- various wells
  - EW-4A
  - EW-4B
  - MW-4A
  - MW-4B
  - Hurzel-N

URS | PCE Investigation, South Lake Tahoe 9

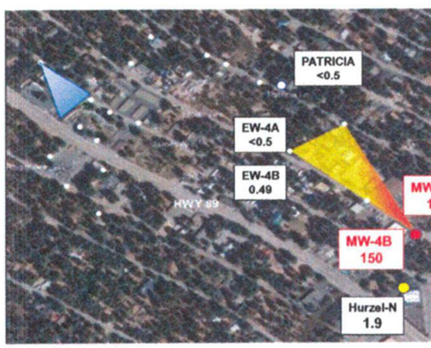
Results- PCE Hydropunch Samples

- PCE < MCL (5 μg/L) in all samples
  - Water table
    - 1.8 μg/L (SB-08-14)
  - Deeper depth
    - 3 μg/L (SB-21-23)

URS | PCE Investigation, South Lake Tahoe 10

Results- PCE Monitoring Well Samples

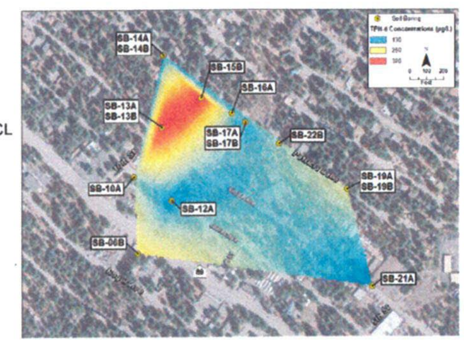
- Patricia Lane well: <0.5 μg/L
- Various wells:
  - MW-4A: 14 μg/L
  - MW-4B: 150 μg/L
  - EW-4A: <0.5 μg/L
  - EW-4B: 0.49 μg/L
  - Hurzel-N: 1.9 μg/L



URS | PCE Investigation, South Lake Tahoe 11

Results- TPH-Diesel Hydropunch Samples

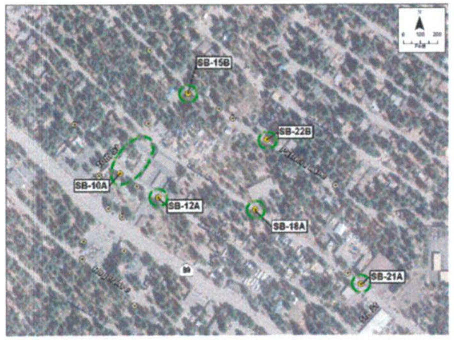
- TPH-d
  - 26/42 detections
  - 15/26 samples
    - > secondary MCL 100 μg/L



URS | PCE Investigation, South Lake Tahoe 12

Results- TPH-Gasoline Hydropunch Samples

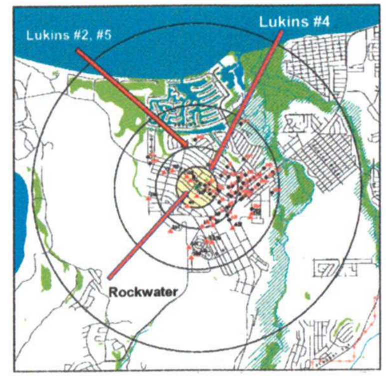
- TPH-g
  - 6/42 detections
  - 6/42 samples
    - > secondary MCL of 5 µg/L



Results- Database Review

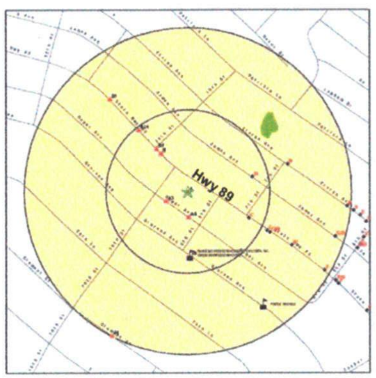
- EDR database report
- Used in Due Diligence
- Identify potential PCE source(s)

EDR



Results- Database Review

- Few potential PCE sources
  - Auto body shops
  - Printing shops
  - Dry cleaners



Summary

- **Hydropunch samples:**
  - 42 samples
  - PCE < MCL of 5 µg/L
  - TPH-D: 17 samples > secondary MCL of 100 µg/L
  - TPH-G: 5 samples > secondary MCL of 5 µg/L
- **Monitoring well samples:**
  - Patricia Lane: PCE, TPH < MCLs
  - Various wells: PCE > MCLs

Conclusions

- No specific source(s) identified
- Highest PCE: east end, deeper depth
  - MW-4A: 14 μg/L
  - MW-4B: 150 μg/L
  - SB-21-23: 3 μg/L
- PCE → deeper depths

Conclusions continued

- No PCE connection in GW from west end to east end
- Possible separate PCE sources for each end of the study boundary
- Potential PCEsource(s) farther upgradient/cross-gradient than expected

Conclusions continued

- No pattern connecting PCE and TPH
- No TPH in Supply wells = not a constituent of concern (COC)

Recommendations

- More testing
  - Site: deeper
  - Offsite: multiple depths
- Sample Lukins #4
  - (**34 μg/L**, June 2015)*
- Evaluate potential sources upgradient/cross-gradient to Lukins #2, #5 and Rockwater

*provided by Lukins

Contact Information

Water Boards

Lisa Dernbach, Senior Engineering Geologist
530-542-5424
lisa.dernbach@waterboards.ca.gov

URS

Chani Hutto, Geologist
916-414-1626
chani.hutto@aecom.com

EXHIBIT UU

Erler & Kalinowski, Inc.

Consulting Engineers and Scientists

1870 Ogden Drive
Burlingame, CA 94010
(650) 292-9100
Fax: (650) 552-9012

3 December 2015

Ms. Lisa Dernbach
Senior Engineering Geologist
California Regional Water Quality Control Board, Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, California 96150

Subject: Response to Water Board Notification of Consideration of No Further Action; Napa Auto Parts/Former Lakeside Auto, 1935 Lake Tahoe Boulevard South Lake Tahoe, California (EKI A70020.01)

Dear Ms. Dernbach,

On behalf of its client, Fox Capital Management Corporation ("Fox"), Erler & Kalinowski, Inc. ("EKI") is pleased to submit to the California Regional Water Quality Control Board, Lahontan Region ("Water Board") this letter that responds to the Notification of Consideration of No Further Action for the former Lakeside Auto/current Napa Store site located at 1935 Lake Tahoe Boulevard ("Napa site"), prepared by the Water Board, dated 8 October 2015 ("Notification").

I. BACKGROUND

According to the Draft Case Summary attached to the Notification, the Water Board concludes that tetrachloroethylene ("PCE") in groundwater on the Napa site does not pose a threat to human health, safety, and the environment, and that there is no evidence of a release of PCE on the Napa site. Therefore, the Water Board considers it appropriate to issue a No Further Action Required letter for the Napa site. On behalf of Fox, we request that the Water Board not issue a No Further Action letter for the Napa site for the reasons stated below.

II. ANALYSIS

Based on a review of the available data, determination of No Further Action ("NFA") for the Napa site is not warranted. As explained below, the Water Board's proposal is: (a) based on soil and groundwater data that are 12 to 13 years old; (b) based on inadequate site investigations by Napa; (c) counter to the findings and conclusions issued by the Water Board in the past; and (d) premature in light of other investigations that are ongoing in the area.

A. The Water Board is Relying on Old Data

According to a groundwater investigation report prepared by SECOR International Incorporated ("SECOR"), dated January 2004 (Attachment 1), sampling conducted at the

Napa site during 2002 and 2003 identified the presence of tetrachloroethylene ("PCE") at 24 feet below ground surface ("bgs") in the shallow groundwater bearing zone (referred to as the shallow zone) at concentrations up to 110 micrograms per liter ("µg/L"), and at 44 to 46 feet bgs in the middle groundwater bearing zone (referred to as the middle zone) at concentrations up to 3,000 µg/L. Shallow soil samples collected from the borings were reported not to contain detectable concentrations of PCE. No source for the PCE in groundwater at the Napa site was identified by SECOR.

No more recent subsurface sampling has been conducted on the Napa site. The Water Board, in its closure evaluation of the Napa site, is relying on data that are 12 to 13 years old which may not accurately represent current soil, soil vapor, and groundwater conditions on the Napa site. More recent subsurface data from the Napa site should be collected and evaluated before the Water Board considers the Napa site for closure.

B. The Water Board is Relying on an Inadequate Investigation by Napa

The prior subsurface investigations of the Napa site were incomplete, as summarized below.

- A concrete sump reportedly existed inside the former auto service and repair bays of the Napa site building facing Glorene Avenue. The sump is a potential PCE discharge point. No soil borings were advanced through the bottom of the sump and no soil samples were collected directly beneath the sump. One angled boring was advanced from an exterior area in the direction of the sump, and a soil sample was reportedly collected at a depth of approximately 8 to 10 feet bgs beneath the sump. Thus, no shallow soil samples have been collected from just below the sump to screen for PCE discharges from the sump. The sump should be evaluated further prior to consideration of closure of the Napa site by the Water Board.

- During the 2002 and 2003 investigations at the Napa site, no soil samples were collected from interior areas of the Napa site building, including interior areas of the auto service bays and machining areas where chemicals such as solvents may have been used or stored. Thus, the soil beneath the service bays remains uncharacterized and may be impacted by PCE. No floor drains or subsurface wastewater pipelines within the Napa site building were assessed. These areas should be assessed prior to consideration of closure of the Napa site by the Water Board.

- No shallow or middle zone groundwater monitoring wells were installed at the Napa site in both upgradient and downgradient locations to obtain representative and reproducible groundwater sample results, or to assess the nature and extent of the contamination. Additional assessment appears warranted, including the preparation of a conceptual site model, prior to consideration of closure of the Napa site by the Water Board.

C. Water Board Indicated that Napa Site is a Source for PCE in Middle Zone Groundwater

In its Staff Report, dated 22 August 2005 (Attachment 2), the Water Board concluded that PCE in middle zone groundwater at the Napa site may have originated from releases at the Napa site, since PCE concentrations in groundwater increased from the upgradient (west) side of the site to the middle of the site. The 2005 Staff Report stated that further investigation may be necessary. Since preparation of the Water Board Staff Report in 2005, no more recent middle zone groundwater data have been generated that would be expected to alter the Water Board's conclusions and opinions regarding the source for PCE in groundwater on the Napa site.

In an email prepared by Ms. Dernbach submitted to Mr. Harold Singer with the Water Board, dated 15 November 2004 (Attachment 3), Ms. Dernbach indicated that PCE contamination in middle zone groundwater beneath Lake Tahoe Boulevard (710 μg/L at 44 feet bgs), between the Napa site and the Lake Tahoe Laundry Works ("LTLW") site, did not appear to be from the LTLW site, but more likely originated at the Napa site. Ms. Dernbach further stated in the email transmittal that the PCE contamination on the LTLW site "is clearly in the upper portion of the saturated zone (20-30 ft) and is unlikely to be pulled to the 44 ft depth". Accordingly, in 2004, the Water Board considered the Napa site to be a source for the PCE in groundwater on the Napa site. As stated above, no more recent middle-zone groundwater data have been generated that would be expected to alter the Water Board's conclusions and opinions regarding the source for the PCE in groundwater on the Napa site. 1/

Attached Figure 1 shows PCE concentrations in middle zone groundwater in the LTLW-Napa-Big O area collected between 2001 and 2008. The data suggest that the source for the PCE in middle zone groundwater is not the LTLW site, but rather the Napa site and/or the Big O site.

D. The Water Board's Proposed Action is Premature Given Ongoing Site Investigations

Groundwater investigations were recently completed on behalf of the Water Board in an area downgradient, i.e., northeast, of the Napa site in accordance with a Work Plan prepared by URS Corporation, dated 8 October 2015. We understand that the results of these investigations will not be available to the public until the first week of January 2016. The results of the Water Board investigations may provide information relevant to the reported groundwater conditions on the Napa site and closure consideration of the Napa site.

In addition, the Water Board has issued a draft cleanup and abatement order to Seven Springs Limited Partnership and Fox that would require them to undertake an investigation

---

1/ Detections of PCE at the LTLW site at concentrations above of 1,500 μg/L have been limited to shallow groundwater, and only at one sample location (LW-MW-1S). PCE in middle zone groundwater at the LTLW site has only been detected at concentrations up to 137 μg/L.

of PCE contamination in an area that includes the Napa site and downgradient areas. The parties' responsibility for that contamination is in dispute, in part because the parties contend that the Napa site is a source of the contamination. To be fair to parties, the Water Board should not take any action to absolve Napa of responsibility for contamination at its site while that dispute is pending. Furthermore, if the draft order is finalized, the Water Board should review the results of any additional investigation required by the order before concluding that closure of the Napa site is warranted.

III. CONCLUSION

In light of the above information, a NFA determination for the Napa site is not warranted. Accordingly, on behalf of Fox, we request that evaluation of closure of the Napa site by the Water Board be postponed until Napa completes an adequate evaluation of the Napa site, and data from pending investigations are received and reviewed by the Water Board and other interested parties.

We appreciate the opportunity to review and comment on the Water Board's Notification regarding the Napa site.

Very truly yours,

ERLER & KALINOWSKI, INC.

Paul B. Hoffey
Project Manager

Andrew N. Safford, P.E.
Project Engineer

Attachments:

Attachment 1: *Soil and Groundwater Investigation Report, Lakeside Automotive, 1935 Lake Tahoe Boulevard, South Lake Tahoe,* California, prepared by SECOR International Incorporated, 20 January 2004.

Attachment 2: *Staff Report, Solvent Contamination at the Bog O Tires Store, 1961 Lake Tahoe Boulevard, South Lake Tahoe*, prepared by California Regional Water Quality Control Board, Lahontan Region, dated 22 August 2005.

Attachment 3: Email correspondence from Ms. Lisa Dernbach of the Water Board to Mr. Harold Singer of the Water Board, dated 15 November 2004.

Figure 1: Middle-Zone Groundwater PCE Concentrations (2001-2008), prepared by EKI.

cc: Scott Reisch, Esq. (Hogan Lovells US LLP)
Peter Cappel (Fox Capital Management Corporation)

ATTACHMENT 1

Soil and Groundwater Investigation Report, Lakeside Automotive, 1935 Lake Tahoe Boulevard, South Lake Tahoe, California, prepared by SECOR International Incorporated, 20 January 2004.

FEB 18 2004

By

LAKESIDE AUTOMOTIVE
1935 Lake Tahoe Boulevard
South Lake Tahoe, California

SECOR Job 93OT.03210.00

JANUARY 20, 2004

Lakeside Automotive-1935 Lake Tahoe Boulevard
Soil and Groundwater Investigation Report

Submitted to:

Ms. Lisa Dernbach
CRWQCB, Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, California 96150

Prepared for:

Mr. Jerry Johnson
P.O. Box 625
South Lake Tahoe, California

Prepared by:

Jeff Collins
Senior Project Manager

REGISTERED GEOLOGIST
THOMAS W. CROSBY
NO. HG 257
CERTIFIED HYDROGEOLOGIST
Exp. 5/31/05
STATE OF CALIFORNIA

Reviewed by:

Thomas W. Crosby, C.HG
Principal Engineering Geologist

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FIGURES

TABLE

APPENDICES

1.0 INTRODUCTION

SECOR International Incorporated (SECOR) is pleased to present the results of the soil and groundwater investigation performed at Lakeside Automotive (site) in South Lake Tahoe. The site contains an operating Napa Auto Parts Store located at 3651 Lake Tahoe Boulevard (**Figure 1**). In Cleanup and Abatement Order Number R6T-2003-030, the California Regional Water Quality Control Board (CRWQCB), Lahontan Region requested that the property owner of Lakeside Automotive conduct an investigation of the soil and groundwater in the vicinity of the site for the identification of chlorinated hydrocarbons, specifically tetrachloroethene (PCE), trichloroethene (TCE), 1,1-dichloroethene (DCE), and 1,2 dichloroethane (DCA). This request was based on the information provided in the February 11, 2002 *Groundwater Characterization Report* completed by SECOR, which identified chlorinated hydrocarbons in the groundwater beneath the site. Investigations completed on other properties hydraulically upgradient from the site, to date, have not identified chlorinated hydrocarbons in significant quantities.

SECOR was retained by the property owner of Lakeside Automotive to conduct a soil and groundwater investigation to define the potential chlorinated hydrocarbon impacts up-gradient and down-gradient of the building on the property. The investigation was conducted in accordance with SECOR's October 1, 2003 work plan, which was approved with changes by the CRWQCB, Lahontan Region. This report describes the soil and groundwater characterization activities performed by SECOR from November 3, 2003 through November 7, 2003, results of soil and groundwater analyses, and conclusions and recommendations based on the results.

2.0 PREVIOUS INVESTIGATIONS AND BACKGROUND

SECOR conducted a previous groundwater investigation at the site on January 10, 2002, which included the collection of eight water samples from four separate locations using Geoprobe equipment supplied by Fisch Environmental Exploration Services. The Geoprobe borings (GP-1 through GP-4) were located in accessible areas hydraulically up-gradient and down-gradient of the Lakeside Automotive building. In each boring, water samples were collected at the depth of first encountered groundwater, which was 20 feet below the ground surface (bgs) and deeper in the aquifer at 48 feet bgs.

Concentrations of cis-1,2-dichloroethene, TCE and PCE were identified hydraulically up-gradient and down-gradient of the building on the property as a result of this investigation. Concentrations of PCE in up-gradient sample locations GP-1 and GP-2 were reported at the same order of magnitude as the samples collected from down-gradient locations GP-3 and GP-4. At the time, these results suggested that the source of the PCE impacts to groundwater did not originate at the Lakeside Automotive property; therefore, SECOR recommended that no further investigations be conducted at this site.

3.0 SOIL AND GROUNDWATER INVESTIGATION

Work Plan Modifications

SECOR originally proposed (October 1, 2003 work plan) to collect 13 soil samples from near surface soil throughout the site and from areas below a concrete sump and suspected floor drain associated with the building on the property. Water sample collection was proposed from three discrete depth intervals in 16 separate locations on and off the property. Water sampling was proposed at 20 feet below the ground surface (bgs) or first encountered groundwater, approximately 45 feet to 50 feet bgs, and approximately 80 feet bgs. SECOR also specified in the work plan that the sampling depths may be adjusted in the field based on the results of proposed down-hole logging with membrane interface probe (MIP) technology, which would be used for the identification of soil stratigraphy and chlorinated hydrocarbons.

Based on verbal communication from the CRWQCB requesting changes to the work plan prior to the investigation, SECOR collected soil samples at 6 feet bgs in addition to the proposed near surface sampling, and analyzed water samples from BH-8 and BH-9 for a full suite of volatile organics using EPA method 8260B. Borehole locations BH-8 and BH-9 were drilled in areas where high concentrations of chlorinated compounds were identified during the previous investigation conducted in January 2002, based on a request from the CRWQCB. In addition, SECOR was directed by the CRWQCB to perform MIP field screening in a location near the former automotive repair and storage area.

Research conducted to identify a potential floor drain in the building did not prove successful; therefore, SECOR eliminated this proposed soil sample from the sampling plan prior to the investigation. In addition, while using MIP technology to determine the soil stratigraphy and target sample locations for high concentrations of chlorinated hydrocarbons, SECOR identified a hard soil horizon with the MIP drive point at approximately 50 feet bgs across the area of proposed investigation. Based on this information and the identification of a 1-foot thick silt horizon in a borehole log of nearby monitoring well MW-44D on Glorene Avenue, SECOR was instructed by the CRWQCB not to puncture the silt horizon. Therefore, water sampling conducted during the investigation was limited to the first encountered groundwater (24 feet bgs) and a second sample from approximately 44 feet to 46 feet bgs.

Water Sampling

Two water samples were collected from 14 separate locations using a screened sampler driven to the desired depth interval. The four-foot screened section of the sampler remained enclosed in a drive tube until reaching the targeted sampling depth, where it was then exposed to allow the inflow of water into the sampler. Water samples were then collected from the subsurface via Teflon tubing. In addition, SECOR collected water samples from two existing monitoring wells (MW-44M and MW-44D) in close proximity to the site. These wells were originally installed as part of the USA gasoline station investigation to monitor petroleum hydrocarbons. Monitoring well MW-44M is screened from approximately 65 feet to 75 feet bgs and MW-44D is screened from approximately 82 feet to 92 feet bgs. Water samples could not be collected from BH-1 due to limited access with the Geoprobe equipment. All samples were sealed, labeled, and placed in

STATE OF CALIFORNIA

OFFICE MEMO
STD. 100 (REV. 10-91)

DATE

TO

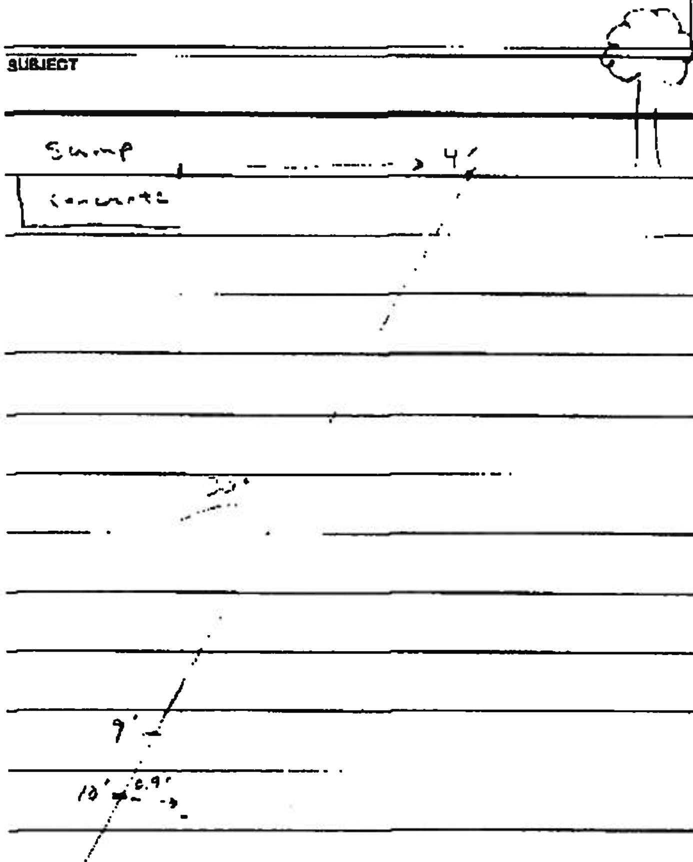
ROOM/STA. NO.

FROM

PHONE NUMBER ATSS

ROOM/STA. NO.

SUBJECT



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an ice chest maintained at a temperature of 4°C. Samples collected from BH-2, BH-3, BH-4, BH-5, BH-6, BH-7, BH-10, BH-11, BH-12, BH-13, BH-14, BH-15, BH-16, MW-44M, and MW-44D were logged onto a chain-of-custody record and delivered to Alpha Analytical, Inc. (Alpha) in Sparks, Nevada for analysis of PCE, TCE, DCE, and DCA by EPA method 8260B. Samples collected from BH-8 and BH-9 were logged onto a chain-of-custody record and delivered to Alpha for analysis of volatile organics by EPA method 8260B.

Soil Sampling

Soil samples were collected in a 1.5-inch by two-foot sampler containing acetate liners. Soil samples were collected in eight specific locations adjacent to the Lakeside Automotive building at depth intervals of 1.5 feet and 6 feet bgs. One additional soil sample was collected 8 feet beneath the concrete sump utilizing an angle boring technique. In order to sample directly under the concrete sump, SECOR positioned the Geoprobe equipment 4 feet to the south of the concrete sump at a 30 degree angle from vertical. The sampler was driven 9 feet at that angle, exposed to soil, and a sample was collected from 9 to 10 feet. Therefore, the corresponding sampling depth below the concrete sump was 8 feet bgs.

The soil samples were collected to identify the potential for releases as a result of the historical automotive maintenance conducted at the site. Soil samples in these borings were described using the Unified Soil Classification System (USCS) as silty sand, poorly graded sand, and well graded sand. Refer to Table I for USCS soil descriptions. A soil sample could not be collected from proposed boring BH-1 due to limited access with the Geoprobe equipment. Each soil sample submitted to Alpha was labeled and placed in an ice chest at 4°C under chain-of-custody for analysis of PCE, TCE, DCE, and DCA by EPA method 8260B.

Prior to the collection of each sample, all sampling equipment was decontaminated with a phosphate-free Liqui-nox and water solution, then triple-rinsed with deionized water. After the completion of the investigation each boring was abandoned by backfilling with a bentonite-cement slurry.

4.0 MEMBRANE INTERFACE PROBE RESULTS

SECOR proposed to utilize MIP technology combined with direct image electrical conductivity logging to determine the depth intervals where chlorinated hydrocarbons occurred in higher concentrations and the corresponding soil type associated with these depth intervals. Four separate locations (BH-4, BH-8, BH-13, and BH-16) on and off the property were designated for this field screening technique during the first day of field work. The MIP system measures chlorinated hydrocarbons that come in contact with a semi-permeable membrane attached to a down-hole probe. While the probe is being advanced, impacts to soil and groundwater diffuse through a polymer membrane on the probe and are lifted back to the ground surface via carrier gas where it is analyzed with a flame ionization detector (FID) or photoionization detector (PID).

Based on the results of the MIP field screening, chlorinated hydrocarbons were consistently identified between 40 feet and 50 feet bgs and stratigraphy exhibiting higher conductivity readings were typically identified between 38 feet and 50 feet bgs. In addition, water samples collected from MW-44M and MW-44D, screened below 50 feet, were reported below the detection limit for each constituent of concern. This information suggests that the areas exhibiting higher conductivity are limiting the vertical migration of the chlorinated hydrocarbons. Refer to the MIP logs provided in Appendix A for the results of the field screening.

5.0 SOIL AND GROUNDWATER ANALYTICAL RESULTS

Seventeen soil samples and 28 water samples were collected during the Geoprobe investigation conducted from November 3 through 7, 2003. In addition, SECOR collected water samples from existing monitoring wells MW-44M and MW-44D. Both screened intervals for the existing monitoring wells are below the silt horizon identified at 50 feet bgs during the Geoprobe investigation. The following information summarizes the soil and groundwater sampling results.

- Each soil sample, including the angle boring sample beneath the concrete sump, collected during the investigation was reported below the detection limit of the laboratory for PCE, TCE, DCE, and DCA.
- Each water sample was reported below the detection limit for DCE and DCA.
- Detectable concentrations of PCE were reported in the first encountered groundwater collected at 24 feet bgs in BH-7, BH-11, BH-12, BH-13, and BH-16.
- Detectable concentrations of TCE were reported in the first encountered groundwater collected at 24 feet bgs in BH-12.
- Detectable concentrations of PCE and TCE were reported between 44 feet and 46 feet bgs above the silt horizon in BH-2, BH-3, BH-4, BH-5, BH-6, BH-7, BH-8, BH-9, BH-10, BH-11, BH-12, BH-13, BH-14, BH-15, and BH-16.
- The full suite of volatile organics performed on groundwater collected from BH-8 and BH-9 at 44 feet bgs detected cis-1,2 DCE in addition to PCE and TCE.
- Water samples collected from MW-44M and MW-44D were reported below the detection limit for PCE, TCE, DCE and DCA.

The analytical results have been illustrated on **Figure 2** and copies of the laboratory analytical reports and the chain-of-custody records are located in **Appendix B**.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The analytical laboratory reported each soil sample collected on the Lakeside Automotive property below detection limits; therefore, a source of chlorinated hydrocarbons was not identified on site. In addition, water samples collected from the first encountered groundwater at 24 feet bgs on site did not contain detectable concentrations of chlorinated hydrocarbons, with the exception of BH-7 (1.1 ug/L), which is located on the northwest corner of Glorene Avenue and Lake Tahoe Boulevard. Water samples collected from the first encountered groundwater northeast of the site in Glorene Avenue did contain PCE and TCE, which suggests that a source of chlorinated hydrocarbons may be located beneath Glorene Avenue. Compared to the previous investigation performed at the Lakeside Automotive property (SECOR, January 2002), PCE concentrations have decreased significantly on site, which may be due in part to natural attenuation since both investigations were conducted during the same time of the year.

Chlorinated hydrocarbons were reported throughout the area of investigation in water samples collected directly above the silt horizon identified at approximately 50 feet bgs. Water samples collected between 44 feet and 46 feet bgs contained PCE ranging from 94 ug/L to 2,200 ug/L and TCE ranging from 3.1 ug/L to 55 ug/L. Water samples analyzed for the full suite of volatile organics in BH-8 and BH-9 contained cis-1,2 dichloroethene at 58 ug/L and 53 ug/L, respectively, in addition to PCE and TCE. The highest concentration of PCE (2,200 ug/L) was reported in BH-11 at 44 feet bgs, which is located southeast of the site on the northeast corner of Glorene Avenue and Lake Tahoe Boulevard. Water samples were also collected from monitoring wells MW-44M and MW-44D in close proximity to BH-11. These wells are screened below the 50 foot silt horizon identified during the Geoprobe investigation. The laboratory reported non-detectable concentrations of PCE, TCE, DCE, and DCA in these wells, which suggests that the chlorinated hydrocarbon impacts are not migrating vertically due to the 50 foot silt horizon.

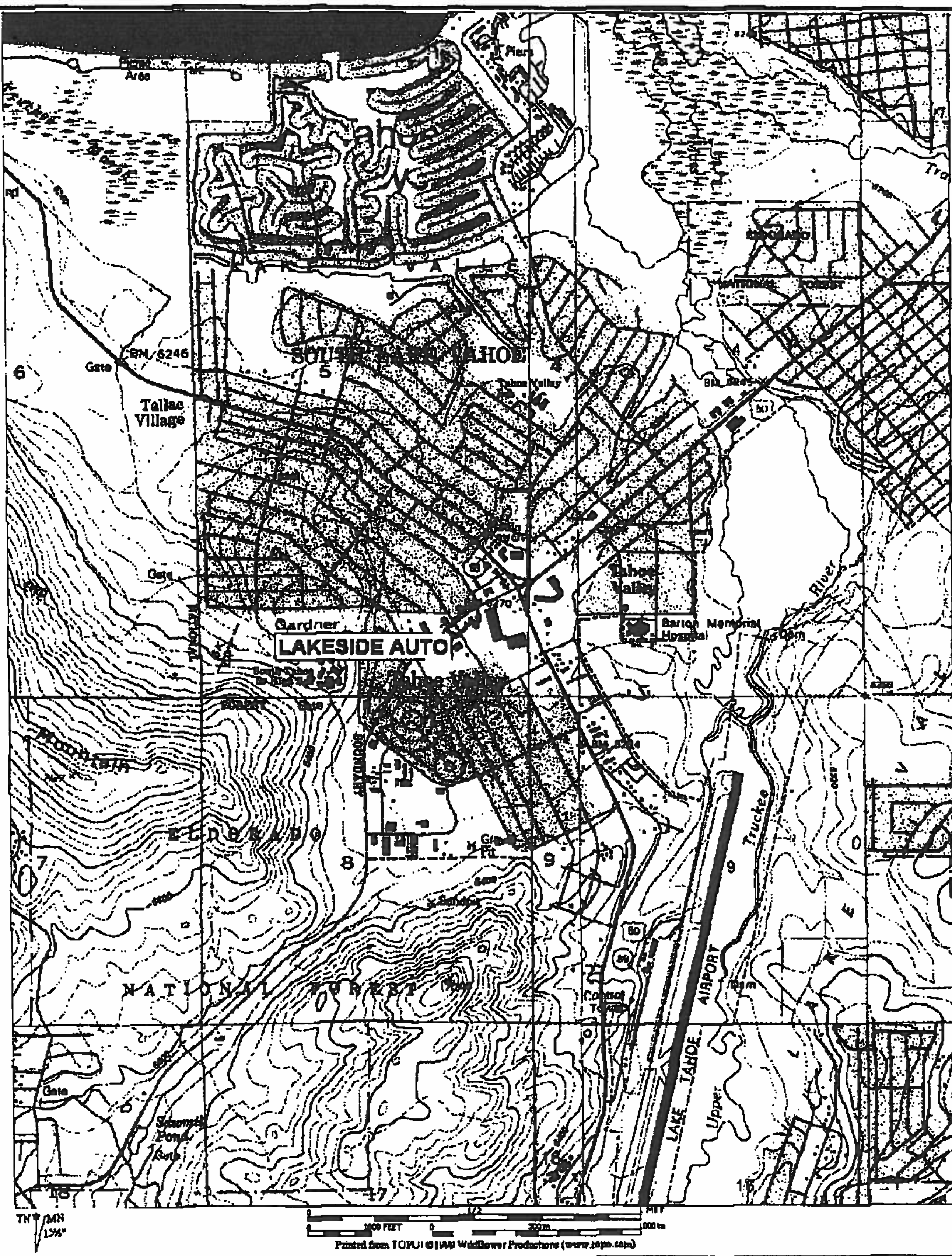
Based on the information provided above and a review of the chlorinated hydrocarbon distribution, it appears that a source of PCE, TCE, and cis-1,2 DCE could be located beneath Glorene Avenue and Lake Tahoe Boulevard. It may be possible that the sewer line located in the middle of Glorene Avenue and the sewer main located in Lake Tahoe Boulevard are a potential source of chlorinated hydrocarbon impact to soil and groundwater based on the close proximity of historical dry cleaning facilities and machine shops in the area.

Prior to recommending on- and off-site monitoring wells to monitor the chlorinated hydrocarbons identified in the groundwater during this investigation, SECOR is requesting a meeting between the CRWQCB and the Lakeside Automotive property owners to discuss the results of the Big O, Lake Tahoe Laundry Works and former Norma's Dry Cleaners and to determine if the South Tahoe Public Utilities District conducted any soil sampling in the vicinity of their sewer lines in Glorene Avenue and Lake Tahoe Boulevard. SECOR believes that it is in the best interest of it's client to understand the progress and results of the other potential responsible parties (PRPs) prior to committing to the next phase of the investigation. If the chlorinated hydrocarbon impacts to groundwater are the result of co-mingled plumes from separate sites, then the PRPs should have the opportunity to approach further characterization and cleanup as a group to lower overall costs.

7.0 LIMITATIONS

This report was prepared in accordance with generally accepted environmental and hydrogeological practices applicable at the time of preparation. The findings and conclusions presented in this report are based on a review of existing data, field observations, and the results of a limited soil and groundwater investigation. They are specific for this site and for this client, and may not be expanded to include the greater areas beyond this site. SECOR makes no other warranties, expressed or implied, as to the professional advice provided in this report.

FIGURE 1
SITE LOCATION MAP



SECOR INTERNATIONAL INCORPORATED
1535 HOT SPRINGS ROAD, SUITE 3
CARSON CITY, NEVADA 89706

SITE LOCATION MAP

Lakeside Automotive
South Lake Tahoe, California

FIGURE: 1

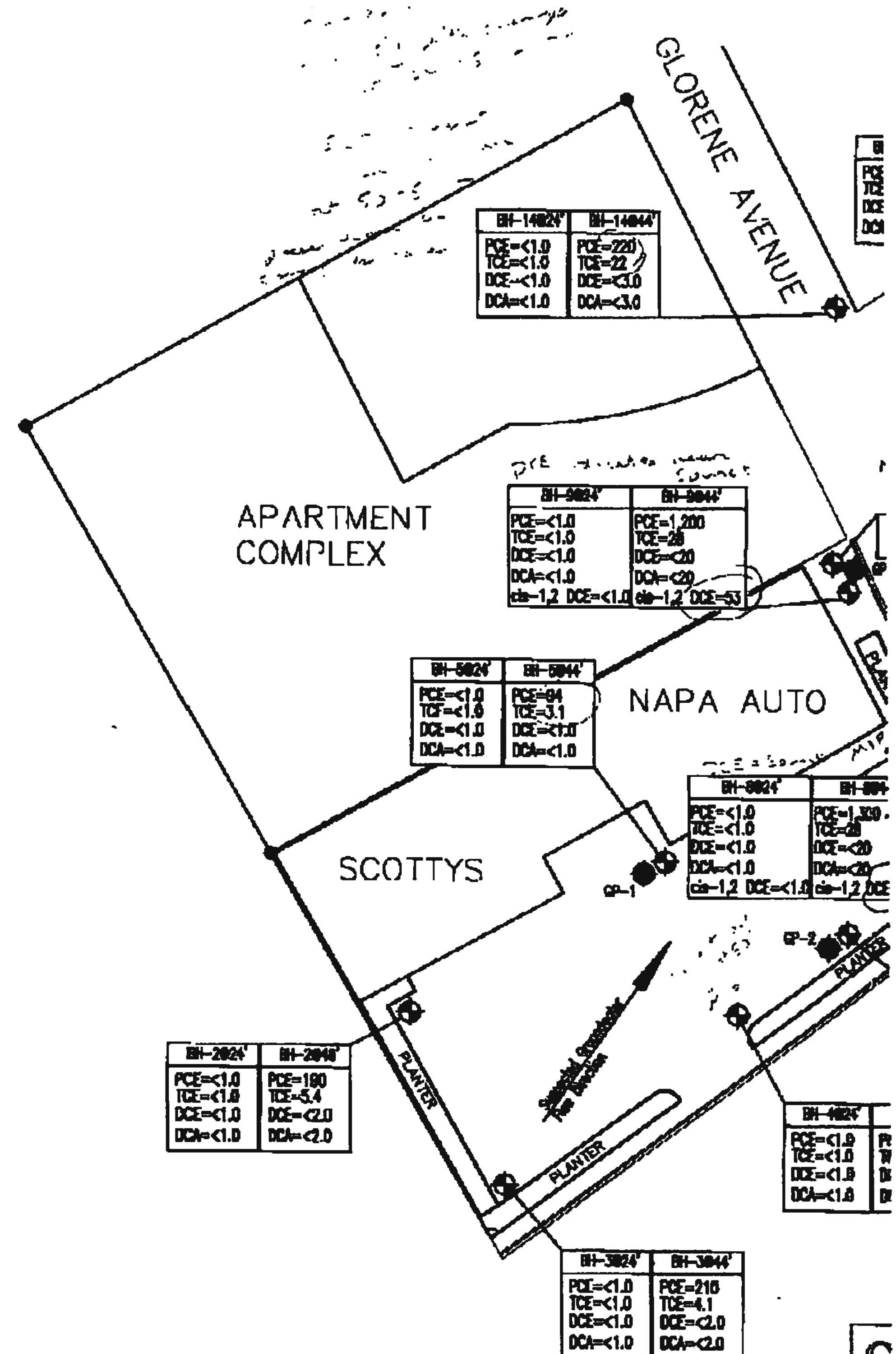
DATE: January, 2004

PROJECT NO: 930T.03210.00

SiteLocation.dwg

FIGURE 2

GROUNDWATER INVESTIGATION MAP



EXPLANATION

● PREVIOUS GEOPROBE BOREHOLE LOCATION

⊕ GEOPROBE BOREHOLE LOCATION

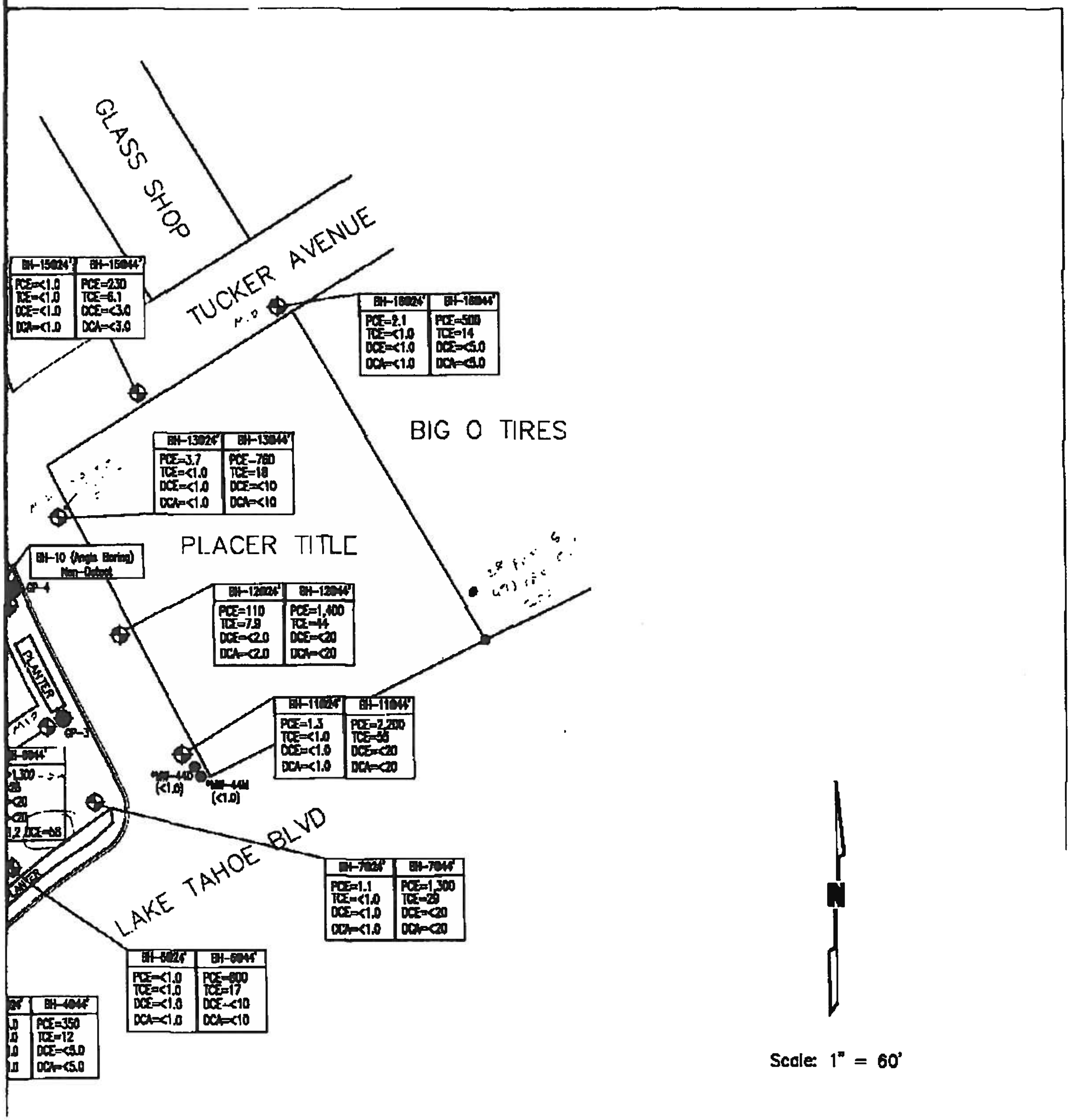
SAMPLE ID and DEPTH
Tetrachloroethene (PCE) in ug/L
Trichloroethene (TCE) in ug/L
1,1 Dichloroethene (DCE) in ug/L
1,2 Dichloroethane (DCA) in ug/L
cis 1,2 Dichloroethene (cis-1,2 DCE) in ug/L

* Samples collected from MW-44M and MW-44D were reported below the detection limit for PCE, TCE, DCE and DCA.

Note: For soil sample results, see Table I.

15

CA



SECOR INTERNATIONAL INCORPORATED

1535 HOT SPRINGS ROAD, SUITE 3
CARSON CITY, NEVADA 89706

GROUNDWATER SAMPLE RESULTS

Lakeside Automotive
1935 Lake Tahoe Boulevard
South Lake Tahoe, CA

FIGURE:	2
DATE:	1/20/04
PROJECT NO:	950T.03210.00

TABLE I

SOIL ANALYTICAL RESULTS

TABLE I

Soil Analytical Results From Geoprobe Investigation
Lakeside Automotive, South Lake Tahoe, CA

Sample Location	USCS Group Symbol	Sample Date	PCE (ug/Kg)[1]	TCE (ug/Kg)	DCE (ug/Kg)	DCA (ug/Kg)
GP-2 @ 1.5'	SM	11-5-03	<20	<20	<20	<20
GP-2 @ 6'	SM	11-5-03	<20	<20	<20	<20
GP-3 @ 1.5'	SM	11-5-03	<40	<40	<40	<40
GP-3 @ 6'	SW	11-5-03	<20	<20	<20	<20
GP-4 @ 1.5'	SP	11-5-03	<20	<20	<20	<20
GP-4 @ 6'	SW	11 5-03	<20	<20	<20	<20
GP-5 @ 1.5'	SP	11-5-03	<20	<20	<20	<20
GP-5 @ 6'	SP	11-5-03	<20	<20	<20	<20
GP-6 @ 1.5'	SP	11-5-03	<20	<20	<20	<20
GP-6 @ 6'	SP	11-5-03	<20	<20	<20	<20
GP-7 @ 1.5'	SP	11-6-03	<20	<20	<20	<20
GP-7 @ 6'	SW	11-6-03	<20	<20	<20	<20
GP-8 @ 1.5'	SP	11-6-03	<20	<20	<20	<20
GP-8 @ 6'	SW	11-6-03	<20	<20	<20	<20
GP-9 @ 1.5'	SW-SM	11-6-03	<20	<20	<20	<20
GP-9 @ 6'	SP-SM	11-6-03	<20	<20	<20	<20
GP-10 @ 8-10'	SW	11-6-03	<20	<20	<20	<20

[illegible]

1. Micrograms per kilogram equivalent to parts per billion.

TABLE II

GROUNDWATER ANALYTICAL RESULTS

TABLE II

Groundwater Analytical Results From Geoprobe Investigation
Lakeside Automotive, South Lake Tahoe, CA

Sample Location	Sample Date	PCE (ug/L)[1]	TCE (ug/L)	DCE (ug/L)	DCA (ug/L)	cis-1,2 DCE (ug/L)
GP-2 @ 24'	11-5-03	<1.0	<1.0	<1.0	<1.0	NA
GP-2 @ 46'	11-5-03	**190**	**5.4** .028	<2.0	<2.0	NA
GP-3 @ 24'	11-5-03	<1.0	<1.0	<1.0	<1.0	NA
GP-3 @ 44	11-5-03	**210**	**4.1** .02	<2.0	<2.0	NA
GP-4 @ 24'	11-5-03	<1.0	<1.0	<1.0	<1.0	NA
GP-4 @ 44'	11-5-03	**350**	**12** .034	<5.0	<5.0	NA
GP-5 @ 24'	11-5-03	<1.0	<1.0	<1.0	<1.0	NA
GP-5 @ 44'	11-5-03	**94**	**3.1**	<1.0	<1.0	NA
GP-6 @ 24'	11-5-03	<1.0	<1.0	<1.0	<1.0	NA
GP-6 @ 44'	11-5-03	**800**	17 .02	<10	<10	NA
GP-7 @ 24'	11-6-03	**1.1**	<1.0	<1.0	<1.0	NA
GP-7 @ 44'	11-6-03	**1,300**	**29** .022	<20	<20	NA
*GP-8 @ 24'	11-6-03	<1.0	<1.0	<1.0	<1.0	<1.0
*GP-8 @ 44'	11-6-03	**1,300**	**28** .022	<20	<20	**58**
*GP-9 @ 24'	11-6-03	<1.0	<1.0	<1.0	<1.0	<1.0
*GP-9 @ 44'	11-6-03	**1,200**	**28** .023	<20	<20	**53**
GP-11 @ 24'	11 7-03	**1.3**	<1.0	<1.0	<1.0	NA
GP-11 @ 44'	11-7-03	**2,200**	**55** .025	<20	<20	NA
GP-12 @ 24'	11-7-03	**110**	**7.9** .01	<2.0	<2.0	NA
GP-12 @ 44'	11-7-03	**1,400**	**44** .031	<20	<20	NA
GP-13 @ 24'	11-7-03	**3.7**	<1.0	<1.0	<1.0	NA
GP-13 @ 44'	11-7-03	**760**	**18** .024	<10	<10	NA
GP-14 @ 24'	11-6-03	<1.0	<1.0	<1.0	<1.0	NA
GP-14 @ 44'	11-6-03	**220**	**22** .01	<3.0	<3.0	NA
GP-15 @ 24'	11-6-03	<1.0	<1.0	<1.0	<1.0	NA
GP-15 @ 44'	11-6-03	**230**	**6.1** .022	<3.0	<3.0	NA
GP-16 @ 24'	11-6-03	**2.1**	<1.0	<1.0	<1.0	NA
GP-16 @ 44'	11-6-03	**500**	**14** 0.08	<5.0	<5.0	NA
MW-44M	11-11-03	<1.0	<1.0	<1.0	<1.0	NA
MW-44D	11-13-03	<1.0	<1.0	<1.0	<1.0	NA
Drinking Water Standards (ug/L):		*5.0*	*5.0*	*7.0*	*5.0*	*70*

1. Micrograms per liter equivalent to parts per billion.
Bold values indicate a concentration above the detection limit.
Shaded values indicate a concentration that exceeds the designated drinking water standard.
*Samples were analyzed for the full suite of volatile organic constituents by EPA method 8260B.

APPENDIX A

MIP Results

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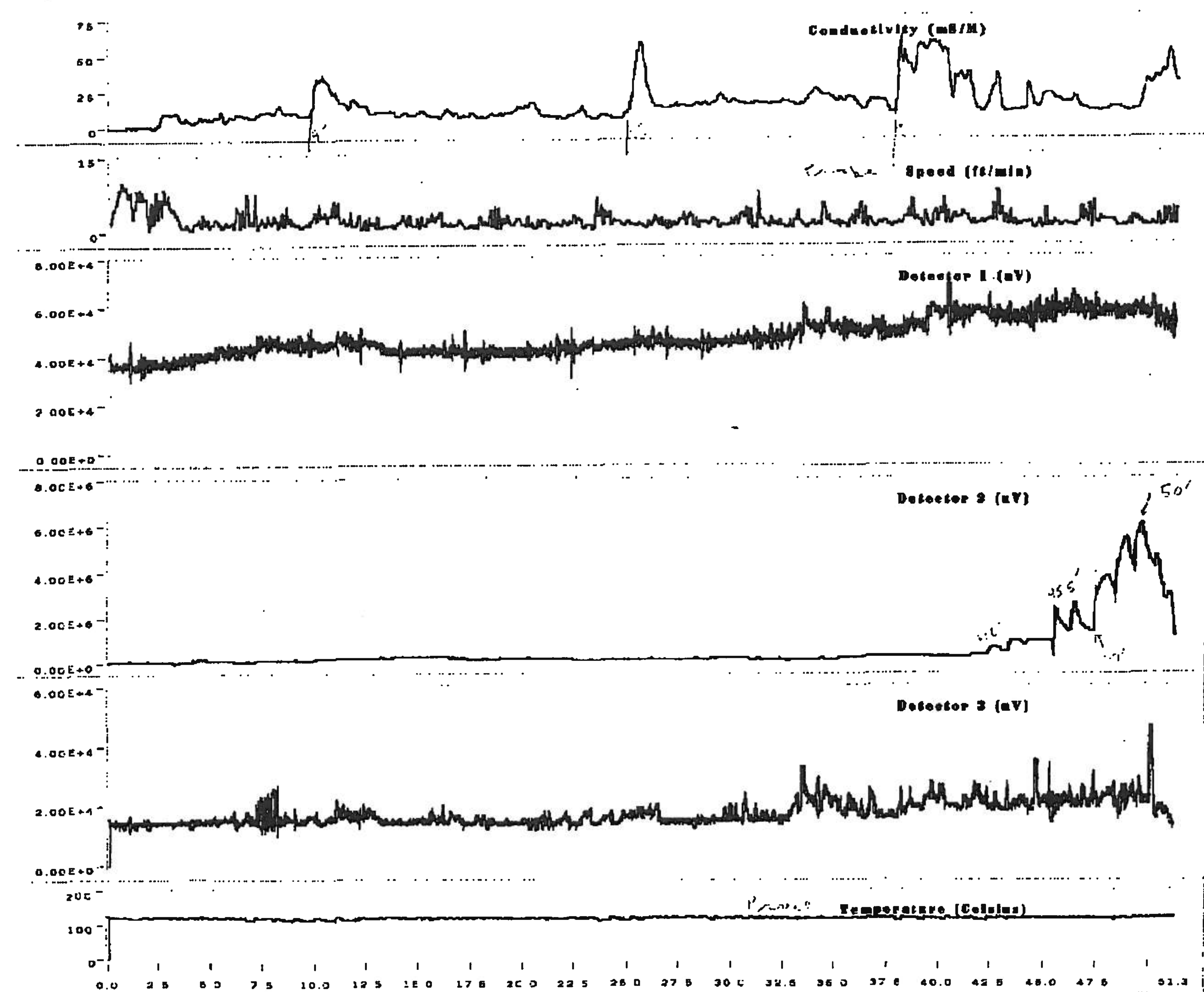
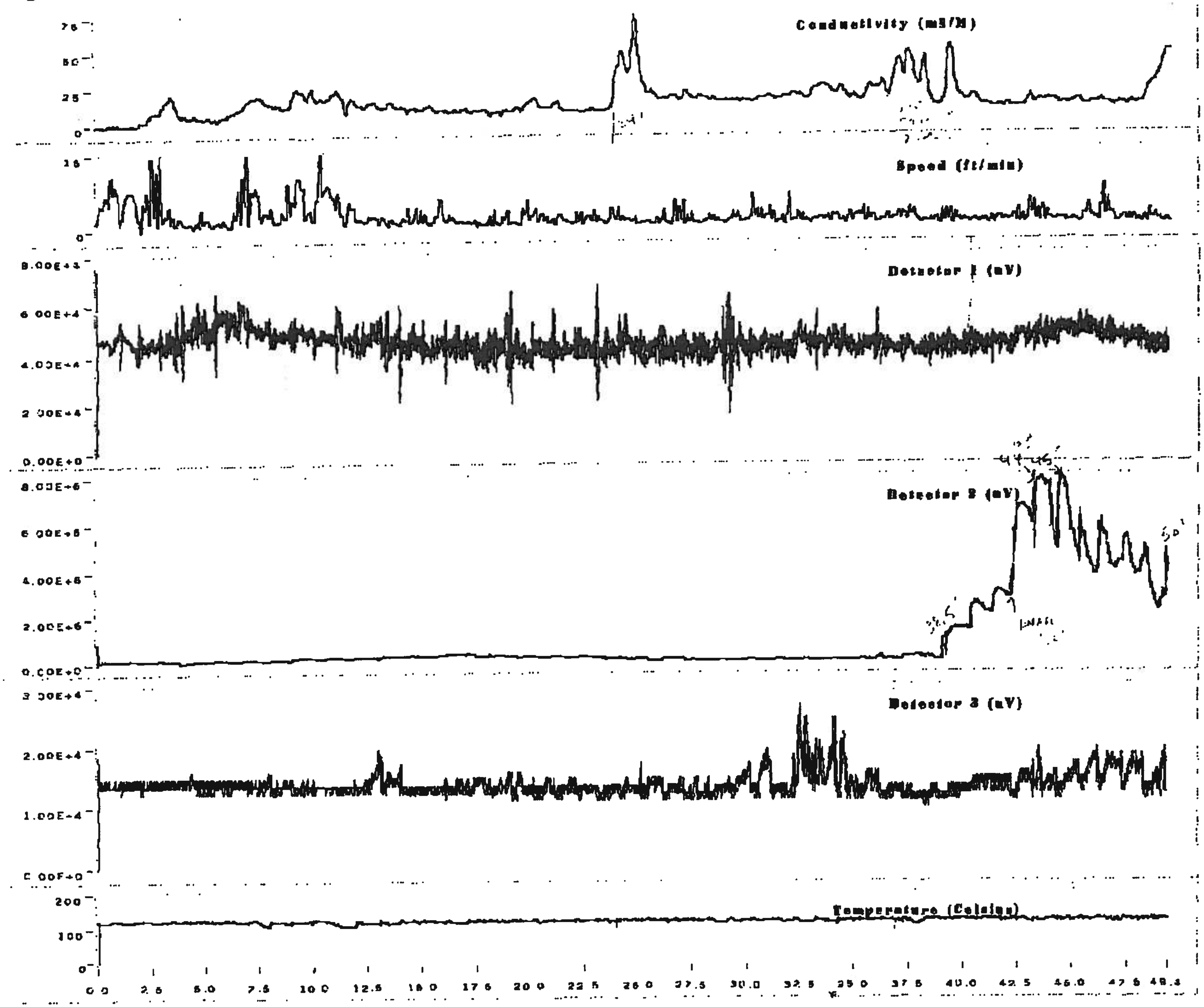


Log: A:\EC0159.DAT BH-8



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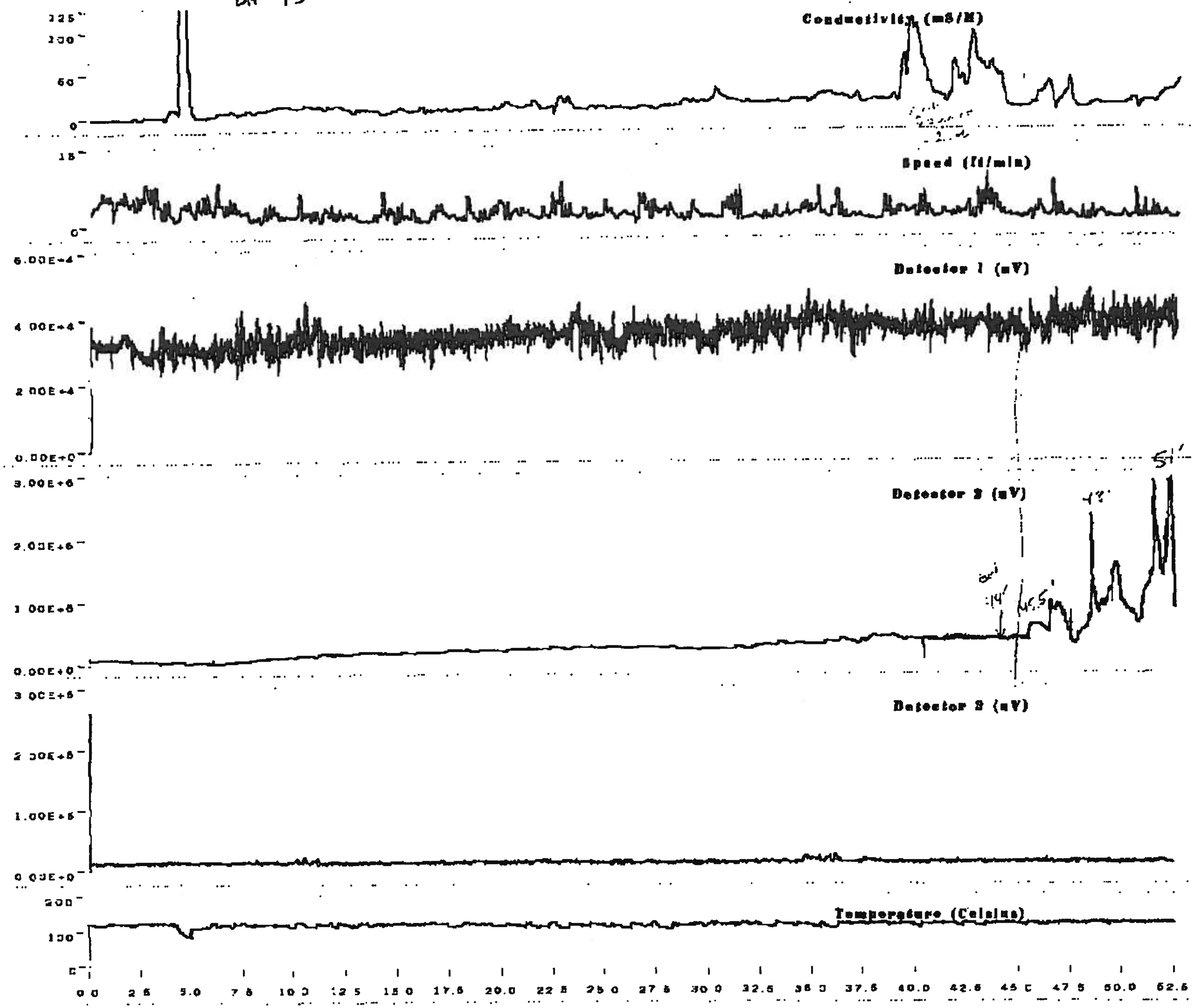

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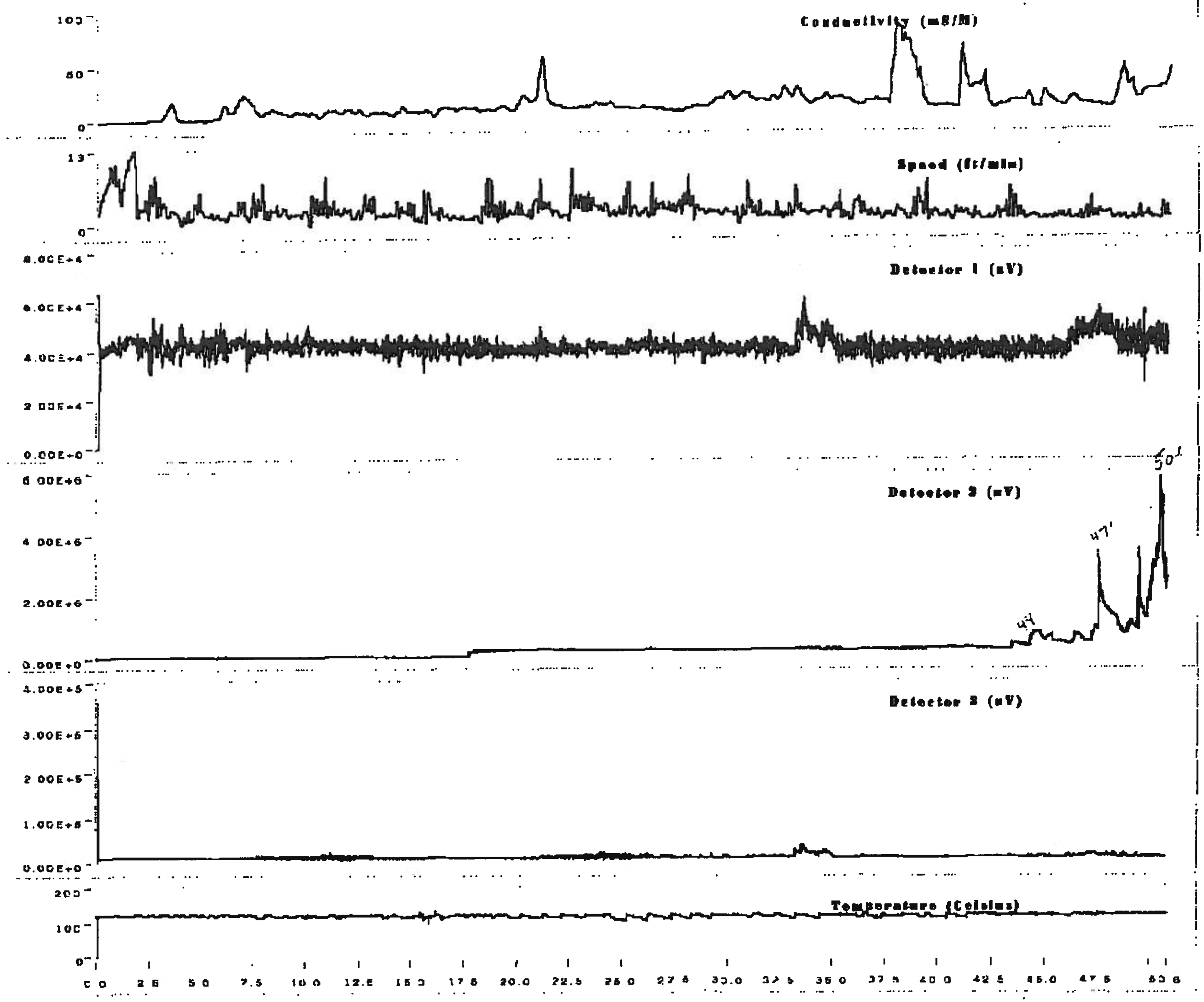

ATTACHMENT 2

Staff Report, Solvent Contamination at the Big O Tires Store, 1961 Lake Tahoe Boulevard, South Lake Tahoe, prepared by California Regional Water Quality Control Board, Lahontan Region, dated 22 August 2005

California Regional Water Quality Control Board
Lahontan Region

STAFF REPORT

SOLVENT CONTAMINATION AT THE BIG O TIRES STORE, 1961 LAKE TAHOE BOULEVARD, SOUTH LAKE TAHOE

August 22, 2005

Lisa Dernbach, P.G., C.Hg., C.E.G.
Senior Engineering Geologist (Specialist)

Reviewed by: Chuck Curtis, P.E.
Planning and Toxics Division Manager

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Executive Summary

The Regional Board has been aware of solvent contamination, particularly tetrachloroethene (PCE), at the Big O Tires Store (Facility) in South Lake Tahoe following a 2001 groundwater investigation. In 2003, the Regional Board Executive Officer issued Cleanup and Abatement Order (CAO) No. R6T-2003-031 to current and former owners and operators (Dischargers) of the Facility to conduct corrective actions. The Dischargers are David and Kathleen Barnett; CAD Enterprises, LLC; CAMCO; BOT 65, Incorporated; and Lightnin II, Incorporated. The Dischargers did not comply with orders in the CAO. Instead, the Dischargers submitted a technical report in early 2004 that put forth the theory of a solvent center-of-mass that migrated to the Facility from an off-site source. The CAO was put in abeyance pending Board staff's review of the technical report and investigation results from other solvent source sites.

Regional Board staff's review of all the data associated with the site and review of other case studies of solvent fate and transport indicates that the Dischargers' theory of an off-site migrating center-of-mass affecting the Facility is not supported. Rather, investigation results show that the Facility is primarily affected by a PCE source originating on site and may secondarily be affected by off-site solvent sources. The on-site source is adversely affecting water quality and beneficial uses, such as municipal and domestic drinking water supply. Additional enforcement actions issued to the Dischargers are warranted for cleanup and abatement of the hazardous waste (solvent-contaminated soil and water).

I. History of PCE Contamination in South Lake Tahoe

In 1989, the South Tahoe Public Utility District (District) reported that PCE had been detected in several municipal wells in the "Y" area in the City of South Lake Tahoe (Figure 1). The information indicated that an unauthorized discharge or discharges of solvent compounds had occurred within the capture zones of these wells. While several solvent compounds were detected, PCE was the most abundant compound. The state drinking water standard for PCE is 5 micrograms per liter (µg/l).

In 1990, Regional Board staff began investigations to identify locations of potential solvent discharges. The investigations were able to identify the businesses and areas that could be potential sources. Following additional investigations by the Regional Board and the District, it was determined in 1998 that PCE in groundwater was not a diffused, area-wide problem. Instead, localized, high PCE concentrations were probably attributed to releases originating at a few specific sites.

Starting in 1998, the Regional Board Executive Officer required that groundwater investigations be conducted on certain properties to determine whether a solvent release had occurred. The properties were selected based upon their location relative to affected drinking water wells and whether they included businesses that likely used solvent compounds. The selected businesses included dry cleaners, automotive and machine shops, paint shops, and printing shops.

Groundwater investigations were conducted at thirteen properties between 1998 and 2003. Of the thirteen, two properties had groundwater containing PCE concentrations in the thousands of micrograms per liter in groundwater and three properties had groundwater containing PCE concentrations in the hundreds of micrograms per liter. The results from investigations at properties in the first group having the highest PCE concentrations in groundwater indicated that those properties were sources of solvent contamination affecting the drinking water aquifer. Contamination found in the second group of sites indicated that those properties possibly were solvent sources and warranted further investigation. The remaining eight properties that conducted investigations had PCE concentrations in groundwater at less than 20 µg/l and were determined by Board staff not to be PCE sources.

II. Cleanup and Abatement Order (CAO) No. R6T-2003-031

The Regional Board Executive Officer issued cleanup and abatement orders to dischargers for the properties having PCE concentrations in groundwater in the thousands of micrograms per liter. The Facility was one of the two properties where dischargers received cleanup and abatement orders.

The October 2001 groundwater investigation conducted at the Facility detected PCE and other solvent compounds in groundwater above drinking water standards. PCE increased in concentration from the water table at 18 feet below ground surface (bgs) to depths of 50 feet bgs in the aquifer (Figure 2). Trichloroethene (TCE) and dichloroethene (DCE) also increased in concentration with depth in the water column. Solvent concentrations increased from the western property boundary towards the middle of the Facility, corresponding with groundwater flowing west to east. The investigation results indicated that an on-site solvent source was adversely affecting water quality. Increasing solvent concentrations with depth in the saturated zone implied the source was free product that sank in the aquifer.

CAO No. R6T-2003-031, issued on August 8, 2003, required the Dischargers to conduct investigations and corrective actions to cleanup and abate the affects of discharges of hazardous waste to groundwater. The Order requires the Dischargers to: 1) submit a workplan for investigating the extent of contamination in soil and groundwater; 2) implement the site investigation; 3) submit a technical report that describes the results of the site investigation; and 4) submit a corrective action plan to abate impacts to soil and groundwater. Contamination from the site threatens multiple municipal and domestic drinking water wells in the area.

On September 25, 2003, the Dischargers submitted a workplan for conducting a soil and groundwater investigation, in accordance with the first requirement in CAO R6T-2003-031. In a November 25, 2003 response, Board staff stated that the workplan was deemed incomplete because it did not propose sufficient sampling points to fully characterize contamination in either soil or groundwater. In the letter, the Dischargers were directed to submit a revised workplan within 21 days that would meet the requirements of the Order.

On December 12, 2003, the Dischargers submitted a deadline-extension request for submitting the revised workplan. The basis for the Dischargers' request was that they desired to complete an area-wide contaminant study that would allow for a more accurate determination for need and placement of off-site borings for sampling. The Regional Board Executive Officer approved the request in a December 22, 2003 letter and set a new deadline of January 16, 2004 for submitting the revised workplan.

III. Migrating Solvent Center-of-Mass Theory

In January 2004, the Regional Board received a document entitled, "Review and Interpretation of Hydrologic Data, Big O Tire Facility." The document, prepared by the Sierra-Pacific Group on behalf of the Dischargers, presents the theory that a solvent center-of-mass migrated with natural groundwater to the Facility from a laundromat business located across the street at 1024 Lake Tahoe Boulevard (see Figure 1). The laundromat business, now called the Lake Tahoe Laundry Works (Laundry), at one time contained a coin-operated dry cleaning machine for public use. The compound, PCE, was used in the machine to clean clothes.

The center-of-mass theory was based upon the Facility consultant's contention that there was a single point of release for solvent contamination rather than multiple releases at different sites, as put forth by Regional Board staff. The theory is based upon the occurrence of the same three compounds, PCE, TCE, and cis-1,2-DCE, within the same orders of magnitude at the Laundry, Facility, and Napa Store. The consultant theorizes that contaminant concentrations indicate that PCE free product originating at the Laundry migrated laterally and vertically in the aquifer before reaching the Facility. The resultant dissolved-phased plume became centered beneath the Facility. Later, when the pumping was expanded at the Clement Well, the consultant suggests the plume center-of-mass was pulled beneath the Napa Store, reflected by high solvent concentrations found at that location. Following shutdown of the Clement Well years later, the consultant indicates the center-of-mass is more evident beneath the Facility than the Napa Store due the Facility's proximity to free product from the Laundry. Based upon this theory of solvent contamination originating at an off-site source, the Dischargers did not propose a revised workplan for implementing a site investigation.

On January 29, 2004, Regional Board staff met with several of the Dischargers to discuss the need for the revised workplan and the theory made in the document "Review and Interpretation of Hydrologic Data."

Based on that meeting, on March 1, 2004, the Regional Board Executive Officer issued a letter to the responsible parties agreeing to hold in abeyance the requirement for the revised workplan for a site investigation. The letter stated that the action is being taken until Board staff could research the validity of the migrating center-of-mass theory and review the results of other PCE investigations being conducted in the area. Following receipt of this information, a decision would be made regarding further compliance with CAO R6T-2003-031.

Following the Executive Officer's March 1, 2004 letter to the Dischargers, Regional Board staff researched the migrating center-of-mass theory. In addition, Board staff spoke to staff at other regional boards that are experienced in the fate and transport of solvents in groundwater. The purpose of the research was to understand the basis of the theory and to determine whether the conditions that are applicable to the theory are or were present.

IV. Characteristics and Behavior of Solvent Compounds

Conventional knowledge of solvent contamination cases indicates that for a migrating center-of-mass there must be a solvent source having saturated a volume of the soil pore space. Solvents may be found in soils (above or below the groundwater table) in two general phases. The first is when a solvent saturates the pore spaces of a volume of soil, and it is variously called non-aqueous-phase liquid (NAPL), separate-phase product, liquid-phase product, free-liquid-phase product, or free product (referred hereinafter as free product). Solvent in the free product phase has a specific gravity greater than one, causing it to sink in water. For PCE, a concentration of one percent solubility (about 1,500 µg/l) in groundwater typically indicates the presence of free product.

The other general phase is when a solvent is in gaseous form in soil pores above the water table or a dissolved form below the water table. Dissolved plumes form after contact with solvents, whether it be from free product, residual contamination (having partially-saturated pore spaces), or a gas. A common misconception of solvent plumes is that they too sink in the aquifer. Instead, plumes composed of dissolved solvent compounds migrate with groundwater flow and decrease in concentration with distance from the source. The compound, PCE, tends to lead a plume of dissolved solvents. PCE breakdown products, TCE and DCE, will usually follow PCE in a plume but at lower concentrations and for shorter distances in conditions that are more aerobic than anaerobic.

The fate and transport of a solvent free product can be complex. In the unsaturated zone, free product is mainly acted on by gravity and moves downward. Free product can also travel laterally on fine-grained layers, mainly silts and clays, which resist downward movement. On silty sand layers, free product will move downward between sediment grains unless the entry pressure exceeds the weight of the free product on top of it, at which time the free product may move laterally. When free product reaches groundwater, it begins to form a mound and spread horizontally on the water table until there is enough mass to overcome the capillary entry pressure. Once in the saturated zone, gravity continues to cause free product to sink in the aquifer because it is more dense than water.

Normal groundwater flow gradients are unable to overcome gravitational forces and soil tension forces to cause free product to move laterally. However, if a strong force, such as a pumping municipal well or groundwater extraction well, is present, it can pull free product away from the source site. This process tends to happen more with free product pools rather than with small free product accumulations, such as fingers and drops, called ganglia.

It is generally known that solvent free product does not remediate on its own under natural attenuation. Numerous cases can be pointed to where solvent discharges 40 years old continue to show free product levels in soil and groundwater. Rather, active measures are required to eliminate a free product source that would otherwise be present for decades.

Therefore, the factors required for a migrating center-of-mass are 1) free product at a source site and 2) free product lateral migration either by movement on fine-grained layers or by an external force such as well extraction. These factors are explored more in the following sections.

V. Analysis of PCE Investigation at Off-site Properties

Once the factors required for validation of a migrating center-of-mass theory were known, investigation reports were reviewed for off-site properties believed to be PCE sources to determine if the factors were present. The results of investigations conducted at three solvent sites in the "Y" area are summarized here.

A. Lake Tahoe Laundry Works

The Laundry is located near the northwest end of a shopping center. The property owner reports that the laundromat contained a coin-operated dry cleaning machine in the years between 1973 and 1979. The machine was self contained and used PCE to clean clothes; there was no sewer connection to the machine.

Site investigations were conducted at the Laundry in 2003, 2004, and 2005. The maximum on-site PCE concentration of 690 µg/l was detected at the water table, 20 feet bgs (Figure 2). PCE concentrations decreased with depth in the aquifer, to 15 µg/l at 44 feet bgs. Other solvent compounds, TCE and DCE, detected above the drinking water standard also decreased in concentration with depth in the aquifer. Water samples taken from boring GP-9, located two hundred and fifty feet in the downgradient flow direction, showed PCE concentrations at 1,000 µg/l at 16 feet bgs and 1,200 µg/l at 40 feet bgs. This boring location is situated at the northern corner of the shopping center parking lot, adjacent to Lake Tahoe Boulevard. Soil sampling showed that a majority of solvent compounds detected were at shallow depths, four to eight feet bgs, near the laundromat front door and in the parking lot. Further investigation is necessary to define the outer most boundaries of soil contamination.

Overall, data from the Laundry point to shallow residual contamination in soil instead of sinking free-product in the aquifer. These investigation results are consistent with spills caused by chemical transport and delivery that were common during the period that PCE was used at the Laundry. Since solvent compounds in groundwater decrease with depth and are at concentrations less than one percent of the solubility level for PCE (i.e., 1,500 µg/l), it is reasonable to conclude that free product does not and did not exist at the site.

In addition, the 2004 site investigation included off-site groundwater sampling beneath Lake Tahoe Boulevard. Water samples collected from a boring located at the Glorene

Avenue intersection, 100 feet northwest from the Laundry, showed non-detectable levels of solvents at the water table at 18 feet and 710 µg/l at 44 feet bgs. Samples collected from a boring located 70 feet north from the Laundry and between it and the Facility detected 25 µg/l PCE at the water table and 230 µg/l at 44 feet bgs. The latter sample location is in the downgradient groundwater flow direction from the former sample location. The sample results suggest that the plume from the Laundry site migrates near the water table since PCE concentrations decrease with distance from the site. Whereas, sample results near the Glorene Avenue intersection suggest that a solvent plume from a different source or sources is migrating deeper in the aquifer from the west direction. It is unknown whether the shallow and deeper plumes commingle.

The 2005 investigation results indicate a commingled plume may be present at the northeast parking lot corner of the shopping center. PCE concentrations detected at GP-9 are inconsistent with concentrations detected upgradient at the Laundry site. The boring location is situated between the Facility and the former Shell Station, where a pump and treat system operated and may have affected the plume from the Facility. Further investigation is necessary to determine whether the Laundry plume commingles with the plume from the Facility at this location.

B. Lakeside Napa Auto Parts Store

Board staff also reviewed the 2002 and 2004 investigation reports for the Lakeside Napa Auto Parts Store (Napa Store). This site is located at 1935 Lake Tahoe Boulevard, about 180 feet west of the Facility (Figures 1 and 2). The property owner cites that a machine shop operated in the east end of the store building until 1997.

Results of the two investigations were similar. PCE was detected in the thousands of micrograms per liter in groundwater at 44 feet bgs and at lesser concentrations near the water table at 18 feet bgs. The compounds TCE and DCE were also detected in the water column at levels exceeding drinking water standards. Solvent compounds increased in concentration in groundwater from the upgradient property boundary on the west side to the middle of the property, indicating an on-site source. In the first investigation, the PCE high concentration of 3,000 µg/l was detected on site. Yet, in the second investigation, the PCE high concentration of 2,200 µg/l was detected 50 feet off site across Glorene Avenue from the Napa Store. It is unknown whether contamination detected at the latter sampling location is from a source at the Napa Store or an off-site source.

Since solvent compounds in groundwater increase with depth and are at concentrations greater than one percent solubility for PCE (i.e., 1,500 µg/l), it is likely that free product exists at the site. Off site, PCE concentrations in groundwater reduced to 500 µg/l on Tucker Avenue, just before the Big "O" Tires property line. Despite collecting 17 soil samples and conducting geophysical analyses of subsurface conditions, a solvent source was not identified during either investigation at the Napa Store. Further investigation may be necessary to determine the relationship of the high PCE concentration detected off site during the 2004 investigation with the Napa Store.

C. South Shore Motors

The South Shore Motors is located at 1875 Lake Tahoe Boulevard, about 300 feet west of the Facility (Figure 1). During a 1999 site investigation, water samples showed PCE at concentrations below the 5 µg/l drinking water standard and dichloroethane (DCA) at concentrations above the 0.5 µg/l drinking water standard. The site was the only property in the South "Y" area to identify DCA.

VI. Operating History of "Y" Area Municipal Wells

The District reports that the first PCE detection in "Y" area municipal wells occurred in 1989, the first time that sampling was required in California. The four municipal wells closest to the Facility are the Tata #4 Well, Clement Well, Julie Well, and the South Y Well (see Figure 1). The Facility is located in the downgradient or crossgradient groundwater flow direction of each of these municipal wells.

Table 1 shows that PCE concentrations detected in the Julie Well in 1989 exceeded the state drinking water standard of 5 µg/l. PCE concentrations detected in the Tata #4 and Clement Wells were below the standard. The latter two wells also contained the compound DCA above the 0.5 µg/l drinking water standard, while the Julie Well did not. The Tata #4 Well and Clement Well pumped at about 70 gallons per minute (gpm), and the Julie Lane Well pumped at about 150 gpm. Based upon pumping rates, it would be assumed that the drawdown capture zone would be larger at the Julie Lane Well than at either of the other two municipal wells. The lack of aquifer tests in or around 1989 prevent knowing the actual capture distance of each well.

Table 1. Solvent Compounds Detected in Municipal Wells

	Julie Well (150 gpm)	Tata #4 Well (70 gpm)	Clement Well (70 gpm)
PCE (µg/l) in 1989	8.3	2.2	0.5
Other compounds in 1989	none	DCA	DCA
PCE (µg/l) in 1992	6.4	0.79	29*
Other compounds in 1992	none	DCA	DCE TCE**

Notes:
µg/l: milligrams per liter
gpm: gallons per minute
PCE: Tetrachloroethene
TCE: Trichloroethene
DCE: Dichloroethene
DCA: Dichloroethane
*pumping increased on average to 200 gpm
**detected in 1993

To abate PCE and DCA concentrations in drinking water, the District choose to conduct wellhead treatment using an air stripper at the Clement Well. Extracted water from the Tata #4 Well, Julie Well, and the South Y Well was piped to the Clement Well and merged with its extracted water before undergoing treatment. The treatment method was successful at removing solvent compounds from groundwater to meet state drinking water standards. Treated water was then sent in the distribution lines to District customers.

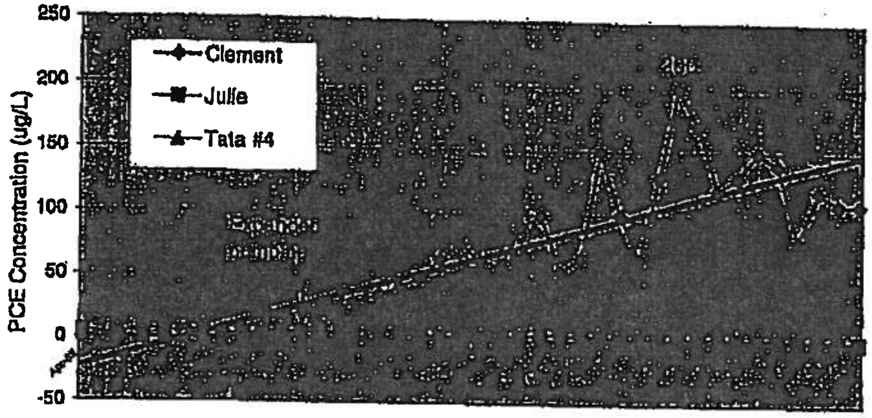
When wellhead treatment began at the Clement Well at the end of 1991, pumping from this well was increased up to 230 gpm and averaged almost 200 gpm. Pumping rates at the Tata #4, Julie, and South Y Wells, however, stayed the same as before. It is unknown whether expanded pumping at the Clement Well caused overlap in the capture zones with other municipal wells in the South Y area.

The District rarely used the South Y Well due to high levels of naturally occurring uranium in the water. When the South Y Well was turned on between August and November 1994 and between July and August 1995, water was blended with water from the other municipal wells to reduce uranium levels. The South Y Well pumped at a rate of 140 gpm.

With the greater pumping rate at Clement came increasing PCE concentrations above the drinking water standard (Graph 1) and the disappearance of DCA (Attachment 1). The trendline for the Clement Well data shows an overall increasing trend in PCE concentrations through time until the well was turned off in early 1999 along with all the other Y area municipal wells. In comparison, expanded pumping at Clement had very little if any effect upon PCE concentrations detected at the Julie and Tata #4 Wells. Graph 1 shows that PCE concentrations peaked at 200 µg/l in the Clement Well in 1996 before starting to decrease in 1997. In addition, the District analyzed influent samples of combined municipal well water going to the air stripper. The levels of PCE detected in these samples were consistently less that PCE concentrations detected in the Clement Well alone due to dilution of the Julie and Tata #4 Wells, and the South Y Well when it occasionally operated.

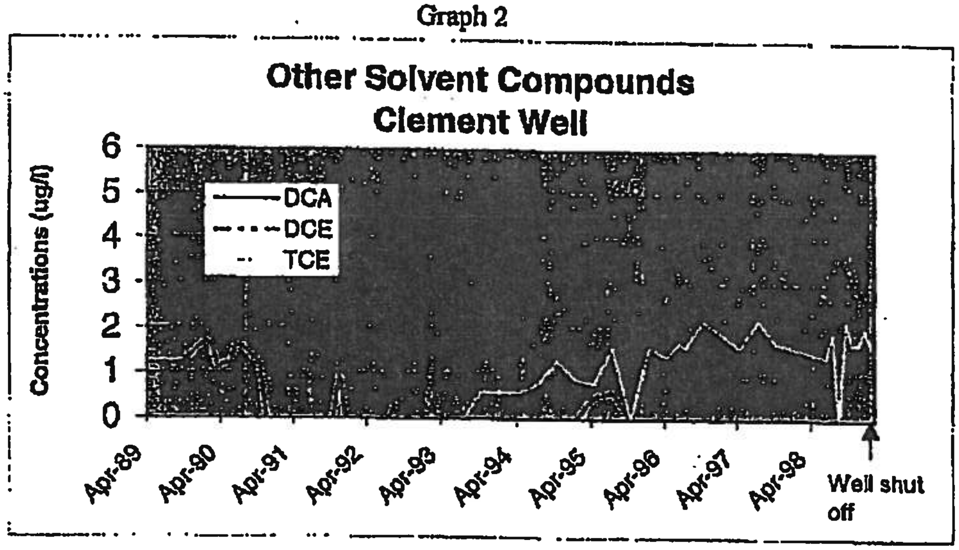
The compounds DCE and TCE were also detected in the Clement Well beginning in 1992 and 1993, respectively (Graph 2). These compounds, however, were not detected in the Julie and Tata #4 Wells, but were detected at low concentrations (less than four micrograms per liter) in the combined well influent samples before the air stripper. No chlorinated hydrocarbon data is available for the South Y Well since it was not pumped often. Clement Well data in Attachment 1 show there was a nine-month time lag from the time when PCE concentrations started steadily increasing in late 1991 to when the

Graph 1. PCE Concentrations in Municipal Wells



first DCE detection was observed in September 1992. The data also show a 22-month time lag, from December 1991 to October 1993, for TCE to reach detectable levels in the Clement Well.

Graph 2



In early 1998, the District shut down all wells in the Y area to conduct a pump test for the Clement Well. The purpose of the test was to determine the drawdown extent of the municipal well and see whether PCE was present in water samples. During the test, the well was pumped at an average rate of 180 gpm for 15 hours. The test results indicated a drawdown distance to 900 feet in the upper aquifer and 1,600 feet in the lower aquifer (Figure 3). Positive PCE results confirmed that one or more solvent sources existed within the well's capture zone.

Wellhead treatment continued uninterrupted from 1991 even when levels of methyl tertiary butyl ether (MTBE) were detected in influent in 1997. MTBE levels in treated effluent increased over the next few years until nearing the drinking water standard in 1999. The District elected at that point to shut down all municipal wells in the south "Y" area. MTBE plumes in groundwater had formed years before from underground storage tank releases, principally from gas stations along Emerald Bay Road.

With the municipal wells shut down in the "Y" area, groundwater resumed the natural flow direction towards Lake Tahoe, to the northeast. The exception to natural groundwater flow occurred at locations where groundwater extraction was implemented for the purpose of aquifer restoration. For the most part, extraction took place on the east side of Lake Tahoe Boulevard between the Tata #4 Well and the former USA Gas Station at 1140 Emerald Bay Road. The largest extraction rate of 45 gpm took place at the Tata #4 Well during 1999 and 2003. Lesser groundwater extraction also took place at the former Shell Station located at 887 Emerald Bay Road. A potentiometric map (Figure 4) shows average groundwater drawdown for remediation purposes in 2002. The map indicates that drawdown (shown as concentric lines) did not affect groundwater at the Facility, Napa Store, and the Laundry. However, the off-site portion of the Laundry plume was likely contained from further migration by extraction wells operating for the Shell Station. If pumping rates fluctuated at different times, so would the extent of capture, possible affecting groundwater contamination from the Facility

VII. Data Interpretation

The following sections discuss data interpretation of the capture distance for municipal wells and discharges affecting the Clement Well.

A. Well Capture and Site Distance

Table 2 lists the distances from the three municipal wells that continuously operated to sites identified as likely solvent sources, and the distances from the South Y Well that briefly operated in 1994 and 1995. Based upon DCA detection in the Clement Well in 1989 (refer to Table 1), it can be concluded that the capture influence extended to at least the South Shore Motors, 440 feet away. Likewise, DCA detected in the Tata #4 Well suggests that capture either reached the South Shore Motors or a similar business using DCA located nearby, of which there were several in the area.

Table 2. Distance from Municipal Wells to Solvent Sources

	Julie Well (ft)	Tata #4 Well (ft)	Clement Well (ft)	South Y Well (ft)
Napa Store	1,400	740	1,100	800
Laundry	1,450	700	1,450	675
Big O Tires	1,500	850	1,400	820
South Shore Motors	550	600	440	1,030

While it is known that PCE discharges had already occurred at the Laundry by 1979, it is unknown when discharges occurred at the Facility or the Napa Store. The Tata #4 Well is closest to the Laundry of the three municipal wells listed in Table 1. Since the pumping rate at the Tata #4 Well and the Clement Well were the same in 1989, it is more likely that the Tata #4 Well would capture PCE at the Laundry rather than the Clement Well, which is located further away. The same could be said about discharges that may have already been present at the Facility; PCE capture would have been more likely by the Tata #4 Well instead of the Clement Well.

The expansion of pumping at the Clement Well in late 1991 not only increased the volume of water reaching the municipal well but also increased the extent of drawdown capture. The disappearance of DCA in 1992 corresponds with increased pumping of municipal wells for wellhead treatment. The increased pumping likely caused low levels of DCA in groundwater to be diluted to non-detectable concentrations from increased water volume.

Since the Facility and the Laundry are located near the edge of the Clement Well's 1,600-foot capture zone (Figure 3) created by increased pumping of 180 gpm, it is unlikely that either site was affected by the smaller capture zone created when the Clement Well was pumping only at 70 gpm before late 1991. Such information supports the contention that PCE detected in the Clement Well in 1989 was not likely from discharges at the Laundry or from potential discharges that may have already occurred at the Facility.

As previously stated, the District operated the South Y Well for four months in 1994 and about two months in 1995. Based upon the pumping rate of this well, 140 gpm, and the close proximity of the well to the three solvent sites, the capture influence of the South Y Well likely overcame the capture influence of the Clement Well. The net effect likely changed the direction of plume movement from west (toward the Clement Well) to south (towards the South Y Well). This would have caused solvent concentrations to decrease at the Clement Well as is evident by the downward spikes in summer 1994 and summer 1995 seen in Graphs 1 and 2. Seasonal pumping rate differences and their effects on plume movement may also be responsible for the down-up cycling of PCE concentrations in the Clement Well.

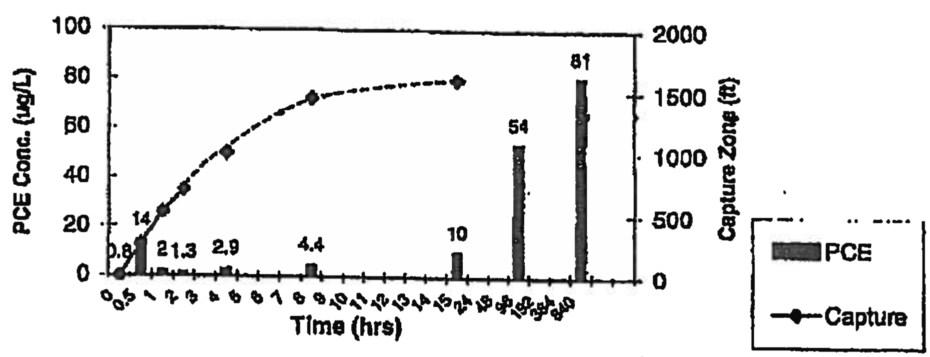
When the South Y Well ceased pumping in each year, portions of the solvent plumes likely moved as a combined plume either to the Tata #4 Well, 330 feet away to the southeast, or to the Clement Well to the west. The net effect of the South Y Well pumping likely caused PCE to move widely in the aquifer in the area and possibly moved some free product to off-site locations from their sources.

Detection of DCE and TCE in the Clement Well after late 1991 could have resulted from either discharges containing the compounds or from chemical breakdown from earlier PCE discharges. Since increasing DCE and TCE detections follow increasing PCE detections, it would not be unreasonable to believe that the former compounds are breakdown products of PCE. DCA is not a typical breakdown product of PCE, so it is likely from a different solvent product.

B. 1998 Clement Well Pump Test

The District's 1998 pump test at the Clement Well showed that at an average pumping rate of 180 gpm, drawdown extended to 1,600 feet within 15 hours. Since data points in the pump test were near asymptotic at the end of the test, it is assumed that the drawdown did not extend a significant distance beyond 1,600 feet. Besides South Shore Motors, the 1,600 feet drawdown distance encompasses the Facility, the Napa Store and the Laundry.

Graph 3. Clement Well Pump Test Results, March 1998



From the pump test data shown in Graph 3, several interpretations can be made. Upon test initiation, PCE was detected in the Clement Well at 14 µg/l. At 60 minutes into the pump test, PCE concentrations dropped to 2 µg/l. This information suggests that a PCE source existed within the first capture zone of 260 feet but reduced in concentration as the capture zone expanded to 520 feet.

Since there are no known PCE sources within the first capture zone, either a PCE release existed within the adjacent residential area or PCE plumes that had been previously drawn to the Clement Well prior to the pump test were still in the immediate area. Since the District had ceased extraction at all Y area municipal wells for two months prior to the pump test, the latter explanation seems more plausible. The PCE plumes that had been drawn to the Clement Well prior to the test had probably migrated about 60 to 120 feet with natural groundwater flow in the time before the pump test was initiated.

The reduced PCE concentrations at the first hour of the pump test were likely affected by dilution from the expanded capture zone. The only PCE site identified within the 520 foot capture zone for the Clement Well is the South Shore Motors at 400 feet. Low PCE concentrations (less than 5 µg/l) detected at the South Shore Motors are consistent with low PCE levels detected in the Clement Well.

PCE concentrations remained low (less than 3 µg/l) until the eighth hour into the test when a PCE concentration of 4.4 µg/l was detected and drawdown was calculated as extending to at least 1,450 feet from the Clement Well. According to Table 2, at this distance, the capture zone influenced the Napa Store, Facility, and Laundry sites.

By the fifteenth hour, PCE concentrations rose to 10 µg/l when the capture zone extended out to 1,600 feet. The increase in PCE concentration between the eighth and fifteenth hour likely represents the time lag for PCE at the Napa Store, the closer of the three sites, to migrate to the Clement Well. After the fifteenth hour, PCE concentrations increased to 81 µg/l in the Clement Well over the next 35 days, probably from the Laundry and the Facility. Overall, increasing PCE concentrations with time after the capture zone reached 1,450 feet likely represents the period it took to reverse the groundwater gradient toward the Clement well and draw in PCE plumes.

The last interpretation is that a time lag can be estimated for PCE near the capture zone boundary to reach the Clement Well following startup of pumping. Prior to the pump test, PCE was detected at 150 µg/l in the Clement Well in late 1997, before pumping ceased in Y area municipal wells. During the pump test, it took 35 days for PCE concentration to reach 81µg/l. At that rate, it should have taken about a month more for PCE concentrations to return to 150 µg/l. However, Julie and Tata #4 Wells were added into service with the Clement Well during that time and diluted the PCE concentrations that were detected from the combined influent. Had that not occurred, a two-month estimation for PCE to travel to the Clement Well from the drawdown boundary of 1,600 feet appears reasonable.

C. PCE Breakdown

Under anaerobic (no to low oxygen) conditions, PCE dissolved in water loses a chloride ion and breaks down into daughter products. The breakdown order is TCE, DCE, and vinyl chloride. DCE is typically in the form of cis-1,2, a stable compound, compared to trans-1,2 DCE, which is less stable.

The rate of PCE breakdown is often site specific depending on such factors as soil type, water table fluctuation, dissolved oxygen content in groundwater, and the presence or not of an impermeable cover on ground surface. It is generally assumed that sites in close proximity to each other would have the same subsurface conditions for PCE breakdown unless available information shows otherwise.

Research has shown that original PCE concentrations can be estimated at sites that have not undergone enhanced remediation. The starting PCE concentration at a location is additive of all constituent concentrations at one location. This calculation has a margin of error of ten percent for concentrations lost due to sampling or analytical errors. The results can be used to estimate whether free product may be present at a site.

Using the above approach, the results of water samples showing the highest solvent concentrations are added together for each of the three solvent sites. Table 3 shows the original PCE concentration calculated for each site, the original concentration after adding a ten percent margin of error, and whether the final concentration indicates free product based upon there being a concentration of one percent of the PCE solubility level of 1,500 µg/l. The table shows that free product is indicated at the Napa Store and the Facility but not at the Laundry site.

Table 3. Calculating Original PCE Concentrations (µg/l)

	PCE	TCE	DCE	Original PCE conc.	With 10% Margin of error	Indicates Free Product?
	Maximum Concentration					
Laundry	690	48	150	888	977	No
Napa Store	3,000	53	95	3,148	3,462	Yes
Facility	4,700	92	130	4,922	5,414	Yes

Additionally, research has shown that the relative age of a PCE release can be estimated by comparing the ratio of breakdown products with other sites. For instance, as PCE breaks down to TCE, the ratio of TCE divided by PCE is a decimal that approaches the number one. The smaller the decimal, 0.01 or less, the newer the release. The larger the decimal, 0.1 or more, the older the release.

Using this concept, the relative age of PCE releases can be compared at the Facility, Napa Store, and the Laundry. Table 4 shows the ratios calculated using groundwater results from past investigations. Only data showing a positive detection for PCE and breakdown products were included in the data set to calculate ratios; non-detect results were excluded. Data collected at off-site locations that could potentially be commingled with other plumes were also excluded from the calculations.

The table shows the maximum range for TCE and DCE and the average ratio of DCE for the Laundry is 0.1 or greater. This information suggests that the release is relatively old. In comparison, the maximum range and the average ratio of TCE and DCE for the Napa Store is 0.030 or greater, indicating the Napa Store release is younger than the Laundry

Table 4. Ratio of PCE Breakdown Products at Solvent Sites

	TCE	cis-1,2DCE	Average TCE DCE	Total No. of Water Samples Collected	Age of Release
Laundry	0.002 – 0.133	0.043 – 0.385	0.048 0.252	27	Oldest
Napa Store	0.010 – 0.10	0.018 – 0.10	0.030 0.047	36	Less than Laundry
Facility	0.013 – 0.068	0.011 – 0.057	0.027 0.031	6	Less than Napa

release. For the Facility, the maximum range and average ratio of TCE and DCE are less than those numbers for the Napa Store, implying the Facility's release was more recent. Lastly, both the average ratios for TCE and DCE are closer in value between the Facility and Napa Store than the Napa Store and the Laundry. This information suggests that the release at the Facility was closer in time to the release at the Napa Store than was the Napa Store release to the Laundry. The confidence level in these calculations is high for the Napa Store and the Laundry since each site contained a minimum of 27 water sample results. The confidence level of calculations for the Facility, however, is not as high since the results of only six water samples are available.

To summarize, calculations indicate that PCE free product is present at the Napa Store and the Facility but not at the Laundry site. Based upon TCE and DCE ratios calculated from PCE, the Laundry release is indicated as being the oldest of releases identified at the three sites. The Laundry release was followed by releases at the Napa Store and then the Facility. According to information provided to the Regional Board, the release at the Laundry ceased by 1979 when the self-service dry cleaning machine was removed. Thus, the Laundry release is at least 26 years old. The release at the Napa Store would then be less than 26 years old and the release at the Facility even younger still. It is noted that these results are based upon a limited data set available for the Facility. Additional sample results would improve the confidence level of the ratios calculated for the Facility.

D. Geology in the South Lake Tahoe Y Area

The Clement Well is screen from approximately 100 to 140 feet bgs in what was originally believed by District staff to be the most transmissive of three aquifers. However, extensive investigation in the Y area by other parties has provided a better understanding of subsurface conditions.

The geologic cross section in Figure 5 shows that the stratigraphy at the Clement Well is not continuous. Rather than an unconfined and two confined aquifers, the cross section shows one aquifer composed mostly of sand with discontinuous interbeds. The majority of the interbeds consist of silty sand and some clayey sand. Less common in the aquifer are silt and clay interbeds.

The cross section in Figure 6 shows the geology beneath the Laundry. The site is underlain by an extensive silty sand interbed that is separated by sand before another, but less extensive, silty sand interbed. Below the water table, generally at 20 feet bgs, is an extensive silty sand interbed at about 38 feet bgs. Below this layer are two more silty sand interbeds and then a thick clay layer at 80 feet. Because no free product is indicated at the Laundry, solvent compounds have been identified as residual contamination in the uppermost silty sand interbed immediately below ground surface. Further investigation should determine whether the second silty sand layer beneath the site has residual product as well.

While a geologic cross section is not available at the Facility, boring logs from the 2001 site investigation provide a good picture of subsurface conditions. The boring log for B-2 (Figure 7) at the Facility shows geologic conditions that are different than that at the Laundry site. The geology at B-2 shows sand from ground surface to 6 feet bgs. This is underlain by silty to clayey sand down to 46 feet bgs. From 46 to 51 feet, sand is identified. The water sample collected from boring B-2 contained the highest solvent concentrations at the site, with PCE detected at 4,700 µg/l. Yet, a soil sample collected at 20 feet bgs did not contain detectable concentrations of solvent compounds. Since the soil sample location was 14 feet below the top of the silty to clayey sand layer, sampling could have missed where solvent free product may have pooled on top before spreading laterally. A review of the two other boring logs (Figures 8 and 9) for the Facility shows that soil samples were collected in the sand below finer-grained layers in the vadose zone. Thus it is possible that soil samples at these locations having non-detectable concentrations of solvents also could have missed identifying where solvent free product may have spread laterally on top of overlying fine-grained layers. Additional investigations at the Facility would assist in determining whether this is the case or not.

VIII. Reconstruction of Well Extraction and Solvent Discharges

The location of the Clement Well, its pumping rate, and type and detected concentration of solvent compounds provide clues to the location and types of possible sources and timing of discharges.

A. Year 1989

It is likely that more than one PCE release existed in the Y area prior to the first time that the solvent compounds were analyzed for in municipal wells in 1989. Positive PCE detections indicated that PCE releases existed within the capture zones for the Julie Well, Clement Well, and Tata #4 Well.

Low concentrations of DCA (less than 2 µg/l) in the Clement Well in 1989 and 1990 indicate that the pumping influence likely encompassed the South Shore Motor contamination, 400 feet away. It is unlikely that solvent compounds detected at the South Shore Motors migrated there from off-site plumes. This is because the groundwater flow direction from South Shore Motors to the Clement Well would have been to the north, which would be cross gradient to groundwater flow at the Napa, Laundry, and the Facility. Therefore, solvent compounds detected in groundwater at the South Shore Motors probably represent a discharge that occurred on site. The property is likely a minor DCA source but not a major PCE source.

According to information available to the Regional Board, PCE discharges had probably occurred at the Laundry by 1979. It is unknown after that time whether PCE flowed with natural groundwater to the northeast or was captured by a municipal well. If the latter instance occurred, capture would most likely have been by the Tata #4 Well, which is located closer to the Laundry than are the Clement and Julie Lane Wells. If capture was not to the Tata #4 Well, then the dissolved plume from the Laundry would have migrated undetected to the northeast with natural groundwater.

Contrary to claims made by the Dischargers, there could not have been a solvent center-of-mass that migrated to the Facility from the Laundry since there did not appear to be free product at the Laundry. In addition, if PCE at the Laundry was being captured by the Tata #4 Well prior to late 1991, the direction would have been southwest instead of northeast towards the Facility. If, however, the Laundry was not within the Tata #4 capture zone, natural groundwater flow would still not have caused a solvent center-of-mass to migrate to the Facility from the Laundry since natural flow forces are not strong enough to overcome gravitational and soil tensional forces exerted on solvent. Instead, soil investigations suggest that residual contamination at the Laundry primarily exists within a silty sand la~~yer beneath the site. Therefore, data available for the Laundry does~~ not support the Discharger's theory of a migrating center-of-mass affecting the Facility.

The same logic applies as to whether the Napa Store could be a potential source for free product migrating to the Facility. Natural groundwater flow would not have been strong enough to overcome gravitational and soil-attraction forces at the Napa Store to move free product to the Facility.

Prior to late 1991 when the Clement Well capture zone did not reach the Napa Store, free product may have moved upon fine-grained layers that sloped or dipped towards the Facility. However, there is not sufficient information to know if laterally continuous fine-grained layers exist between the Napa Store and the Facility. Thus, it is unknown whether free product could have moved towards or away from the Facility on a fine-grained layer until further investigations are completed.

Based upon low to non-detectable PCE concentrations in the Clement Well between 1989 and late 1991, it is unlikely that PCE discharges at the Laundry and potentially at the Facility and Napa Store would have been affected by the Clement Well capture zone. Rather, with the Clement Well pumping at the rate of 70 gpm pumping rate, only PCE from South Shore Motors was likely reaching the well.

B. Late 1991

Groundwater conditions changed in the "Y" area starting in late 1991 with the startup of wellhead treatment at the Clement Well. Upon startup of expanded pumping at the Clement Well in December 1991, averaging up to 200 gpm, PCE concentrations detected from that well showed an immediate rise from those concentrations detected in the past. This information indicates that a PCE source or sources existed in the expanded Clement Well capture zone prior to expanded pumping.

The Laundry release had occurred prior to expanded pumping at the Clement Well in late 1991. The PCE plume from the Laundry would have been affected by the expanded Clement Well capture zone and pulled westward. Based upon breakdown product ratios, the next oldest release after the Laundry occurred at the Napa Store. Clement Well data indicates that the Napa release occurred prior to expanded pumping in late 1991. The time difference between the PCE release at the Laundry site and the Napa Store was likely no greater than 12 years. However, there exists insufficient data to determine an exact timing for the Napa Store release before late 1991.

Breakdown product ratios also imply that the PCE release at the Facility occurred after the release at the Napa Store. Since the ratios calculated at the Facility are closer to the ratios for the Napa Store, it can be surmised that the Facility release occurred significantly less than 12 years after the Napa release. DCE concentrations shown peaking in the Clement Well during October 1995 suggest that the Facility release had occurred before this time. If this were the case, the nine-month time lag for DCE migration to ~~the Clement Well would place the Facility release at being no later than~~ January 1995. It is possible that a release occurred at the Facility even prior to expanded pumping at the Clement Well, yet there is insufficient data to know whether this occurred.

Between late 1991 and early 1999, expanded pumping at the Clement Well may have affected free product at the Napa Store and the Facility. Pumping forces could have moved free product at the Napa Store westward, which is away from the Facility. Likewise, free product at the Facility could also have been pulled westward, possible affecting the Napa Store. Investigations at off-site properties would be necessary to determine whether this was the case or not.

C. Year 1999

Groundwater conditions changed again in 1999 following the shut down of "Y" area municipal wells due to MTBE contamination. Groundwater flow returned to the natural northeast direction. All plumes not affected by remediation wells on the east side of Lake Tahoe Boulevard at other sites were, therefore, acted on by natural groundwater flow. This includes the solvent plumes previously captured by the Clement Well.

From all indications, the release at the Facility had more likely occurred by this time than did not. This conclusion is based upon (1) the amount of TCE and DCE that were detected during the 2001 site investigation, (2) the breakdown product ratios indicating a release not too far in time from the Napa Sore release prior to late 1991, and (3) possibly, the DCE peak concentration in the Clement Well suggesting a release by January 1995. However, as with the Napa Store, there is insufficient data to provide an exact timing for the release or releases at the Facility.

When groundwater samples were collected at the Facility in October 2001, more than 600 days had passed following the shut down of municipal wells. Aquifer tests conducted in the "Y" area by dischargers at other sites in 1999 and later indicate that natural groundwater flows at a rate of about half a foot or more per day. Using this rate, solvent plumes previously pulled to the Clement Well would then have migrated at least 300 feet in the northeast direction by that time. New plumes formed at the Facility, Laundry, and Napa Store would also have migrated the same distance. High PCE concentrations detected in groundwater across Glorene Avenue from the Napa Store during the 2004 investigation could either be from that site or the Facility.

Groundwater sampling beneath Lake Tahoe Boulevard conducted for the Laundry reflect two solvent plumes migrating in the aquifer upgradient and cross gradient of the Facility. Investigation results between the Napa Store and the Laundry site do not support a migrating center-of-mass theory affecting the Facility. Rather, since the concentrations of solvent compounds detected on the Facility's upgradient boundaries are at only a fraction of the concentration of solvent compounds detected in the middle of the Facility, a source is indicated at the Facility.

Figure 10 is a conceptual model of the formation of a PCE commingled plume in the "Y" area from 1991 to 2004. The figure shows that starting in 1999, when the Clement Well ceased pumping, plumes from the Napa Store and the Laundry may have commingled with the plume beneath the Facility. The latter commingled plume migrates from the Facility to downgradient properties in the northeast direction. A portion of the Laundry and Facility plumes may have been captured by extraction wells for the Shell Station. In mid-2003, groundwater extraction at the Shell Station was scaled back as a result of decreasing MTBE levels in the aquifer. That action likely resulted in a loss of capture of a portion the plumes that were drawn to the Shell Station.

The status today is that municipal wells remain off in the "Y" area. The District has not stated a timetable for resuming operation of the wells. Thus, it is assumed that none of the solvent plumes emanating from the Napa Store, Laundry, and the Facility are being captured, except potentially by a few domestic wells located north of "Y" area.

IX. Discharge at the Facility

The exact time of solvent discharge at the Facility is unknown. The 2001 Investigation results imply that PCE has been around long enough (greater than five years) to break down to TCE and DCE. This indicates that the release was not a recent one but rather one that had been present for more than just a few years.

Data does not support the Dischargers' theory of a migrating center-of-mass being the sole source of contamination beneath the Facility. The absence of free product at the

Laundry eliminates the possibility of a migrating center-of-mass from that site. In addition, the lack of free product beneath Lake Tahoe Boulevard refutes the Discharger's contention that the source migrated from the Laundry and settled under the road before the Facility. Without free product, the theory of the Laundry being a single point of release for PCE contamination in the Y area is unsupported. Since PCE concentrations increase appreciably as groundwater migrates beneath the Facility, it is apparent that a solvent source at the Facility is contributing to the pollution.

The above conclusion is based upon the assumption that solvent concentrations detected in groundwater at the Laundry reflect that of the original discharge. This theory is more reasonable than the Discharger's implication of a free product release. The Discharger's theory is unrealistic because many studies have shown that solvent free product does not naturally attenuate to levels less than one percent of the solubility level without active remediation. Since active remediation has not occurred at the Laundry, solvent concentrations in groundwater represent those close to that of the original discharge.

Furthermore, data does not support a migrating center-of-mass originating at the Napa Store. While free product is indicated by solvent concentrations at the Napa Store, there is insufficient information indicating lateral movement on a fine-grained layer or an external force from the northeast direction. Rather, there is just as much probability that free product from the Facility migrated towards the Napa Store during the time of expanded pumping at the Clement Well. Since there is insufficient data indicating that either the Laundry or the Napa Store are sources for a migrating center-of-mass, the groundwater pollution at the Facility most likely originated at the Facility.

This leads to three possible scenarios for the timing of the discharge or discharges at the Facility. The first scenario is that the initial discharge occurred prior to 1991. In this scenario, the plume emanating from the site migrated undetected with natural groundwater flow in the northeast direction. After wellhead treatment began at the Clement Well in late 1991, the plume was pulled to the northwest to the Clement Well, along with the plumes originating from the Laundry and the Napa Store, if a release had occurred there by then. When all "Y" area municipal wells were shut down in 1999 due to MTBE contamination, the solvent plumes ceased being pulled to the Clement Well and were acted on by natural groundwater flow to the northeast. In addition, plumes continued to form from sources at the Facility, Laundry, and the Napa Store, flowing with natural groundwater in a northeast direction. Downgradient portions of the Laundry and Facility plumes may have been affected by off-site extraction being conducted at other sites.

The second scenario is that the discharge at the Facility originally began sometime after wellhead treatment was initiated at the Clement Well in late 1991. Groundwater contamination beneath the Facility would have been captured by the Clement Well. The release would not have occurred too much after this period since breakdown product ratios indicate a timing fairly close to the timing of the Napa Store release, which was prior to late 1991. Peaking DCE concentrations in the Clement Well suggest that a release occurred no later than January 1995. After the Clement Well ceased pumping in early 1999, the source beneath the Facility continued to form a plume that was acted on by natural groundwater flow to the northeast.

The third scenario is that the discharge at the Facility occurred after the Clement Well ceased pumping in early 1999. The site investigation conducted two-and-a-half years later discovered solvent compounds in groundwater beneath the Facility. This scenario seems unlikely based upon the presence and concentrations of TCE and DCE as PCE breakdown products. On average, TCE and DCE concentrations were detected at the Facility one-order of magnitude less than were PCE concentrations. According to research papers, PCE breakdown is often a slow process taking a number of years to occur and only then in a reduced environment. Since two-and-a-half years is a relatively short time for PCE breakdown to occur, the difference between PCE concentrations and TCE and DCE concentrations should be much greater. This is especially true at the water table, which is an aerobic environment that does not promote PCE breakdown.

Of the three discharge scenarios described above, the first and second scenarios seem most likely. The third scenario is the least likely scenario given the short time available for PCE breakdown.

X. Dischargers

Based upon data indicating that an on-site discharge of solvent waste is contributing to groundwater pollution at the Facility and off site, it is reasonable to list parties and entities as dischargers for purposes of cleaning up and abating the pollution. The property owner and operators of the Facility are considered dischargers during the time of the first indication of pollution for solvent compounds. In addition, the current property owner and lessee are considered responsible parties since they control site access.

The first indication of a PCE discharge at the Facility is not exactly known. A release may have originally occurred prior to start up of expanded pumping at the Clement Well in late 1991. Yet, there is no data to confirm this theory. Data, however, is available indicating that a solvent source existed after expanded pumping began in late 1991. According the DCE data, the release likely occurred no later than January 1995.

El Dorado County records reflect that David and Kathleen Barnett were the owners of the subject property from the 1970s to 1996. The property was then recorded under CAD Enterprises, LLC, which is managed by the Barnetts. Therefore, the Barnetts are considered dischargers since they were the property owner when the release probably occurred after late 1991. CAD Enterprises is also a responsible party since it is the current landowner and controls access to the site.

Documents submitted to the Regional Board reflect that Lightnin II, Incorporated became the operator in 1994 and has continuously been the operator to date. Based on the estimated release date being no later than January 1995, Lightnin II, Incorporated is considered a discharger for cleaning up and abating hazardous waste because its times of operating the Facility coincide with the period indicating discharge(s) at the Facility.

Lastly, the Dischargers had previously requested that Board staff name the operator of the Big "O" Tires Store prior to CAMCO, as a responsible party for discharges of waste. This request is not justified. The Regional Board has no information indicating that discharges occurred at the site prior to 1985, when CAMCO became the operator. Hence, there is no justification for the Regional Board to name the prior operator of the site as a responsible party in enforcement orders.

XI. Conclusion

Information provided to the Regional Board about off-site contamination being the source of pollution at the Facility is not supported by data. Investigation results at the Laundry do not indicate the presence of free-product that is necessary to support the Dischargers' migrating center-of-mass theory. Nor do the results support the single point of release theory put forth affecting other PCE-identified sites in the Y area. Rather, results at the Laundry point to shallow, residual contamination in soil that in turn created a shallow groundwater plume having concentrations much less than those detected in the middle of the Facility. Should the Laundry plume extend to the Facility, its affect on water quality there is secondary compared to contaminant concentration from the on-site source. Likewise for the plume migrating to the Facility from the Napa Store; its concentrations are secondary compared to concentrations detected at the Facility.

Since the Facility is the primary source of solvent waste detected in soil and groundwater, an enforcement action is justified ~~requiring the dischargers to clean up and abate the~~ affects of the discharge to protect beneficial uses. The entities Lightnin II, Incorporated and David and Kathleen Barnett are appropriately named as dischargers in CAO R6T-2003-031. These entities were either operating the Facility or owned the property in January 1995 when a solvent discharge was indicated at the site. CAD Enterprises is also appropriately named as a responsible party in CAO R6T-2003-031 since it is the current property owner controlling access to the site.

XII. Recommendation for Additional Enforcement Action

The October 2001 site investigation at the Facility was a limited characterization that did not define the extent of groundwater pollution. Nor did the investigation locate the source of solvent discharge. Previous soil samples collected below fine-grained layers may have missed horizontal movement of solvent free product above. Therefore, further investigation is required to locate solvent waste and define the extent of groundwater pollution.

The four corrective actions listed in CAO R6T-2003-031 still need to be completed. An amended Order containing a revised compliance schedule is necessary for implementing these corrective actions. In addition, interim corrective measures are needed in an amended Order, to abate pollution affecting beneficial uses.

References

2005, PES Environmental, Additional Site Investigation Results, Lake Tahoe Laundry Works

2004, PES Environmental, Supplemental Site Investigation Results, Lake Tahoe Laundry Works

2004, Secor, Soil and Groundwater Investigation Results, Lakeside Automotive Napa Store

2004, Sierra-Pacific Group, Review and Interpretation of Hydrogeologic Data, Big O Tire Facility

2003, PES Environmental, Groundwater Investigation Results, Lake Tahoe Laundry Works

2002, Secor, Groundwater Characterization Report, Lakeside Automotive Napa Store

2001, Battelle Press, Anaerobic Degradation of Chlorinated Solvents

2001, Harding ESE, Groundwater Investigation, Big O Tire Center

1999, Batelle Press, Engineered Approaches for In Situ Bioremediation of Chlorinated Solvent Contamination

1998, South Tahoe Public Utility District, Clement Well Pump Test

1998, Batelle Press, Nonaqueous-Phased Liquids, Remediation of Chlorinated and Recalcitrant Compounds

Figures: Figure 1-Map of South "Y" area of South Lake Tahoe
Figure 2-PCE Map of Big O Tires Store and nearby properties
Figure 3-Capture Map for Clement Well
Figure 4-~~Shallow Zone Potentiometric Map for "Y" area, 2002~~
Figure 5-Geologic Cross Section Southeast of the Clement Well
Figure 6-Geologic Cross Section Northeast of the Julie Well
Figure 7-Boring Log for B-2, Big O Tires Store
Figure 7-Boring Log for B-1, Big O Tires Store
Figure 7-Boring Log for B-3 Big O Tires Store
Figure 10-Conceptual PCE Plume Map, 1991-2004

Attachments: 1.Table of Influent VOC Concentrations at the Clement Well
2. Table of Influent VOC Concentrations at the Julie Well
3. Table of Influent VOC Concentrations at the Tata #4 Well

ATTACHMENT 3

Email correspondence from Ms. Lisa Dernbach of the Water Board to Mr. Harold Singer of the Water Board, dated 15 November 2004

From: Harold Singer
To: Dernbach, Lisa; Dodds, Robert
Date: 11/16/04 8:27AM
Subject: Re: Letter re: PCE at Y

Admin - File this w/ 11-16-04 ltr to owners of Lake Tahoe Laundry Works

File: SLIC, LkTahoe Laundry Works, T65043.

Lisa

Thanks -

BOB - the letter is in my in-box - PLEASE SIGN.

thanks
harold

>>> Lisa Dernbach 11/15/04 03:31PM >>>
Harold,

I agree with the report's conclusion that the source of contamination in GW-6 is not from the laundromat. One, the Clement well ceased operating four years ago and a dissolved plume pulled to the well would have migrated about 700 ft or more with natural groundwater since that time. And two, the laundromat plume is clearly in the upper portion of the saturated zone (20-30 ft) and is unlikely to be pulled to the 44 ft depth in the absence of an active force such as the Clement well.

More likely, contamination at GW-6 is from the Lakeside Napa Auto Store where sampling less than 100 ft away showed PCE levels in the thousands of micrograms per liter. The Napa parties though are claiming the source is the sewerline and believe we should require that STPUD conduct a PCE investigation just as everyone else has had to do. We can discuss this issue more if you want.

A head's up, tomorrow I plan on sending Chuck a draft letter to review that reinstates the CAO for the Big O Tires Store. The letter refutes the DNAPL migrating center of mass theory since no DNAPL was detected at the Lake Tahoe Laundry Works. I'm sure this letter will get a big response from the parties.

Lisa

>>> Harold Singer 11/15/04 10:56 AM >>>
Lisa and Chuck

I have one question on the letter.

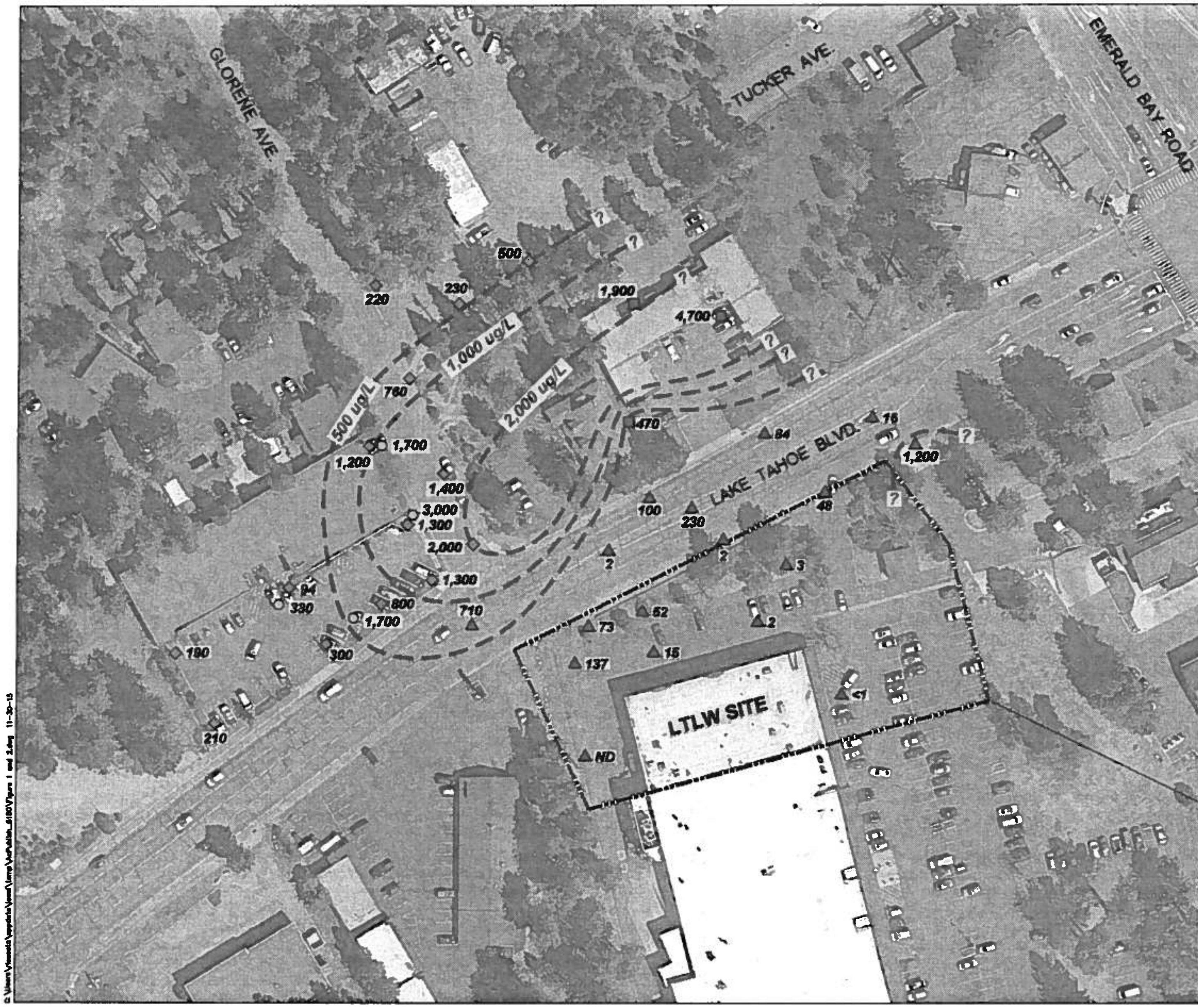
You indicate that the "upgradient" well contamination is due to other sources. Given that the Y area is within the zone of influence of the Clement well and that the source of PCE at the Laundromat ceased many years ago, is it possible that some of the contamination in this well is from the Laundromat? If so, you may want to modify the letter to be less specific that this contamination is from "upgradient" sources.

thanks
harold

CC: Curtis, Chuck

FIGURE 1

Middle-Zone Groundwater PCE Concentrations (2001-2008)
prepared by Erler & Kalinowski, Inc.



Legend:

- ■ —— Big O Tire Investigation (October 2001) (47 ft - 51 ft bgs)
- ○ —— Lakeside Auto Investigation (January 2002) (48 ft bgs)
- ◆ —— Lakeside Auto Investigation (November 2003) (44 ft - 46 ft bgs)
- ▲ —— LTLW Investigation (October 2003) (44 ft - 47 ft bgs); (September 2004) (44 ft - 51 ft bgs); (August 2008) (32 ft - 57 ft bgs)
- — — Generalized PCE Concentration Contour Lines (not all PCE data used to generate contour lines)

Abbreviations:

ft bgs	= feet below ground surface
ug/L	= micrograms per liter
ND	= not detected
PCE	= tetrachloroethene

Notes:

1. All locations are approximate.
2. Basemap source: Google Earth Pro, date of imagery 16 April 2015.

Erler & Kalinowski, Inc.

MIDDLE-ZONE GROUNDWATER PCE CONCENTRATIONS (ug/L) (2001 - 2008)

Figure 1

EXHIBIT VV

Erler & Kalinowski, Inc.

Consulting Engineers and Scientists

1870 Ogden Drive
Burlingame, CA 94010
(650) 292-9100
Fax: (650) 552-9012

3 December 2015

Ms. Lisa Dernbach
Senior Engineering Geologist
California Regional Water Quality Control Board, Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, California 96150

Subject: Response to Water Board Notification of Consideration of No Further Action; Former Big O Tires Store Site, 1961 Lake Tahoe Boulevard South Lake Tahoe, California (EKI A70020.01)

Dear Ms. Dernbach,

On behalf of its client, Fox Capital Management Corporation ("Fox"), Erler & Kalinowski, Inc. ("EKI") is pleased to submit to the California Regional Water Quality Control Board, Lahontan Region ("Water Board") this letter that responds to the Notification of Consideration of No Further Action for the former Big O Tires Store site located at 1961 Lake Tahoe Boulevard ("Big O site"), prepared by the Water Board, dated 7 October 2015 ("Notification").

I. BACKGROUND

According to the Notification, the Water Board has evaluated the data collected from the Big O site and has determined that the historical release of petroleum hydrocarbons and solvent chemicals does not pose a threat to human health, safety, and the environment. Therefore, the Water Board considers it appropriate to issue a No Further Action Required letter for the Big O site. On behalf of Fox, we request that the Water Board not issue a No Further Action letter for the Big O site for the reasons stated herein.

II. ANALYSIS

Based on a review of the available data and the Water Board's own policies, determination of No Further Action ("NFA") for the Big O site is not warranted. As explained below, the Water Board's proposal is: (a) based on soil and groundwater data that are 9 to 14 years old; (b) based on inadequate site investigations by Big O; (c) counter to findings and conclusions in a Water Board Staff Report for the Big O site prepared in 2005; (d) premature in light of other investigations that are ongoing in the area; and (e) conflicts with the Water Board's Low-Threat Underground Storage Tank Case Closure Policy ("LTCP"), which the Water Board implies in its Notification that it is following with respect to closure of the Big O site.

A. The Water Board is Relying on Old Data

Groundwater investigations at the Big O site were conducted initially in October 2001. Groundwater samples were collected at two depths from each of three (3) boreholes advanced at the Big O site. Groundwater samples collected from the shallow groundwater bearing zone (referred to as the shallow zone) at 15 to 20 feet below ground surface ("bgs") contained tetrachloroethylene ("PCE") at concentrations ranging from 28 micrograms per liter ("µg/L") to 720 µg/L. Groundwater samples collected from the next lower groundwater bearing zone (referred to as the middle zone) at 47.5 to 50 feet bgs contained PCE at concentrations ranging from 470 µg/L to 4,700 µg/L.

A second subsurface investigation was conducted at the Big O site in July 2006. The investigation included collection of shallow soil samples and grab samples of shallow groundwater. PCE was detected in one shallow soil sample at a concentration of 42 micrograms per kilogram ("µg/kg"). PCE was detected in shallow groundwater at one of 11 locations sampled at a concentration of 5.8 µg/L.

No more recent subsurface sampling has been conducted at the Big O site. The Water Board, in its closure evaluation of the Big O site, is relying on data that are 9 to 14 years old which may not accurately represent current soil, soil vapor, and groundwater conditions at the Big O site.

B. The Water Board is Relying on an Inadequate Investigation by Big O

Prior subsurface investigations of the Big O Site were incomplete, as summarized below.

A "Revised Soil and Groundwater Investigation Work Plan" for the Big O site, prepared by LFR, Inc, dated 27 April 2006 (see Attachment 1), proposed borehole locations in areas that were identified as suspect PCE discharge locations, including: (1) adjacent to a floor drain in the bottom of a "lube pit," (2) adjacent to a floor drain in the main auto service bay, (3) adjacent to a new oil above ground storage tank ("AST") and filter drum, and (4) in an unpaved area that may have received surface water runoff from operations areas, according to LFR. The 27 April 2006 LFR Work Plan indicates that it reflects input from the Water Board, but we do not know whether it was approved by the Water Board as an approval letter could not be located in the public record. A review of the "Results Report," prepared by LFR, dated 9 August 2006, indicates that the above-listed four boreholes were not placed at the proposed locations, and no explanation is provided in the 9 August 2006 LFR report as to why those borehole locations were moved. For example:

- Borehole B-12 proposed to be located in the bottom of the lube pit adjacent to a drain was relocated approximately 20 feet to the northwest and outside of the pit.

- Borehole B-11 proposed to be located adjacent to a floor drain in the main service bay was relocated approximately 8 feet northwest of the drain.
- Borehole B-10 proposed to be located adjacent to the AST and filter drum area was relocated approximately 15 feet to the north.
- Borehole B-9 proposed to be located in an unpaved area off the edge of a concrete paved surface was moved approximately 15 feet to the northeast and onto the paved surface.

At a minimum, these locations should be sampled, per the LFR Work Plan, before the Water Board considers the Big O site for closure, as these locations were identified by LFR as suspect PCE discharge locations. Access constraints should not be accepted by the Water Board as sufficient reasoning for not sampling those suspect locations, as other techniques can be implemented to obtain samples such as manual hand auger sampling and use of angled borings. Further, the Amended Cleanup and Abatement Order (No. R6T-2003-031A1) (March 7, 2006) ("2006 Order") issued for the Big O site, (see Attachment 2), states that "further investigation is needed to attempt to locate the source area(s);" "[t]he investigation must be comprehensive, evaluating all on-site potential release areas and waste disposal areas;" and sampling is required at "all potential release sources to evaluate whether solvent compounds were discharged on site." (2006 Order, Paragraphs 7 and 9). These requirements from the 2006 Order have not been met.

The 2006 Order references an El Dorado County Department of Environmental Health report documenting an inspection of the Big O site on 6 April 2005, and the identification of a receipt for contaminated soil taken to a transfer disposal facility. The 2006 Order requires that Big O provide details of the release and the nature of the contaminated soil removed from the site as it "may be contributing to the groundwater pollution" at the Big O site (2006 Order, Paragraph 10). It does not appear that this requirement of the 2006 Order has been met.

Other examples that indicate the Big O site was inadequately characterized include the following:

- The area where a shallow soil sample contained detectable PCE (borehole B-9), located in an area of the Big O site that may have received surface water runoff from operations areas, was not further investigated or characterized to determine if PCE concentrations increased away from that sample location. Borehole B-9 was placed on a concrete paved surface and was not placed in the unpaved area that may have directly received surface water runoff. Additional boreholes and samples should have been collected from this area of the Big O site, including unpaved areas, to determine the lateral and vertical extents of the PCE contamination, and to determine whether higher concentrations of PCE existed away from borehole B-9.

- Soil in other unpaved areas of the Big O site that may have received surface water runoff from Big O operations areas, such as the unpaved areas along Tucker Avenue and unpaved areas on the Classic Cue portion of the site, were not sampled. These areas may have been impacted by PCE in surface water runoff from Big O operations and should have been sampled as part of the 2006 LFR investigation.

- The 2006 LFR investigation was conducted during a period of unusually high groundwater elevation (depth to groundwater was reported to be within 8 feet of the ground surface); thus, PCE concentrations in shallow groundwater may have been diluted due to fresh water influx possibly from the nearby storm water retention and percolation basin. In a letter dated 22 February 2007, prepared by the Water Board (see Attachment 3), the Water Board indicated that high groundwater at the Big O site during sampling could potentially have diluted PCE concentrations in the shallow zone. The comments by the Water Board in its 22 February 2007 letter suggested that several groundwater sampling events over several seasons with varying groundwater elevations would have more accurately depicted groundwater quality conditions at the Big O site. Such seasonal sampling from groundwater monitoring wells installed at the site should be implemented before the Water Board considers the Big O site for closure.

- During the 2006 LFR investigation, shallow groundwater samples were collected on the upgradient side of sub-grade features, such as wastewater pipelines, which may have missed shallow groundwater impacts, if any, at those potential source locations. It is unclear why boreholes B-3, B-13 and B-14 were placed on the upgradient, i.e., west, side of the wastewater pipeline from the Big O building, and not on the downgradient (east) side. The wastewater pipeline from the Big O building, which presumably was connected to floor drains in the building, was inadequately characterized.

- No shallow or middle zone groundwater monitoring wells were installed at the Big O site in both upgradient and downgradient locations to obtain representative and reproducible groundwater sample results. In its 22 February 2007 letter, the Water Board stated that increasing PCE concentrations in groundwater from the upgradient to downgradient areas of the site (in both shallow and middle zones) during the 2001 sampling event suggested a source of PCE at the Big O site. This possible source was never further investigated by Big O.

C. Water Board Indicated that Big O Site is a Source for PCE in Middle Zone Groundwater

In its Staff Report, dated 22 August 2005 (see Attachment 4), the Water Board concluded that PCE in middle zone groundwater at the Big O Tires site did not originate from the Lake Tahoe Laundry Works ("LTLW") site, and that the Big O site is "primarily affected by a PCE source originating onsite." Since preparation of the Water Board Staff Report in 2005, no more recent middle zone groundwater data have been generated that would be expected to alter the Water Board's conclusions and opinions regarding the source for the PCE in groundwater on the Big O site. 1/

In its 22 February 2007 letter, the Water Board stated that the Big O site potentially contributed to groundwater PCE contamination in the South Y area, and that as a result, the Water Board could not issue a closure or no further action letter related to the Big O site. No additional information for the Big O site has been presented that would be expected to alter the Water Board's conclusion in its 2007 letter.

Attached Figure 1 shows PCE concentrations in middle zone groundwater in the LTLW-Napa-Big O area collected between 2001 and 2008. The data suggest that the source for PCE in middle zone groundwater is not the LTLW site, but rather the Napa/former Lakeside Auto site and/or the Big O site.

D. The Water Board's Proposed Action is Premature Given Ongoing Investigations, the Pending Draft Cleanup and Abatement Order, and the Incomplete Public Record

Groundwater investigations were recently completed on behalf of the Water Board in an area downgradient (i.e., north and northeast) of the Big O site in accordance with a Work Plan prepared by URS Corporation, dated 8 October 2015. We understand that the results of these investigations will not be available to the public until the first week of January 2016. The results of the Water Board investigations may provide information relevant to groundwater conditions at the Big O site and closure consideration of the Big O site.

In addition, the Water Board has issued a draft cleanup and abatement order to Seven Springs Limited Partnership and Fox that would require them to undertake an investigation of PCE contamination in an area that includes the Big O site and downgradient areas. The parties' responsibility for that contamination is in dispute, in part because the parties contend that Big O is a source of the contamination. To be fair to parties, the Water Board should not take any action to absolve Big O of responsibility for contamination at its site while that dispute is pending. Furthermore, if the draft order is finalized, the Water Board should review the results of any additional investigation required by the order before concluding that closure of the Big O site is warranted.

Finally, on 3 December 2015, the Water Board uploaded to Geotracker laboratory analytical data reports that indicated the presence of petroleum hydrocarbons in shallow

---

1/ Detections of PCE at the LTLW site at concentrations above of 1,500 µg/L have been limited to shallow groundwater, and only at one sample location (LW-MW-1S). PCE in middle zone groundwater on the LTLW site has only been detected at concentrations up to 137 µg/L.

zone groundwater samples collected by the Water Board on 30 November 2015 from several monitoring wells (Hurzel-N and MW-4A/B) located potentially downgradient of the Big O site. No additional information that would be useful in the evaluation of the data was provided by the Water Board, such as well purging and sampling methods and procedures, well screen intervals, well depths, depth to water measurements, or sample depths. Given that petroleum hydrocarbons were detected in soil samples and shallow zone groundwater samples collected on the Big O site, and that evaluation of the off-site extent of petroleum in groundwater from the Big O site was not performed by Big O, the source for the petroleum hydrocarbons in groundwater at the two wells may be the Big O site. Given that possibility, closure of the Big O site should not be granted by the Water Board. Further, given that the Water Board has provide only limited information on petroleum hydrocarbons in downgradient wells, Fox reserves the right to comment further on this topic once a full results report related to this sampling event has been provided or is available to the public, as this information may affect our evaluation of the Big O site.

E. The Water Board's Proposed Action Does not Comply with Board Policy

In its Notification, the Water Board cites the State Water Board adopted LTCP, which implies the Water Board is using the policy as a basis for closure of the Big O site. According to the LTCP, the following criteria must be met to qualify for closure and no further action:

1. The unauthorized release is located within the service area of a public water system.
2. The unauthorized release consists only of petroleum.
3. The unauthorized ("primary") release from the UST system has been stopped.
4. Free product has been removed to the maximum extent practicable.
5. A conceptual site model ("CSM") that assesses the nature, extent, and mobility of the release has been developed.
6. Secondary sources have been removed to the extent practicable.
7. Soil and groundwater have been tested for methyl tert butyl ether ("MTBE").
8. A nuisance as defined by Water Code Section 13050 does not exist at the site.

It is our opinion that the Big O site does not meet the closure requirements under LTLP, and in particular conditions 2, 3, 5, and 7, above.

The unauthorized release at the Big O site did not only consist of petroleum, but also consisted of PCE. Thus, condition 2 has not been met. Moreover, the source or sources for the petroleum and PCE releases were never identified, characterized, or remediated. Thus condition 3 has not been met. A formal CSM for the Big O site has not been prepared, based on the documents available in the public record. Furthermore, as discussed above, the nature, extent, and mobility of the petroleum and PCE releases at the Big O site have not been assessed fully. Thus, condition 5 of the LTCP has not been met. Lastly, gasoline range petroleum hydrocarbons have been detected on the Big O site which suggests releases of gasoline. No testing for MTBE (a gasoline additive) has been performed. Thus, condition 7 of the LTCP has not been met.

III. CONCLUSION

In light of the above information, a NFA determination for the Big O site is not warranted. Accordingly, on behalf of Fox, we request that evaluation of closure of the Big O site by the Water Board be postponed until Big O completes an adequate evaluation of the Big O site, data from pending investigations are received and reviewed by the Water Board and other interested parties, and the criteria set forth in the Board's own Low-Threat Closure Policy have been met.

We appreciate the opportunity to review and comment on the Water Board's Notification regarding the Big O Tires site.

Very truly yours,

ERLER & KALINOWSKI, INC.

Paul B. Hoffey

Paul B. Hoffey
Project Manager

Andrew N. Safford, P.E.
Project Engineer

Attachments:

Attachment 1: *Revised Soil and Groundwater Investigation Work Plan, Big O Tire Store, 1961 South Lake Tahoe Boulevard, South Lake Tahoe, California,* prepared by LFR, Inc., 27 April 2006.

Attachment 2: Amended Cleanup and Abatement Order (No. R6T-2003-031A1), California Regional Water Quality Control Board, Lahontan Region, 7 March 2006.

Attachment 3: *Comments on Site Investigation Results, Big O Tires Store, 1961 Lake Tahoe Boulevard, South Lake Tahoe, El Dorado County,* letter prepared by the Water Board, 22 February 2007.

Attachment 4: *Staff Report, Solvent Contamination at the Bog O Tires Store, 1961 Lake Tahoe Boulevard, South Lake Tahoe*, prepared by California Regional Water Quality Control Board, Lahontan Region, dated 22 August 2005.

Figure 1: Middle-Zone Groundwater PCE Concentrations (2001-2008), prepared by EKI.

cc: Scott Reisch, Esq. (Hogan Lovells US LLP)
Peter Cappel (Fox Capital Management Corporation)

ATTACHMENT 1

Revised Soil and Groundwater Investigation Work Plan, Big O Tire Store, 1961 South Lake Tahoe Boulevard, South Lake Tahoe, California, prepared by LFR, Inc., 27 April 2006

Revised
Soil and Groundwater Investigation Work Plan
Big O Tire Store
1961 South Lake Tahoe Boulevard
South Lake Tahoe, California

April 27, 2006
001-09449-00

Prepared for
Downey Brand, LLP
555 Capitol Mall, 10th Floor
Sacramento, CA 95814

LFR
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April 27, 2006

001-09449-00

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Lahontan Regional Water Quality Control Board
2501 Lake Tahoe Boulevard
South Lake Tahoe, California 96150

Subject: Revised Soil and Groundwater Investigation Work Plan
Big O Tire Store, 1961 South Lake Tahoe Boulevard, South Lake Tahoe, California

Dear Ms. Dernbach:

LFR is pleased to present this Revised Soil and Groundwater Investigation Work Plan for the Big O Tire Store located at 1961 South Lake Tahoe Boulevard, South Lake Tahoe, California. The Work Plan has been revised to respond to review comments provided by the Lahontan Regional Water Quality Control Board in a letter dated April 20, 2006 to David and Kathleen Barnett and CAD Enterprises LLC., Mr. Harry Krupp of Lightnin II., Inc., and Mark Strong of Bot 65, Inc., CAMCO. This Revised Soil and Groundwater Investigation Work Plan is being submitted on behalf of David and Kathleen Barnett and CAD Enterprises LLC.

Please call me at (916) 786-0320 with any questions or comments regarding this work plan.

Sincerely,

Jenifer Beatty

Jenifer J. Beatty, P.G., C.HG.
Principal Hydrogeologist

Attachment

cc: Harold Singer, LRWQCB Executive Officer
Robert P. Soran, Downey Brand, LLP
Lew Feldman, Feldman & Shaw, LLP

CONTENTS

CERTIFICATION

All geologic information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by an LFR Inc. California Professional Geologist.

Jenifer Beatty

4/27/06

Jenifer Beatty, P.G. C.HG.
Principal Hydrogeologist

Date

1.0 INTRODUCTION

LFR Inc. (LFR) has prepared this revised work plan to conduct additional environmental investigations at the Big O Tire Store located at 1961 Lake Tahoe Boulevard in South Lake Tahoe, California ("the Site"; Figures 1 and 2). This work plan was prepared on behalf of David and Kathleen Barnett and CAD Enterprises LLC, pursuant to Amended Cleanup and Abatement Order No. R6T-2003-031A1 ("the Order"), issued by the Lahontan Regional Water Quality Control Board (LRWQCB) on March 7, 2006. The Order requires CAD Enterprises, LLC, David and Kathleen Barnett, Lightnin II, Incorporated, CAMCO, and BOT 65 Incorporated to further investigate the Site for the potential discharge of chlorinated hydrocarbon products to groundwater.

This work plan presents the revised scope of work to further investigate potential on-site sources for solvents that have been detected in groundwater in the "Y" area of South Lake Tahoe, near and beneath the Site; the rationale for that scope of work; and the proposed methods and procedures. The original work plan was submitted to the LRWQCB on March 14, 2006 on behalf of David and Kathleen Barnett and CAD Enterprises, LLC. The scope of work presented in the March 14, 2006 work plan has been revised to respond to review comments provided by the LRWQCB in a letter dated April 20, 2006 to the parties named on the Order.

1.1 Background

The LRWQCB prepared a letter dated July 20, 2001, requiring that Mr. Barnett perform a groundwater investigation to determine if tetrachloroethylene (PCE) was present in groundwater beneath the Site. The LRWQCB request was based on the detection of PCE in groundwater pumped from several municipal wells in the "Y" area in 1989, which has led to the investigation of numerous facilities in the Y area to identify the source of PCE present in area groundwater.

In response to that request, CAD Enterprises conducted a preliminary investigation of the site in October 2001 that included collection of two grab groundwater samples from depths of approximately 20 to 25 feet below ground surface (bgs) and 50 feet bgs in each of three soil borings (B-1, B-2, and B-3; Figure 2) completed on the Site. Results of that investigation indicated the presence of PCE in each of the groundwater samples collected at concentrations ranging from 28 micrograms per liter (μg/l) to 4,700 μg/l.

1.2 Objective

The objective of the proposed work is to evaluate whether operations at the Big O Tire Store have resulted in impacts to underlying soil and shallow groundwater. This objective will be met through collection and laboratory analysis of soil and shallow groundwater (if encountered) from 11 soil borings to be advanced at the Site.

The data from this investigation will be used to assess whether or not the source(s) of the PCE that has been detected in groundwater samples collected from approximately 20 to 25 feet bgs and 50 feet bgs beneath the Site and the site vicinity may include historical operations at the Big O Tire store.

2.0 SCOPE OF WORK

Soil borings will be advanced in areas that represent potential sources for waste materials to be released in the subsurface. These operational areas include floor drains, two aboveground storage tanks (ASTs), hydraulic lifts, a storage cabinet adjacent to the building, an old tire storage area, parts cleaning sinks, and areas surrounding the building that have appear to receive surface water runoff potentially affected by operations. The approximate locations of these features are illustrated on Figure 2. It should be noted that the two part-cleaning sinks near the lube pit are not connected to any drain in the building. One of the sinks is self contained and appears to be for employees to use while working beneath the vehicles. The second sink is a Safety Kleen sink that drains into a Safety Kleen drum.

Eight borings will be advanced adjacent to operational areas at the locations shown on Figure 2. In addition, one boring will be advanced within 5 feet of previous sampling location B-2 to further evaluate shallow soil in that area. Finally, at least two borings will be advanced along the sanitary sewer line, one within the building and one where the line exits the Big O building as described below in Section 2.3 (not illustrated on Figure 2).

The tasks to complete this scope of work are discussed below.

2.1 Task 1: Background Information Review

Information concerning the present and past usage of the Site and neighboring properties will be obtained and reviewed to identify evidence of past activities that may have resulted in the release(s) of hazardous substances such as PCE. Sources of this information will consist of historical aerial photographs, Sanborn Fire Insurance Maps, if available, and an environmental database report prepared by Environmental Data Resource, Inc. Information obtained during this review may be used to modify the proposed sampling locations.

2.2 Task 2: Permitting and Preparation of a Health and Safety Plan

Intrusive subsurface activities will be conducted within the site boundaries. LFR will obtain the applicable well permits from the El Dorado County Environmental Management Department.

A Health and Safety Plan (HSP) will be prepared for the Site. The HSP will document the potential hazards to worker health and safety at the Site during the proposed field activities and specify the appropriate means to mitigate or control these hazards. The HSP will address the potential for exposure to hazardous constituents and describes general safety procedures. Fieldwork will be monitored to ensure that appropriate health and safety procedures are followed.

2.3 Task 3: Clear Utilities and Locate Sanitary Sewer Line

In accordance with state law, Underground Services Alert (USA) will be notified at least 48 hours before initiating intrusive field tasks. The locations of the intrusive activities will be clearly marked with white paint or surveyor's flagging, as required by USA. USA will notify all utility owners of record within the site vicinity of LFR's intention to conduct intrusive activities at the Site. The utility owners of record, or their designated agents, will be expected to clearly mark the positions of their utilities on the ground surface throughout all publicly owned areas designated for investigation.

In addition, LFR will retain a qualified, private subsurface utility locator LFR to verify that subsurface structures will not be encountered during drilling and sampling activities. The utility locator will also attempt to trace the floor drains and the subsurface sanitary sewer line within and outside the building. The final locations of the two soil borings to be installed along the sanitary sewer line will be determined in the field, based on the results of the utility survey. The sampling locations will be selected to assess soil and groundwater quality in an area along the sewer line within the building that most likely represents a potential area for a release. The area of potential release will be identified based on the sewer layout as determined by the utility survey and proximity to a potential discharge (i.e., where waste water would be first introduced into the sewer). For example, within the building, the sampling location would be selected to target a joint or elbow closest to the point of potential discharge. The location outside of the building will be selected in a similar fashion and within 10 feet of where the sanitary sewer exits the building.

2.4 Task 4: Soil Sampling

Soil borings will be advanced using direct-push technology. A direct-push rig consists of a small truck equipped with a hydraulic ram and percussion hammer. This rig will be used to push a 4-foot-long, 1- or 2-inch-diameter sampler containing an acetate sleeve into the subsurface. The borings will be advanced to depths of approximately 10 to 15 feet bgs. Soil samples will be collected continuously and each soil core will be inspected on a near-continuous basis for lithology and screened for the presence of volatile chemicals using field screening equipment (i.e., a photoionization detector [PID]). An LFR geologist will record a description of the lithology at each boring, using the Unified Soil Classification System. The PID readings will also be recorded onto the field boring logs. Field forms are included in Appendix A.

Three to four soil samples per boring will be collected for submittal to the analytical laboratory. Soil samples will be collected by cutting the acetate sleeve at the desired depth intervals. The ends of the sleeves containing soil selected for laboratory analysis will be covered with Teflon™-lined plastic caps. The samples will be labeled, logged on chain-of-custody forms, and placed in an ice-chilled cooler for transport to the analytical laboratory under chain-of-custody control.

Table 1 presents the proposed sampling plan for each boring. As indicated in Table 1, one to two of the samples collected from each boring will be placed on hold at the analytical laboratory and two of the samples will be selected for laboratory analysis based on field screening observations and observations of lithologic changes (i.e., where applicable, soil samples will be collected at the interface where more permeable soils are underlain by finer grained soils).

Soil borings will be properly abandoned with bentonite grout, in accordance with the guidelines provided by the applicable permits.

2.5 Task 5: Grab Groundwater Sampling

Grab groundwater samples will be collected from each soil boring using industry standard procedures for collection of grab groundwater samples. After the desired depth of boring is reached (approximately 15 to 18 feet bgs) at each designated borehole, a 1-inch-diameter polyvinyl chloride (PVC) well screen and casing will be placed in the borehole. Shallow groundwater will be allowed to enter the borehole for approximately two to four hours. If no water, or an insufficient volume of water, is encountered in the borehole after that time, no water sample will be collected, and the boring will be properly abandoned that same day.

If groundwater enters the boring, the groundwater sample will be collected by lowering a small-diameter (0.75-inch), stainless steel or Teflon™ bailer down the PVC casing from the surface and carefully decanting the sampled water into appropriate laboratory supplied containers. Upon completion, the soil boring will be abandoned by withdrawing the temporary well casing and filling the soil boring with bentonite grout, in accordance with the guidelines provided by the applicable permits.

2.6 Task 6: Laboratory Analyses

Soil and groundwater samples collected from the Site will be submitted to a California state-certified laboratory for chemical analysis. Samples will be transported under strict chain-of-custody procedures. Analytical procedures will include the following:

- volatile organic compounds (VOCs) using EPA Method 8260B
- gasoline, diesel, oil and grease using EPA Method 8015B

- semivolatile organic compounds (SVOCs) using EPA Method 8270 (select locations only)

Groundwater sample containers and preservatives will be provided by the laboratory or purchased from a laboratory supplier immediately prior to the sampling event. The containers will be pre-cleaned and will not be rinsed before sample collection. Preservatives, if required, will be added to the containers by the laboratory before shipment to LFR for sampling purposes.

2.7 Decontamination Procedures

Equipment that comes into contact with potentially contaminated soil or groundwater will be decontaminated and rinsed with distilled water before use at each sampling location and sampling event to ensure the integrity of samples collected. Disposable equipment intended for one-time use will be packaged for appropriate disposal and will not be reused. Drilling and sampling devices used will be decontaminated using high-pressure hot water (steam cleaned) or by the following procedures:

- laboratory-grade detergent and tap water wash, in a 5-gallon plastic bucket, using a brush
- initial tap water rinse, in a 5-gallon plastic bucket
- final distilled water rinse, in a 5-gallon plastic bucket

Equipment will be decontaminated in a pre-designated area over plastic sheeting, and clean bulky equipment will be stored on plastic sheeting in uncontaminated areas. Clean small equipment will be stored in plastic bags. Materials to be stored for more than a few hours will be covered with plastic sheeting.

2.8 Soil and Wastewater Disposal

Soil and wastewater generated from sampling activities will be stored temporarily on site in a designated location in U.S. Department of Transportation-approved 5-gallon buckets with pressure-sealing lids or 55-gallon drums with ring-top sealed lids. The drums will be labeled as nonhazardous waste soil or non-potable water and identified with the generator's name, the sampling locations from which the waste was generated, and the date the waste was generated.

Upon completion of the investigation, LFR will collect samples of the waste soil and water for chemical analysis. LFR will evaluate the data and make recommendations regarding appropriate disposal options.

3.0 DATA EVALUATION AND REPORTING

Upon receipt of the final analytical results, LFR will prepare a report to document investigation activities. This report will describe the field activities, present analytical results, and summarize the findings and conclusions of the investigation. The report will include figures and tables summarizing the laboratory results.

Sa[illegible] Matrix
Big O Tire Store
1961 Lake Tahoe Boulevard
South Lake Tahoe, California

Boring Location	Proposed Sample Identification	Matrix	Approximate Sample Depth - Actual Depth to be Based on Field Observation (staining, odor, lithologic change, PID)	Samples to be Placed on Hold at Laboratory	VOCs	TPH as gas/diesel/motor oil/hydraulic oil	SVOCs	Sample Rationale
B-4	B-4-3	Soil	3		X	X		Collect and analyze shallow soil samples adjacent to previous grab groundwater sample location B-3. Sample will be collected at lithologic change previously noted at approximately 8 feet bgs.
	B-4-6	Soil	6		X	X		
	B-4-10	Soil	10	H	X	X		
B-5	B-5-1.5	Soil	1.5		X	X		Assess potential impacts from surface-water runoff near vehicle servicing operations
	B-5-3.5	Soil	3.5		X	X		
	B-5-6.5	Soil	6.5	H	X	X		
	B-5-15	Soil	15	H	X	X		
	B-5-15-GW	Grab Groundwater	15-18		X	X		
B-6	B-6-1.5	Soil	1.5		X	X		Assess soil and groundwater quality near the parts cleaning sinks.
	B-6-3.5	Soil	3.5		X	X		
	B-6-6.5	Soil	6.5	H	X	X		
	B-6-15	Soil	15	H	X	X		
	B-6-15-GW	Grab Groundwater	15-18		X	X		
B-7	B-7-1.5	Soil	1.5		X	X		Assess soil and groundwater quality near AST, welding operations.
	B-7-3.5	Soil	3.5		X	X		
	B-7-6.5	Soil	6.5	H	X	X		
	B-7-15	Soil	15	H	X	X		
	B-7-15	Grab Groundwater	15-18		X	X		
B-8	B-8-1.5	Soil	1.5		X	X	X	Assess soil and groundwater quality near used oil AST
	B-8-3.5	Soil	3.5		X	X	X	
	B-8-6.5	Soil	6.5	H	X	X		
	B-8-15	Soil	15	H	X	X		
	B-8-15	Grab Groundwater	15-18		X	X		
B-9	B-9-1.5	Soil	1.5		X	X		Assess potential impacts from hydraulic lift.
	B-9-3.5	Soil	3.5		X	X		
	B-9-6.5	Soil	6.5	H	X	X		
	B-9-15	Soil	15	H	X	X		
	B-9-15	Grab Groundwater	15-18		X	X		
B-10	B-10-1.5	Soil	1.5		X	X		Assess potential impacts from hydraulic lift and new oil AST.
	B-10-3.5	Soil	3.5		X	X		
	B-10-6.5	Soil	6.5	H	X	X		
	B-10-15	Soil	15	H	X	X		
	B-10-15	Grab Groundwater	15-18		X	X		
B-11	B-11-1.5	Soil	1.5	H	X	X		Assess soil and groundwater quality near floor drain and potential impacts from hydraulic lift.
	B-11-3.5	Soil	3.5		X	X	X	
	B-11-6.5	Soil	6.5		X	X	X	
	B-11-15	Soil	15	H	X	X		
	B-11-15	Grab Groundwater	15-18		X	X		

Sa[illegible] [illegible]atrix
Big O Tire Store
1961 Lake Tahoe Boulevard
South Lake Tahoe, California

Boring Location	Proposed Sample Identification	Matrix	Approximate Sample Depth - Actual Depth to be Based on Field Observation (staining, odor, lithologic change, PID)	Samples to be Placed on Hold at Laboratory	VOCs	TPH as gasoline/diesel/motor oil/hydraulic oil	SVOCs	Sample Rationale
B-12	B-12-4	Soil	4	H	X	X		Assess soil and groundwater quality near floor drain.
	B-12-6.5	Soil	6		X	X	X	
	B-12-9	Soil	9		X	X	X	
	B-12-15	Soil	15	H	X	X		
	B-12-15	Grab Groundwater	15-16		X	X		
B-13	B-13-4	Soil	4		X	X		Assess soil and groundwater quality along sanitary sewer line within the building.
	B-13-6.5	Soil	6.5		X	X		
	B-13-10	Soil	10	H	X	X		
	B-13-15	Soil	15	H	X	X		
	B-13 GW-depth	Grab Groundwater	15-16		X	X		
B-14	B-14-4	Soil	4		X	X		Assess soil and groundwater quality along sanitary sewer line as it exits the building.
	B-14-6.5	Soil	6.5		X	X		
	B-14-10	Soil	10	H	X	X		
	B-14-15	Soil	15	H	X	X		
	B-14-GW-depth	Grab Groundwater	15-18		X	X		

H - Soil samples to be placed on hold at the laboratory pending receipt of analytical results for shallow soil samples
AST - aboveground storage tank
PID - photoionization detector
TPH - total petroleum hydrocarbons by EPA Method 8015 B Modified
VOCs - volatile organic compounds by EPA Method 8260
SVOCs - semivolatile organic compounds by EPA Method 8270

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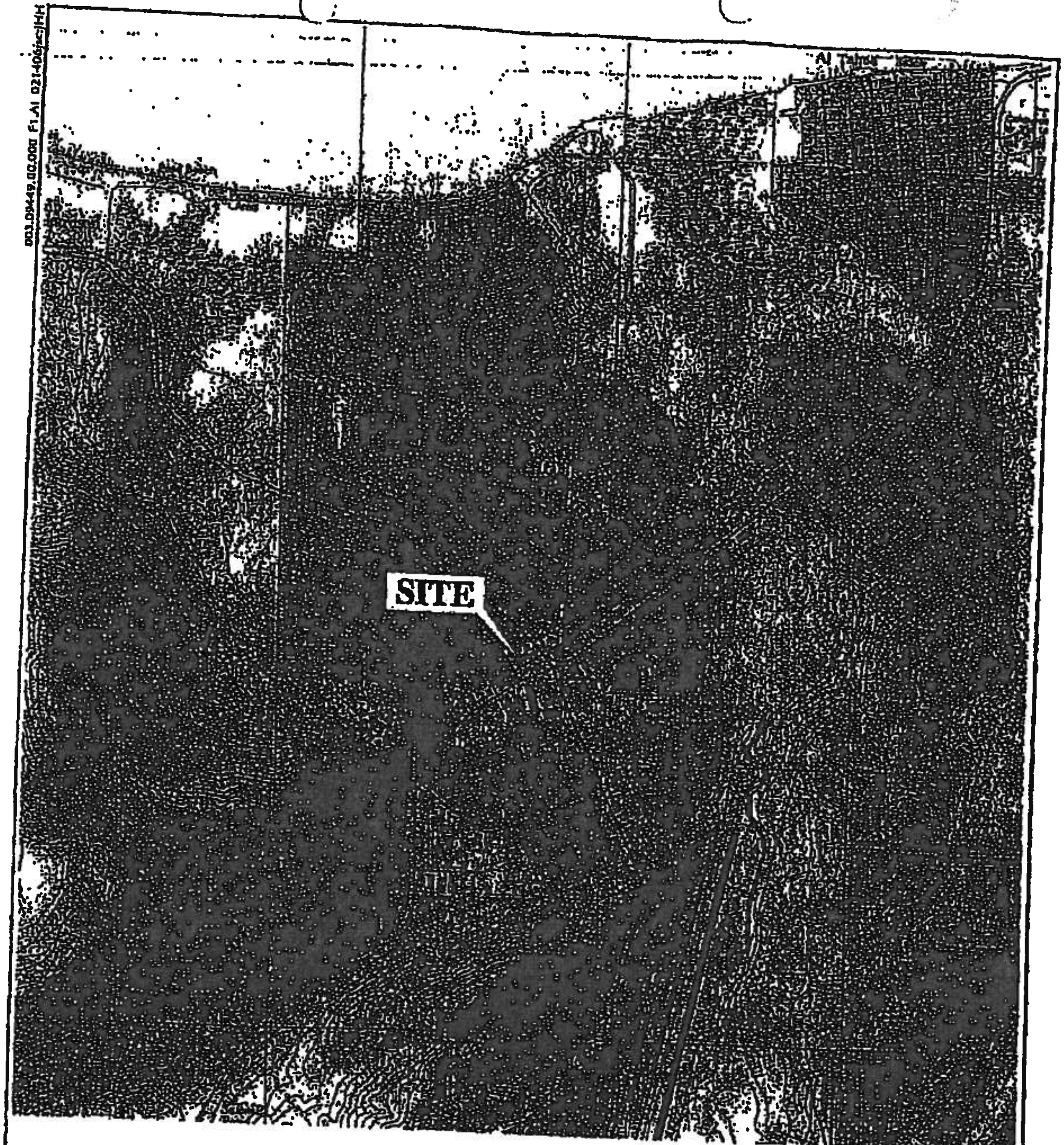


MAP SOURCE:
U.S.G.S. SOUTH LAKE TAHOE, CA
15' Quadrangle
1:24,000 (1 INCH = 2,000 FEET)

N

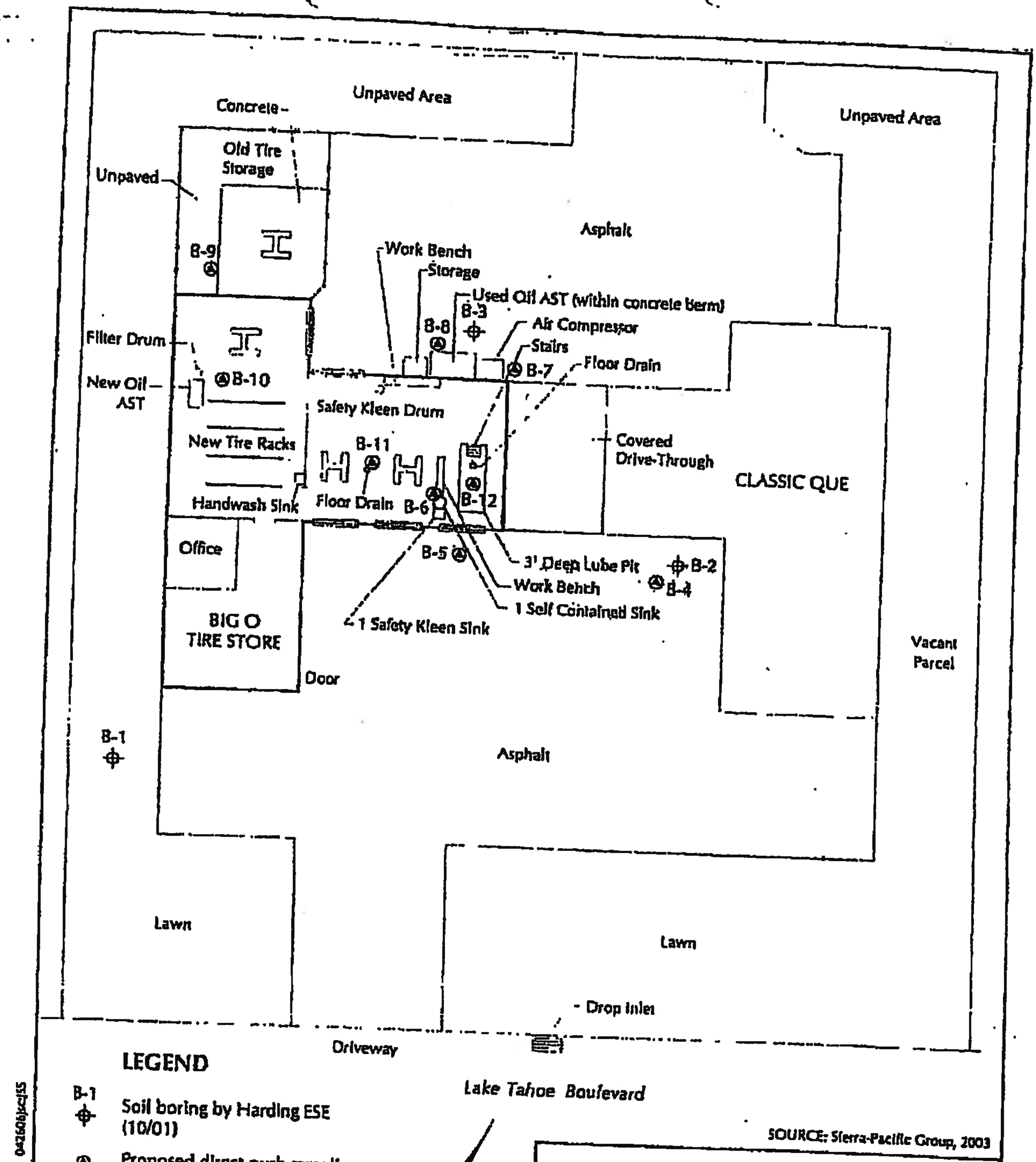
0 2000 FEET

Site Vicinity Map

Big O Tire Property, 1961 S. Lake Tahoe Blvd., S. Lake Tahoe, California

LFR

Figure 1



Previous and Proposed Soil Boring Locations

Big O Tire Property, 1961 S. Lake Tahoe Blvd., S. Lake Tahoe, CA

LFR

Figure 2

APPENDIX A

Field Forms

Lithology and Sample Data

LFR
LEVINE·FRICKE

oject Number: ____________________

Page ________ of ________

Project Name: ____________________

Date: ____________________

WELL CONSTRUCTION			LITHOLOGY		SAMPLE DATA			
Depth, feet		Time of Sample	Graphic Log	Description	Sample Number	Interval	Penetration Rate (blows/ft.)	PID/FID (ppm)

Boring/Well No.: ________ Drilling method: ________

Date drilled: ________ Sampling Method: ________

Drilling company: ________ Hammer weight and size: ________

LFR Staff: ________

Boring/Well Location Schematic

N
indicate

Reviewed by: ____________________ Signed: ____________________ Date: ________

ATTACHMENT 2

Amended Cleanup and Abatement Order (No. R6T-2003-031A1), California Regional Water Quality Control Board, Lahontan Region, executed 7 March 2006

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

AMENDED CLEANUP AND ABATEMENT ORDER NO. R6T-2003-031A1

WDID NO. 6A090307N01

REQUIRING
CAD ENTERPRISES LLC,
DAVID AND KATHLEEN BARNETT,
LIGHTNIN II INCORPORATED, CAMCO,
AND BOT 65 INCORPORATED
TO INVESTIGATE FOR FUTURE CLEANUP AND ABATEMENT OF
THE EFFECTS OF THE DISCHARGE OF
CHLORINTAED HYDROCARBON PRODUCTS TO THE
GROUND WATERS OF THE
LAKE TAHOE HYDROLOGIC UNIT AT
BIG O TIRES STORE LOCATED AT
1961 LAKE TAHOE BOULEVARD IN SOUTH LAKE TAHOE

El Dorado County

The California Regional Water Quality Control Board, Lahontan Region (Water Board), finds:

1. The Water Board Executive Officer issued Cleanup and Abatement Order (CAO) No. R6T-2003-031 on August 8, 2003. The Order requires CAD Enterprises, David and Kathleen Barnett, CAMCO, BOT 65 Incorporated and Lightnin II Incorporated (hereinafter referred to collectively as the Dischargers) to clean up and abate the discharge and threatened discharge of chlorinated hydrocarbon products to the ground waters of the Lake Tahoe Hydrologic Unit at the Big O Tires Store Lake Tahoe (hereinafter referred to as the Facility). The Facility is located at 1961 Lake Tahoe Boulevard in South Lake Tahoe. The Order required the Dischargers to: 1) submit a workplan for investigating the extent of contamination in soil and groundwater; 2) implement the site investigation; 3) submit a technical report that describes the results of the site investigation; and 4) submit a corrective action plan to abate impacts to soil and groundwater. Contamination from the site threatens multiple municipal and domestic drinking water wells in the area.

2. On September 25, 2003, the Dischargers submitted a workplan for conducting a soil and groundwater investigation, in accordance with the first requirement in CAO R6T-2003-031. In a November 25, 2003 response, Board staff stated that the workplan was deemed incomplete because it did not propose sufficient sampling points to fully characterize contamination in either soil or groundwater. In the letter the Dischargers were directed to submit a revised workplan within 21 days that would meet the requirements of the Order.

3. On January 15, 2004, the Regional Board received a document entitled, "Review and Interpretation of Hydrologic Data, Big O Tire Facility." The document, prepared by the Sierra-Pacific Group on behalf of the Dischargers, presented the theory that a solvent center-of-mass, mostly consisting of tetrachloroethene (PCE), migrated in groundwater to the Facility from a laundromat business located across the street at 1024 Lake Tahoe Boulevard. The business, now called the Lake Tahoe Laundry Works (Laundry), at one time contained a

self-service dry cleaning machine for public use. Based upon this theory of an off-site source, the Dischargers did not propose a revised workplan for implementing a site investigation.

4. On March 1, 2004, the Regional Board Executive Officer issued a letter to the Dischargers agreeing to hold in abeyance the requirement for the revised workplan for a site investigation. The letter stated that the action is being taken until Board staff could research the validity of the migrating center-of-mass theory and review the results of other PCE investigations being conducted in the area. Following receipt of this information, a decision would be made regarding further compliance with CAO R6T-2003-031.

5. Multiple site investigations have been completed on parcels near to the Facility since 2003. Investigation information indicates that PCE plumes from the Laundry and another nearby PCE source exist at different depths in groundwater beneath Lake Tahoe Boulevard before reaching the Facility. Yet, no solvent free product was detected at the Laundry, indicating the site is not a center-of-mass source as suggested by the Dischargers. Because PCE concentrations at the Facility, 4,700 micrograms per liter, are the highest detected in groundwater in the vicinity of the site, data suggest the Facility is a pollution source adversely affecting water quality.

6. On August 23, 2005, a draft amended cleanup and abatement order was mailed to the responsible parties listed in this order and to other interested parties for comments. The draft Order listed the Barnetts, CAD Enterprises, and Lightnin II, Inc., as dischargers. CAMCO and BOT 65, Inc., were not included in that draft as responsible parties because municipal well data indicated a potential discharge had occurred no later than January 1995, which was after their times of operation at the Facility. Relevant comments that were received were incorporated into this amended Order.

7. The Dischargers' theory that the Facility is not a source of solvent pollution needs further investigation. Sampling is required at all potential release sources and waste disposal areas to evaluate whether solvent compounds were discharged on site.

8. Based upon past data indicating that a solvent source is contributing to groundwater pollution at the Facility, all operators of the Facility back to the first indication of pollution are listed as dischargers. Lightnin II, Inc., has been the operator at the Facility since 1994 and is thus listed in this Order as a discharger. This Order also lists CAMCO and Bot 65, Inc. as they were the operators of the site when PCE was detected in the Clement municipal well in 1991 and before then when PCE was a commonly used parts degreaser and brake cleaner. Since data indicates that the release occurred no later than January 1995, both operators are named as dischargers in this Order since the change in operation occurred sometime in 1994. In addition, this Order lists Kathleen and David Barnett and CAD Enterprises as dischargers since they were or are the property owners of the Facility since the time when solvent compounds were detected in municipal wells beginning in 1991.

9. The October 2001 site investigation at the Facility was a limited characterization that did not define or determine a pollution source or sources. Therefore, further investigation is needed to attempt to locate the source area(s). The investigation must be comprehensive, evaluating <u>all</u> on-site potential release areas and waste disposal areas.

10. An El Dorado County Department of Environmental Health report documenting an inspection of the Facility on April 6, 2005, identified a receipt for contaminated soil taken to a transfer disposal facility. Neither the Water Board nor El Dorado County has information showing the release was reported to either agency. The Dischargers must provide all details of the release and the nature of the contaminated soil removed from the site as it may be contributing to the groundwater pollution at the Facility.

11. Site investigations listed in CAO R6T-2003-031 still need to be completed. This amended Order contains a revised compliance schedule for implementing an on-site source area investigation: 1) submit a workplan for conducting a site investigation to evaluate potential pollution releases, 2) implement a soil and groundwater investigation, and 3) submit a technical report describing the results of the site investigation and whether the site is a likely source of pollution to groundwater. Based on discussions with the dischargers, the workplan (task 1) is nearly complete; therefore, this Order provides only a very short period for submittal of this workplan.

12. This enforcement action is being taken by this regulatory agency to enforce the provisions of the California Water Code and as such is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000 et. seq.) in accordance with Section 15321, Chapter 3, Title 14, of the California Code of Regulation.

THEREFORE, IT IS HEREBY ORDERED that pursuant to Water Code sections 13267 and 13304, CAD Enterprises, David and Kathleen Barnett, Lightnin II, Inc., CAMCO, and BOT 65, Inc. (collectively referred to hereafter as the "Dischargers"), shall investigate potential pollution sources at the Facility to assist in future cleanup and abatement of chlorinated hydrocarbons and other potential contaminants to waters of the State. The Dischargers shall comply with the provisions of this order:

1. Conduct all investigation and cleanup tasks by or under the direction of a California registered geologist or civil engineer experienced in the area of groundwater pollution cleanup. All technical documents submitted to the Water Board shall contain the signature and stamp of the registered individual overseeing investigation and corrective actions.

2. Do not cause or permit any additional waste to be discharged or deposited where it is, or probably will be, discharged into waters of the State.

3. **Site Investigation.**

   3.1. <u>By March 15, 2006,</u> submit a revised workplan to the Water Board that proposes a comprehensive investigation to identify potential solvent releases and waste disposal areas. The revised workplan must address all comments in Water Board staff's November 25, 2003 letter. The workplan must include a map showing all potential source areas, such as floor drains, sewer lines, parts cleaning sinks, chemical storage areas, sumps, dry wells, outdoor work areas, and discharge locations from wash-down and waste disposal activities. The workplan must include a survey designed to identify the location of sewer collection lines on the property and their connections to the municipal sewer. The workplan must also propose to collect samples to define water quality beneath the site. The investigation must be designed in a manner that does not promote the vertical migration of contaminants to lower portions of the aquifer. A comprehensive sampling program must be proposed in the back area, between the building and Tucker Avenue, to identify potential waste disposal areas.

3.2. **By March 30, 2006**, begin implementation of the revised workplan to determine the location of potential discharges at the Facility and to characterize contamination in soil and groundwater. Begin implementation means: obtained all required permits; contracted with all contractor(s) necessary to complete the work; and, completed all necessary preparations for implementing the required work.

3.3. **By May 26, 2006**, submit a technical report to the Water Board that describes the soil and groundwater investigation conducted at the site in accordance with the accepted workplan. All maps shall be drawn to scale. At a minimum, the report must:

- 3.3.1. Provide a narrative description of work performed and information obtained.
- 3.3.2. Include boring logs, monitoring well designs for all constructed wells, and all analytical data obtained.
- 3.3.3. Include site maps showing the location of all borings and sampling points, and potential release sources, such as part cleaning sinks, floor drains, sumps, dry wells, utility lines, outdoor work areas, and runoff collection points.
- 3.3.4. Describe the geology beneath the Facility.
- 3.3.5. List the depth of first-encountered groundwater at all points sampled. State whether perched zones were encountered and the basis for this finding. Describe whether the contaminants are following in preferential pathways and the basis for that conclusion.
- 3.3.6. Provide a conclusion regarding the source for waste at the Facility and affects upon water quality.

4. Report on Contaminated soil Removed From the Site

By **April 15, 2006**, submit a technical report to the Water Board that, at a minimum, addresses the following:

4.1. The amount and nature (quality) of the contaminated soil removed from the Facility as identified in the receipt described in Finding No.10 of this Order.

4.2. Describe the incident that resulted in the contaminated soil that was removed from the facility and/or the action that caused the owner or operator of the Facility to characterize and/or contract for the removal of this contaminated soil.

4.3. Identify the person or persons who initiated the removal of this contaminated soil.

4.4. Identify on a map of the Facility the location where the soil was removed along with an indication of the depth of the excavation.

4.5. Describe and include any data that was collected prior to and during the removal of this contaminated soil that defined the basis for the lateral and vertical extent of the soil removal action.

4.6. Include a copy of the receipt for the contaminated soil disposal and identify the transfer station where this contaminated soil was taken.
4.7. Describe any other contaminated soil removal activities at the Facility.

It is expected that sections 4.1 through 4.6 of this report will be prepared and submitted by Lightnin II, Inc and/or CAD Enterprises as these dischargers were the operator and owner of the Facility, respectively, since 1994, which includes the eleven-year period prior to the inspection noted in Finding No. 10 of this Order. A response to section 4.7 must be submitted by all dischargers, either as individual reports or as part of a jointly prepared report that addresses all periods when the dischargers either owned or operated the Facility.

Failure to comply with the terms or conditions of this Order will result in additional enforcement action that may include the imposition of administrative civil liability pursuant to sections 13268 and 13350 of the Water Code, or referral to the Attorney General of the State of California for such legal action as he may deem appropriate.

Ordered by: Harold J. Singer Dated: March 7, 2006
HAROLD J. SINGER
EXECUTIVE OFFICER

California Environmental Protection Agency – Regional Water Quality Control Board, Lahontan Region

Fact Sheet – Requirements for Submitting Technical Reports Under Section 13267 of the California Water Code

June 3, 2005

What does it mean when the regional water board requires a technical report?

Section 13267[1] of the California Water Code provides that "...the regional board may require that any person who has discharged, discharges, or who is suspected of having discharged...waste that could affect the quality of waters...shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires".

This requirement for a technical report seems to mean that I am guilty of something, or at least responsible for cleaning something up. What if that is not so?

Providing the required information in a technical report is not an admission of guilt or responsibility. However, the information provided can be used by the regional water board to clarify whether a given party has responsibility.

Are there limits to what the regional water board can ask for?

Yes. The information required must relate to an actual or suspected discharge of waste, and the burden of compliance must bear a reasonable relationship to the need for the report and the benefits obtained. The regional water board is required to explain the reasons for its request.

What if I can provide the information, but not by the date specified?

A time extension can be given for good cause. Your request should be submitted in writing, giving reasons. A request for a time extension should be made as soon as it is apparent that additional time will be needed and preferably before the due date for the information.

Are there penalties if I don't comply?

Depending on the situation, the regional water board can impose a fine of up to $1,000 per day, and a court can impose fines of up to $25,000 per day as well as criminal penalties. A person who submits false information is guilty of a misdemeanor and may be fined as well.

[1] All code sections referenced herein can be found by going to www.leginfo.ca.gov . Copies of the regulations cited are available from the Regional Board upon request.

What if I disagree with the 13267 requirement and the regional water board staff will not change the requirement and/or date to comply?

You have two options. First, if you want to preserve your right of appeal you must file a petition with the State Water Resources Control Board within 30 days of the requirement to submit the report (See http://www.waterboards.ca.gov/wqpetitions/index.htm l and 23CCR §2050 et seq for details on what is needed in a petition.) Second, you may request that the regional water board reconsider the requirement. You may pursue this second course of action whether or not you file a petition with the State Water Resources Control Board.

Claim of Copyright or other Protection

Any and all reports and other documents submitted to the Regional Board pursuant to this request will need to be copied for some or all of the following reasons: 1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, 2) any further proceedings of the Regional Board and the State Water Resources Control Board, 3) any court proceeding that may involve the document, and 4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the discharger or its contractor claims any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying stated above will render the document unusable for the Regional Board's purposes, and will result in the document being returned to the discharger as if the task had not been completed.

If I have more questions, who do I ask?

Requirements for technical reports normally indicate the name, telephone number, and email address of the regional water board staff person involved at the end of the letter.

ATTACHMENT 3

Comments on Site Investigation Results, Big O Tires Store, 1961 Lake Tahoe Boulevard, South Lake Tahoe, El Dorado County, letter prepared by the Water Board, 22 February 2007

File

California Regional Water Quality Control Board
Lahontan Region

Linda S. Adams
Secretary for Environmental Protection

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Arnold Schwarzenegger
Governor

FEB 2 2 2007

David and Kathleen Barnett
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3170 Highway 50, #5
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CAMCO
BOT 65, Inc.
Attn. Mark Strong
2200 Lindenwood
South Lake Tahoe, CA 96150

Lightnin II, Inc.
dbaBig O Tires Store#147
Attn. Harry Krupp
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Carson City, NV 89703

COMMENTS ON SITE INVESTIGATION RESULTS, BIG O TIRES STORE, 1961 LAKE TAHOE BOULEVARD, SOUTH LAKE TAHOE, EL DORADO COUNTY – CLEANUP AND ABATEMENT ORDER NO. R6T-2003-031A1

The Regional Water Quality Control Board (Water Board) received the October 31, 2006 response document for the Big O Tires Store in South Lake Tahoe. The response document, prepared by Levine Fricke (LFR), supplements information in the August 9, 2006 "Results of Soil and Groundwater Investigations." Both the report and the response document conclude that the Big O Tire Store property has not contributed to the occurrence of tetrachloroethene (PCE) in groundwater detected beneath the site or in the "Y" area.

In addition, the Water Board received the January 29, 2007 letter from CAD Enterprises' attorney, Lewis Feldman of Feldman Shaw, LLP. Mr. Feldman's letter included a copy of a legal complaint by Seven Springs Limited Partnership against Fox Capitol Management Corporation. Seven Springs is the current owner of the South Y Shopping Center, which is located across the street from the Big O Tires Store and which contains the Lake Tahoe Laundry Works site. Fox Capitol is the former owner of the South Y Shopping Center. The legal complaint indicates that the Laundry was a source of PCE to soil and groundwater. Mr. Feldman's letter states that the Laundry is the source of PCE in groundwater at the Big O Tires site. The letter also states that numerous investigations at the Big O Tires site confirm the absence of PCE in soil at the site.

Mr. Feldman requests the Water Board issue a letter requiring no further action at the Big O Tires site and close its file on the case.

Comments

The information provided does not indicate the site is a major source of PCE in groundwater. However, based upon the investigation results, I am not convinced that the site has not contributed to PCE groundwater contamination in the "Y" area of South Lake Tahoe. Rather, information suggests that some PCE originated from operations at the site. My reasoning for this decision is as follows.

First, a soil sample collected at 3 feet below ground surface (bgs) near the northwest hydraulic lift contained 42 micrograms per kilogram (µg/kg) PCE. Since the water table was at 6 feet bgs during this latest investigation, which was the highest ever detected at the site, it is unlikely that PCE in soil originated from groundwater. This is further supported since PCE was not detected in the vadose zone throughout the site, which might have occurred if there was significant soil gas emanating from contaminated groundwater. Instead, PCE detected in shallow soil at boring B-9 indicates an on-site source.

Second, my June 2, 2006 letter conditionally approving your proposed investigation workplan stated: "I believe it will be difficult for you to justify a conclusion that there is no on-site source without concurrent results from a boring located in the anticipated upgradient flow direction on the property unless all on-site samples show non-detect concentrations for solvent compounds." The site investigation conducted did not collect soil or groundwater samples from the anticipated upgradient flow direction on the property, adjacent to Lake Tahoe Boulevard. Meanwhile, a water sample collected from boring B-13b contained 5.8 micrograms per liter (µg/L) PCE in groundwater. Since no upgradient soil or groundwater sample was collected during the investigation and two areas on-site contained detectable PCE concentrations, I do not believe that you have justified a conclusion that there is no on-site source for PCE. My opinion would be different if you had collected an upgradient water sample that showed PCE at concentrations similar to or greater than PCE concentrations detected in groundwater beneath the site. But, the fact that the 2001 site investigation indicated PCE concentrations increase in groundwater from the upgradient flow direction to the downgradient flow direction across the site still suggests an on-site PCE source.

Third, while water samples collected from borings B-8, B-13, and B-14, located within 8 to 9 feet of the sewer lateral, showed no detectable concentrations of PCE, a water sample from boring B-13b, located closer to the sewer lateral, did contain PCE. The report states that 5.8 µg/L PCE was detected within 4 feet of the sewer lateral from this boring. This sample was taken from a depth of 11 to 14 feet bgs, which is five feet deeper than water samples that were taken from the other three borings. This information could suggest that PCE is detected in groundwater at the site as you get closer to the sewer lateral and/or collect water samples at or deeper than 11 feet bgs. Or, it suggests that high groundwater at 6 feet bgs leached out a small source of PCE from the bottom of the sewer lateral, believed to be about 8 feet bgs. Either way, a shallow PCE source cannot be ruled-out.

And fourth, a high water table has the potential to dilute PCE concentrations associated with solvent free product that typically is found with depth in the aquifer. Ten of the eleven boring logs in the report show a water table depth of 6.25 feet or less. This higher than usual groundwater elevation, compared to the past investigation conducted at your site and other nearby sites, appears related to above normal precipitation in 2006. Thus, water samples not showing PCE concentrations during the recent investigation may show detectable PCE concentrations during periods of low water table, as was seen during the original 2001 site investigation. In the earlier investigation, up to 740 µg/L PCE was detected in a water table sample collected at 20 feet bgs. The high groundwater and low to non-detect concentrations in groundwater also suggest that a large source of PCE in shallow soils is not likely present at the site.

Taking all the preceding information into account, I do not believe that you have made a case for concluding that the site has not contributed to the occurrence of PCE in groundwater detected beneath the site or in the "Y" area. The information suggests that while there is not a large mass of PCE in shallow soils at the site, shallow soil and water samples containing PCE do indicate some PCE from operations at the site are present.

Conclusion

Information provided to this office points to your site as being a probable PCE release source, albeit a small one. This implies that a larger source of PCE release likely occurred at another property in the "Y" area of South Lake Tahoe.

Since the information indicates the Big O Tires site potentially contributed to PCE groundwater contamination in the "Y" area, I cannot issue a closure or "no further action" letter that would relieve you of future corrective actions for PCE contamination. Yet, for the time being, there is no basis for you to conduct further investigations.

Rather, I believe the matter of PCE in groundwater in the "Y" area would be better served by requiring further investigations or cleanup remedies at other nearby PCE release sites. I will notify you if further investigations are required at your site.

I appreciate your cooperation to work with Water Board staff. You may contact me at (530) 542-5412 if you have any questions.

Harold J Singer

HAROLD J. SINGER
EXECUTIVE OFFICER

cc: Lewis Feldman, Feldman Shaw, LLP
PCE Interested Parties Mailing List

LSD/dldT:/Big O invest comm.let
[Send to file: SLIC, El Dorado Co., T6S034]

ATTACHMENT 4

Staff Report, Solvent Contamination at the Big O Tires Store, 1961 Lake Tahoe Boulevard, South Lake Tahoe, prepared by California Regional Water Quality Control Board, Lahontan Region, dated 22 August 2005

California Regional Water Quality Control Board
Lahontan Region

STAFF REPORT

SOLVENT CONTAMINATION AT THE BIG O TIRES STORE, 1961 LAKE TAHOE BOULEVARD, SOUTH LAKE TAHOE

August 22, 2005

Lisa Dernbach, P.G., C.Hg., C.E.G.
Senior Engineering Geologist (Specialist)

Reviewed by: Chuck Curtis, P.E.
Planning and Toxics Division Manager

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Executive Summary

The Regional Board has been aware of solvent contamination, particularly tetrachloroethene (PCE), at the Big O Tires Store (Facility) in South Lake Tahoe following a 2001 groundwater investigation. In 2003, the Regional Board Executive Officer issued Cleanup and Abatement Order (CAO) No. R6T-2003-031 to current and former owners and operators (Dischargers) of the Facility to conduct corrective actions. The Dischargers are David and Kathleen Barnett; CAD Enterprises, LLC; CAMCO; BOT 65, Incorporated; and Lightnin II, Incorporated. The Dischargers did not comply with orders in the CAO. Instead, the Dischargers submitted a technical report in early 2004 that put forth the theory of a solvent center-of-mass that migrated to the Facility from an off-site source. The CAO was put in abeyance pending Board staff's review of the technical report and investigation results from other solvent source sites.

Regional Board staff's review of all the data associated with the site and review of other case studies of solvent fate and transport indicates that the Dischargers' theory of an off-site migrating center-of-mass affecting the Facility is not supported. Rather, investigation results show that the Facility is primarily affected by a PCE source originating on site and may secondarily be affected by off-site solvent sources. The on-site source is adversely affecting water quality and beneficial uses, such as municipal and domestic drinking water supply. Additional enforcement actions issued to the Dischargers are warranted for cleanup and abatement of the hazardous waste (solvent-contaminated soil and water).

I. History of PCE Contamination in South Lake Tahoe

In 1989, the South Tahoe Public Utility District (District) reported that PCE had been detected in several municipal wells in the "Y" area in the City of South Lake Tahoe (Figure 1). The information indicated that an unauthorized discharge or discharges of solvent compounds had occurred within the capture zones of these wells. While several solvent compounds were detected, PCE was the most abundant compound. The state drinking water standard for PCE is 5 micrograms per liter (μg/l).

In 1990, Regional Board staff began investigations to identify locations of potential solvent discharges. The investigations were able to identify the businesses and areas that could be potential sources. Following additional investigations by the Regional Board and the District, it was determined in 1998 that PCE in groundwater was not a diffused, area-wide problem. Instead, localized, high PCE concentrations were probably attributed to releases originating at a few specific sites.

Starting in 1998, the Regional Board Executive Officer required that groundwater investigations be conducted on certain properties to determine whether a solvent release had occurred. The properties were selected based upon their location relative to affected drinking water wells and whether they included businesses that likely used solvent compounds. The selected businesses included dry cleaners, automotive and machine shops, paint shops, and printing shops.

Groundwater investigations were conducted at thirteen properties between 1998 and 2003. Of the thirteen, two properties had groundwater containing PCE concentrations in the thousands of micrograms per liter in groundwater and three properties had groundwater containing PCE concentrations in the hundreds of micrograms per liter. The results from investigations at properties in the first group having the highest PCE concentrations in groundwater indicated that those properties were sources of solvent contamination affecting the drinking water aquifer. Contamination found in the second group of sites indicated that those properties possibly were solvent sources and warranted further investigation. The remaining eight properties that conducted investigations had PCE concentrations in groundwater at less than 20 µg/l and were determined by Board staff not to be PCE sources.

II. Cleanup and Abatement Order (CAO) No. R6T-2003-031

The Regional Board Executive Officer issued cleanup and abatement orders to dischargers for the properties having PCE concentrations in groundwater in the thousands of micrograms per liter. The Facility was one of the two properties where dischargers received cleanup and abatement orders.

The October 2001 groundwater investigation conducted at the Facility detected PCE and other solvent compounds in groundwater above drinking water standards. PCE increased in concentration from the water table at 18 feet below ground surface (bgs) to depths of 50 feet bgs in the aquifer (Figure 2). Trichloroethene (TCE) and dichloroethene (DCE) also increased in concentration with depth in the water column. Solvent concentrations increased from the western property boundary towards the middle of the Facility, corresponding with groundwater flowing west to east. The investigation results indicated that an on-site solvent source was adversely affecting water quality. Increasing solvent concentrations with depth in the saturated zone implied the source was free product that sank in the aquifer.

CAO No. R6T-2003-031, issued on August 8, 2003, required the Dischargers to conduct investigations and corrective actions to cleanup and abate the affects of discharges of hazardous waste to groundwater. The Order requires the Dischargers to: 1) submit a workplan for investigating the extent of contamination in soil and groundwater; 2) implement the site investigation; 3) submit a technical report that describes the results of the site investigation; and 4) submit a corrective action plan to abate impacts to soil and groundwater. Contamination from the site threatens multiple municipal and domestic drinking water wells in the area.

On September 25, 2003, the Dischargers submitted a workplan for conducting a soil and groundwater investigation, in accordance with the first requirement in CAO R6T-2003-031. In a November 25, 2003 response, Board staff stated that the workplan was deemed incomplete because it did not propose sufficient sampling points to fully characterize contamination in either soil or groundwater. In the letter, the Dischargers were directed to submit a revised workplan within 21 days that would meet the requirements of the Order.

On December 12, 2003, the Dischargers submitted a deadline-extension request for submitting the revised workplan. The basis for the Dischargers' request was that they desired to complete an area-wide contaminant study that would allow for a more accurate determination for need and placement of off-site borings for sampling. The Regional Board Executive Officer approved the request in a December 22, 2003 letter and set a new deadline of January 16, 2004 for submitting the revised workplan.

III. Migrating Solvent Center-of-Mass Theory

In January 2004, the Regional Board received a document entitled, "Review and Interpretation of Hydrologic Data, Big O Tire Facility." The document, prepared by the Sierra-Pacific Group on behalf of the Dischargers, presents the theory that a solvent center-of-mass migrated with natural groundwater to the Facility from a laundromat business located across the street at 1024 Lake Tahoe Boulevard (see Figure 1). The laundromat business, now called the Lake Tahoe Laundry Works (Laundry), at one time contained a coin-operated dry cleaning machine for public use. The compound, PCE, was used in the machine to clean clothes.

The center-of-mass theory was based upon the Facility consultant's contention that there was a single point of release for solvent contamination rather than multiple releases at different sites, as put forth by Regional Board staff. The theory is based upon the occurrence of the same three compounds, PCE, TCE, and cis-1,2-DCE, within the same orders of magnitude at the Laundry, Facility, and Napa Store. The consultant theorizes that contaminant concentrations indicate that PCE free product originating at the Laundry migrated laterally and vertically in the aquifer before reaching the Facility. The resultant dissolved-phased plume became centered beneath the Facility. Later, when the pumping was expanded at the Clement Well, the consultant suggests the plume center-of-mass was pulled beneath the Napa Store, reflected by high solvent concentrations found at that location. Following shutdown of the Clement Well years later, the consultant indicates the center-of-mass is more evident beneath the Facility than the Napa Store due the Facility's proximity to free product from the Laundry. Based upon this theory of solvent contamination originating at an off-site source, the Dischargers did not propose a revised workplan for implementing a site investigation.

On January 29, 2004, Regional Board staff met with several of the Dischargers to discuss the need for the revised workplan and the theory made in the document "Review and Interpretation of Hydrologic Data."

Based on that meeting, on March 1, 2004, the Regional Board Executive Officer issued a letter to the responsible parties agreeing to hold in abeyance the requirement for the revised workplan for a site investigation. The letter stated that the action is being taken until Board staff could research the validity of the migrating center-of-mass theory and review the results of other PCE investigations being conducted in the area. Following receipt of this information, a decision would be made regarding further compliance with CAO R6T-2003-031.

Following the Executive Officer's March 1, 2004 letter to the Dischargers, Regional Board staff researched the migrating center-of-mass theory. In addition, Board staff spoke to staff at other regional boards that are experienced in the fate and transport of solvents in groundwater. The purpose of the research was to understand the basis of the theory and to determine whether the conditions that are applicable to the theory are or were present.

IV. Characteristics and Behavior of Solvent Compounds

Conventional knowledge of solvent contamination cases indicates that for a migrating center-of-mass there must be a solvent source having saturated a volume of the soil pore space. Solvents may be found in soils (above or below the groundwater table) in two general phases. The first is when a solvent saturates the pore spaces of a volume of soil, and it is variously called non-aqueous-phase liquid (NAPL), separate-phase product, liquid-phase product, free-liquid-phase product, or free product (referred hereinafter as free product). Solvent in the free product phase has a specific gravity greater than one, causing it to sink in water. For PCE, a concentration of one percent solubility (about 1,500 µg/l) in groundwater typically indicates the presence of free product.

The other general phase is when a solvent is in gaseous form in soil pores above the water table or a dissolved form below the water table. Dissolved plumes form after contact with solvents, whether it be from free product, residual contamination (having partially-saturated pore spaces), or a gas. A common misconception of solvent plumes is that they too sink in the aquifer. Instead, plumes composed of dissolved solvent compounds migrate with groundwater flow and decrease in concentration with distance from the source. The compound, PCE, tends to lead a plume of dissolved solvents. PCE breakdown products, TCE and DCE, will usually follow PCE in a plume but at lower concentrations and for shorter distances in conditions that are more aerobic than anaerobic.

The fate and transport of a solvent free product can be complex. In the unsaturated zone, free product is mainly acted on by gravity and moves downward. Free product can also travel laterally on fine-grained layers, mainly silts and clays, which resist downward movement. On silty sand layers, free product will move downward between sediment grains unless the entry pressure exceeds the weight of the free product on top of it, at which time the free product may move laterally. When free product reaches groundwater, it begins to form a mound and spread horizontally on the water table until there is enough mass to overcome the capillary entry pressure. Once in the saturated zone, gravity continues to cause free product to sink in the aquifer because it is more dense than water.

Normal groundwater flow gradients are unable to overcome gravitational forces and soil tension forces to cause free product to move laterally. However, if a strong force, such as a pumping municipal well or groundwater extraction well, is present, it can pull free product away from the source site. This process tends to happen more with free product pools rather than with small free product accumulations, such as fingers and drops, called ganglia.

It is generally known that solvent free product does not remediate on its own under natural attenuation. Numerous cases can be pointed to where solvent discharges 40 years old continue to show free product levels in soil and groundwater. Rather, active measures are required to eliminate a free product source that would otherwise be present for decades.

Therefore, the factors required for a migrating center-of-mass are 1) free product at a source site and 2) free product lateral migration either by movement on fine-grained layers or by an external force such as well extraction. These factors are explored more in the following sections.

V. Analysis of PCE Investigation at Off-site Properties

Once the factors required for validation of a migrating center-of-mass theory were known, investigation reports were reviewed for off-site properties believed to be PCE sources to determine if the factors were present. The results of investigations conducted at three solvent sites in the "Y" area are summarized here.

A. Lake Tahoe Laundry Works

The Laundry is located near the northwest end of a shopping center. The property owner reports that the laundromat contained a coin-operated dry cleaning machine in the years between 1973 and 1979. The machine was self contained and used PCE to clean clothes; there was no sewer connection to the machine.

Site investigations were conducted at the Laundry in 2003, 2004, and 2005. The maximum on-site PCE concentration of 690 µg/l was detected at the water table, 20 feet bgs (Figure 2). PCE concentrations decreased with depth in the aquifer, to 15 µg/l at 44 feet bgs. Other solvent compounds, TCE and DCE, detected above the drinking water standard also decreased in concentration with depth in the aquifer. Water samples taken from boring GP-9, located two hundred and fifty feet in the downgradient flow direction, showed PCE concentrations at 1,000 µg/l at 16 feet bgs and 1,200 µg/l at 40 feet bgs. This boring location is situated at the northern corner of the shopping center parking lot, adjacent to Lake Tahoe Boulevard. Soil sampling showed that a majority of solvent compounds detected were at shallow depths, four to eight feet bgs, near the laundromat front door and in the parking lot. Further investigation is necessary to define the outer most boundaries of soil contamination.

Overall, data from the Laundry point to shallow residual contamination in soil instead of sinking free-product in the aquifer. These investigation results are consistent with spills caused by chemical transport and delivery that were common during the period that PCE was used at the Laundry. Since solvent compounds in groundwater decrease with depth and are at concentrations less than one percent of the solubility level for PCE (i.e., 1,500 µg/l), it is reasonable to conclude that free product does not and did not exist at the site.

In addition, the 2004 site investigation included off-site groundwater sampling beneath Lake Tahoe Boulevard. Water samples collected from a boring located at the Glorene

Avenue intersection, 100 feet northwest from the Laundry, showed non-detectable levels of solvents at the water table at 18 feet and 710 µg/l at 44 feet bgs. Samples collected from a boring located 70 feet north from the Laundry and between it and the Facility detected 25 µg/l PCE at the water table and 230 µg/l at 44 feet bgs. The latter sample location is in the downgradient groundwater flow direction from the former sample location. The sample results suggest that the plume from the Laundry site migrates near the water table since PCE concentrations decrease with distance from the site. Whereas, sample results near the Glorene Avenue intersection suggest that a solvent plume from a different source or sources is migrating deeper in the aquifer from the west direction. It is unknown whether the shallow and deeper plumes commingle.

The 2005 investigation results indicate a commingled plume may be present at the northeast parking lot corner of the shopping center. PCE concentrations detected at GP-9 are inconsistent with concentrations detected upgradient at the Laundry site. The boring location is situated between the Facility and the former Shell Station, where a pump and treat system operated and may have affected the plume from the Facility. Further investigation is necessary to determine whether the Laundry plume commingles with the plume from the Facility at this location.

B. Lakeside Napa Auto Parts Store

Board staff also reviewed the 2002 and 2004 investigation reports for the Lakeside Napa Auto Parts Store (Napa Store). This site is located at 1935 Lake Tahoe Boulevard, about 180 feet west of the Facility (Figures 1 and 2). The property owner cites that a machine shop operated in the east end of the store building until 1997.

Results of the two investigations were similar. PCE was detected in the thousands of micrograms per liter in groundwater at 44 feet bgs and at lesser concentrations near the water table at 18 feet bgs. The compounds TCE and DCE were also detected in the water column at levels exceeding drinking water standards. Solvent compounds increased in concentration in groundwater from the upgradient property boundary on the west side to the middle of the property, indicating an on-site source. In the first investigation, the PCE high concentration of 3,000 µg/l was detected on site. Yet, in the second investigation, the PCE high concentration of 2,200 µg/l was detected 50 feet off site across Glorene Avenue from the Napa Store. It is unknown whether contamination detected at the latter sampling location is from a source at the Napa Store or an off-site source.

Since solvent compounds in groundwater increase with depth and are at concentrations greater than one percent solubility for PCE (i.e., 1,500 µg/l), it is likely that free product exists at the site. Off site, PCE concentrations in groundwater reduced to 500 µg/l on Tucker Avenue, just before the Big "O" Tires property line. Despite collecting 17 soil samples and conducting geophysical analyses of subsurface conditions, a solvent source was not identified during either investigation at the Napa Store. Further investigation may be necessary to determine the relationship of the high PCE concentration detected off site during the 2004 investigation with the Napa Store.

C. South Shore Motors

The South Shore Motors is located at 1875 Lake Tahoe Boulevard, about 300 feet west of the Facility (Figure 1). During a 1999 site investigation, water samples showed PCE at concentrations below the 5 µg/l drinking water standard and dichloroethane (DCA) at concentrations above the 0.5 µg/l drinking water standard. The site was the only property in the South "Y" area to identify DCA.

VI. Operating History of "Y" Area Municipal Wells

The District reports that the first PCE detection in "Y" area municipal wells occurred in 1989, the first time that sampling was required in California. The four municipal wells closest to the Facility are the Tata #4 Well, Clement Well, Julie Well, and the South Y Well (see Figure 1). The Facility is located in the downgradient or crossgradient groundwater flow direction of each of these municipal wells.

Table 1 shows that PCE concentrations detected in the Julie Well in 1989 exceeded the state drinking water standard of 5 µg/l. PCE concentrations detected in the Tata #4 and Clement Wells were below the standard. The latter two wells also contained the compound DCA above the 0.5 µg/l drinking water standard, while the Julie Well did not. The Tata #4 Well and Clement Well pumped at about 70 gallons per minute (gpm), and the Julie Lane Well pumped at about 150 gpm. Based upon pumping rates, it would be assumed that the drawdown capture zone would be larger at the Julie Lane Well than at either of the other two municipal wells. The lack of aquifer tests in or around 1989 prevent knowing the actual capture distance of each well.

Table 1. Solvent Compounds Detected in Municipal Wells

	Julie Well (150 gpm)	Tata #4 Well (70 gpm)	Clement Well (70 gpm)
PCE (µg/l) in 1989	8.3	2.2	0.5
Other compounds in 1989	none	DCA	DCA
PCE (µg/l) in 1992	6.4	0.79	29*
Other compounds in 1992	none	DCA	DCE TCE**

Notes:
µg/l: milligrams per liter
gpm: gallons per minute
PCE: Tetrachloroethene
TCE: Trichloroethene
DCE: Dichloroethene
DCA: Dichloroethane
*pumping increased on average to 200 gpm
**detected in 1993

To abate PCE and DCA concentrations in drinking water, the District choose to conduct wellhead treatment using an air stripper at the Clement Well. Extracted water from the Tata #4 Well, Julie Well, and the South Y Well was piped to the Clement Well and merged with its extracted water before undergoing treatment. The treatment method was successful at removing solvent compounds from groundwater to meet state drinking water standards. Treated water was then sent in the distribution lines to District customers.

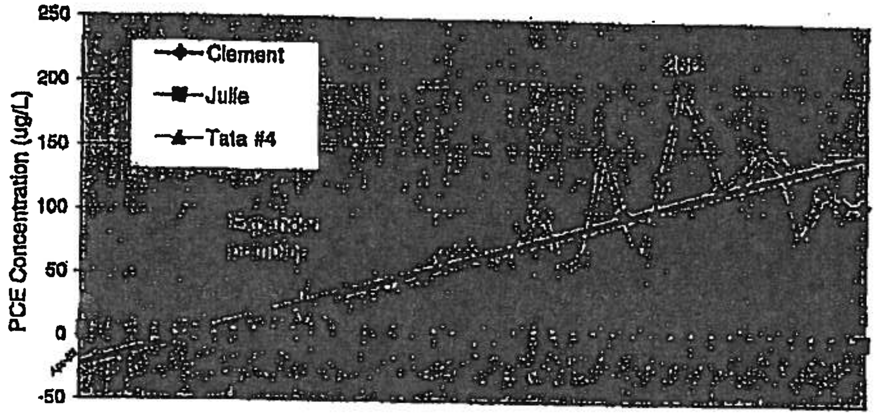
When wellhead treatment began at the Clement Well at the end of 1991, pumping from this well was increased up to 230 gpm and averaged almost 200 gpm. Pumping rates at the Tata #4, Julie, and South Y Wells, however, stayed the same as before. It is unknown whether expanded pumping at the Clement Well caused overlap in the capture zones with other municipal wells in the South Y area.

The District rarely used the South Y Well due to high levels of naturally occurring uranium in the water. When the South Y Well was turned on between August and November 1994 and between July and August 1995, water was blended with water from the other municipal wells to reduce uranium levels. The South Y Well pumped at a rate of 140 gpm.

With the greater pumping rate at Clement came increasing PCE concentrations above the drinking water standard (Graph 1) and the disappearance of DCA (Attachment 1). The trendline for the Clement Well data shows an overall increasing trend in PCE concentrations through time until the well was turned off in early 1999 along with all the other Y area municipal wells. In comparison, expanded pumping at Clement had very little if any effect upon PCE concentrations detected at the Julie and Tata #4 Wells. Graph 1 shows that PCE concentrations peaked at 200 μg/l in the Clement Well in 1996 before starting to decrease in 1997. In addition, the District analyzed influent samples of combined municipal well water going to the air stripper. The levels of PCE detected in these samples were consistently less that PCE concentrations detected in the Clement Well alone due to dilution of the Julie and Tata #4 Wells, and the South Y Well when it occasionally operated.

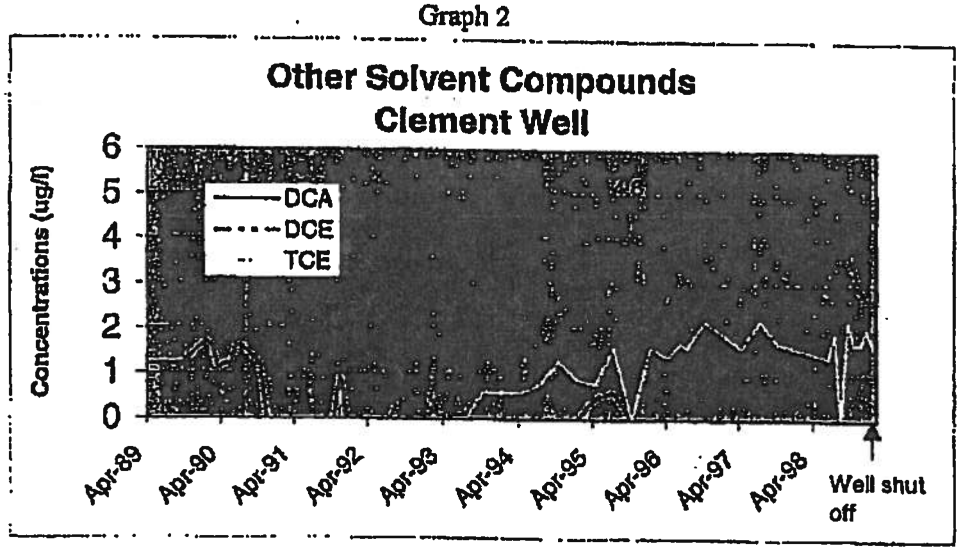
The compounds DCE and TCE were also detected in the Clement Well beginning in 1992 and 1993, respectively (Graph 2). These compounds, however, were not detected in the Julie and Tata #4 Wells, but were detected at low concentrations (less than four micrograms per liter) in the combined well influent samples before the air stripper. No chlorinated hydrocarbon data is available for the South Y Well since it was not pumped often. Clement Well data in Attachment 1 show there was a nine-month time lag from the time when PCE concentrations started steadily increasing in late 1991 to when the

Graph 1. PCE Concentrations in Municipal Wells



first DCE detection was observed in September 1992. The data also show a 22-month time lag, from December 1991 to October 1993, for TCE to reach detectable levels in the Clement Well.

Graph 2



In early 1998, the District shut down all wells in the Y area to conduct a pump test for the Clement Well. The purpose of the test was to determine the drawdown extent of the municipal well and see whether PCE was present in water samples. During the test, the well was pumped at an average rate of 180 gpm for 15 hours. The test results indicated a drawdown distance to 900 feet in the upper aquifer and 1,600 feet in the lower aquifer (Figure 3). Positive PCE results confirmed that one or more solvent sources existed within the well's capture zone.

Wellhead treatment continued uninterrupted from 1991 even when levels of methyl tertiary butyl ether (MTBE) were detected in influent in 1997. MTBE levels in treated effluent increased over the next few years until nearing the drinking water standard in 1999. The District elected at that point to shut down all municipal wells in the south "Y" area. MTBE plumes in groundwater had formed years before from underground storage tank releases, principally from gas stations along Emerald Bay Road.

With the municipal wells shut down in the "Y" area, groundwater resumed the natural flow direction towards Lake Tahoe, to the northeast. The exception to natural groundwater flow occurred at locations where groundwater extraction was implemented for the purpose of aquifer restoration. For the most part, extraction took place on the east side of Lake Tahoe Boulevard between the Tata #4 Well and the former USA Gas Station at 1140 Emerald Bay Road. The largest extraction rate of 45 gpm took place at the Tata #4 Well during 1999 and 2003. Lesser groundwater extraction also took place at the former Shell Station located at 887 Emerald Bay Road. A potentiometric map (Figure 4) shows average groundwater drawdown for remediation purposes in 2002. The map indicates that drawdown (shown as concentric lines) did not affect groundwater at the Facility, Napa Store, and the Laundry. However, the off-site portion of the Laundry plume was likely contained from further migration by extraction wells operating for the Shell Station. If pumping rates fluctuated at different times, so would the extent of capture, possible affecting groundwater contamination from the Facility

VII. Data Interpretation

The following sections discuss data interpretation of the capture distance for municipal wells and discharges affecting the Clement Well.

A. Well Capture and Site Distance

Table 2 lists the distances from the three municipal wells that continuously operated to sites identified as likely solvent sources, and the distances from the South Y Well that briefly operated in 1994 and 1995. Based upon DCA detection in the Clement Well in 1989 (refer to Table 1), it can be concluded that the capture influence extended to at least the South Shore Motors, 440 feet away. Likewise, DCA detected in the Tata #4 Well suggests that capture either reached the South Shore Motors or a similar business using DCA located nearby, of which there were several in the area.

Table 2. Distance from Municipal Wells to Solvent Sources

	Julie Well (ft)	Tata #4 Well (ft)	Clement Well (ft)	South Y Well (ft)
Napa Store	1,400	740	1,100	800
Laundry	1,450	700	1,450	675
Big O Tires	1,500	850	1,400	820
South Shore Motors	550	600	440	1,030

While it is known that PCE discharges had already occurred at the Laundry by 1979, it is unknown when discharges occurred at the Facility or the Napa Store. The Tata #4 Well is closest to the Laundry of the three municipal wells listed in Table 1. Since the pumping rate at the Tata #4 Well and the Clement Well were the same in 1989, it is more likely that the Tata #4 Well would capture PCE at the Laundry rather than the Clement Well, which is located further away. The same could be said about discharges that may have already been present at the Facility; PCE capture would have been more likely by the Tata #4 Well instead of the Clement Well.

The expansion of pumping at the Clement Well in late 1991 not only increased the volume of water reaching the municipal well but also increased the extent of drawdown capture. The disappearance of DCA in 1992 corresponds with increased pumping of municipal wells for wellhead treatment. The increased pumping likely caused low levels of DCA in groundwater to be diluted to non-detectable concentrations from increased water volume.

Since the Facility and the Laundry are located near the edge of the Clement Well's 1,600-foot capture zone (Figure 3) created by increased pumping of 180 gpm, it is unlikely that either site was affected by the smaller capture zone created when the Clement Well was pumping only at 70 gpm before late 1991. Such information supports the contention that PCE detected in the Clement Well in 1989 was not likely from discharges at the Laundry or from potential discharges that may have already occurred at the Facility.

As previously stated, the District operated the South Y Well for four months in 1994 and about two months in 1995. Based upon the pumping rate of this well, 140 gpm, and the close proximity of the well to the three solvent sites, the capture influence of the South Y Well likely overcame the capture influence of the Clement Well. The net effect likely changed the direction of plume movement from west (toward the Clement Well) to south (towards the South Y Well). This would have caused solvent concentrations to decrease at the Clement Well as is evident by the downward spikes in summer 1994 and summer 1995 seen in Graphs 1 and 2. Seasonal pumping rate differences and their effects on plume movement may also be responsible for the down-up cycling of PCE concentrations in the Clement Well.

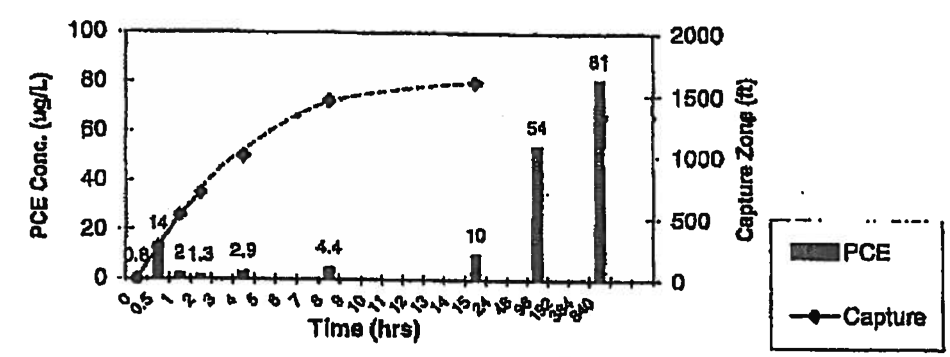
When the South Y Well ceased pumping in each year, portions of the solvent plumes likely moved as a combined plume either to the Tata #4 Well, 330 feet away to the southeast, or to the Clement Well to the west. The net effect of the South Y Well pumping likely caused PCE to move widely in the aquifer in the area and possibly moved some free product to off-site locations from their sources.

Detection of DCE and TCE in the Clement Well after late 1991 could have resulted from either discharges containing the compounds or from chemical breakdown from earlier PCE discharges. Since increasing DCE and TCE detections follow increasing PCE detections, it would not be unreasonable to believe that the former compounds are breakdown products of PCE. DCA is not a typical breakdown product of PCE, so it is likely from a different solvent product.

B. 1998 Clement Well Pump Test

The District's 1998 pump test at the Clement Well showed that at an average pumping rate of 180 gpm, drawdown extended to 1,600 feet within 15 hours. Since data points in the pump test were near asymptotic at the end of the test, it is assumed that the drawdown did not extend a significant distance beyond 1,600 feet. Besides South Shore Motors, the 1,600 feet drawdown distance encompasses the Facility, the Napa Store and the Laundry.

Graph 3. Clement Well Pump Test Results, March 1998



From the pump test data shown in Graph 3, several interpretations can be made. Upon test initiation, PCE was detected in the Clement Well at 14 µg/l. At 60 minutes into the pump test, PCE concentrations dropped to 2 µg/l. This information suggests that a PCE source existed within the first capture zone of 260 feet but reduced in concentration as the capture zone expanded to 520 feet.

Since there are no known PCE sources within the first capture zone, either a PCE release existed within the adjacent residential area or PCE plumes that had been previously drawn to the Clement Well prior to the pump test were still in the immediate area. Since the District had ceased extraction at all Y area municipal wells for two months prior to the pump test, the latter explanation seems more plausible. The PCE plumes that had been drawn to the Clement Well prior to the test had probably migrated about 60 to 120 feet with natural groundwater flow in the time before the pump test was initiated.

The reduced PCE concentrations at the first hour of the pump test were likely affected by dilution from the expanded capture zone. The only PCE site identified within the 520 foot capture zone for the Clement Well is the South Shore Motors at 400 feet. Low PCE concentrations (less than 5 µg/l) detected at the South Shore Motors are consistent with low PCE levels detected in the Clement Well.

PCE concentrations remained low (less than 3 µg/l) until the eighth hour into the test when a PCE concentration of 4.4 µg/l was detected and drawdown was calculated as extending to at least 1,450 feet from the Clement Well. According to Table 2, at this distance, the capture zone influenced the Napa Store, Facility, and Laundry sites.

By the fifteenth hour, PCE concentrations rose to 10 µg/l when the capture zone extended out to 1,600 feet. The increase in PCE concentration between the eighth and fifteenth hour likely represents the time lag for PCE at the Napa Store, the closer of the three sites, to migrate to the Clement Well. After the fifteenth hour, PCE concentrations increased to 81 µg/l in the Clement Well over the next 35 days, probably from the Laundry and the Facility. Overall, increasing PCE concentrations with time after the capture zone reached 1,450 feet likely represents the period it took to reverse the groundwater gradient toward the Clement well and draw in PCE plumes.

The last interpretation is that a time lag can be estimated for PCE near the capture zone boundary to reach the Clement Well following startup of pumping. Prior to the pump test, PCE was detected at 150 µg/l in the Clement Well in late 1997, before pumping ceased in Y area municipal wells. During the pump test, it took 35 days for PCE concentration to reach 81µg/l. At that rate, it should have taken about a month more for PCE concentrations to return to 150 µg/l. However, Julie and Tata #4 Wells were added into service with the Clement Well during that time and diluted the PCE concentrations that were detected from the combined influent. Had that not occurred, a two-month estimation for PCE to travel to the Clement Well from the drawdown boundary of 1,600 feet appears reasonable.

C. PCE Breakdown

Under anaerobic (no to low oxygen) conditions, PCE dissolved in water loses a chloride ion and breaks down into daughter products. The breakdown order is TCE, DCE, and vinyl chloride. DCE is typically in the form of cis-1,2, a stable compound, compared to trans-1,2 DCE, which is less stable.

The rate of PCE breakdown is often site specific depending on such factors as soil type, water table fluctuation, dissolved oxygen content in groundwater, and the presence or not of an impermeable cover on ground surface. It is generally assumed that sites in close proximity to each other would have the same subsurface conditions for PCE breakdown unless available information shows otherwise.

Research has shown that original PCE concentrations can be estimated at sites that have not undergone enhanced remediation. The starting PCE concentration at a location is additive of all constituent concentrations at one location. This calculation has a margin of error of ten percent for concentrations lost due to sampling or analytical errors. The results can be used to estimate whether free product may be present at a site.

Using the above approach, the results of water samples showing the highest solvent concentrations are added together for each of the three solvent sites. Table 3 shows the original PCE concentration calculated for each site, the original concentration after adding a ten percent margin of error, and whether the final concentration indicates free product based upon there being a concentration of one percent of the PCE solubility level of 1,500 µg/l. The table shows that free product is indicated at the Napa Store and the Facility but not at the Laundry site.

Table 3. Calculating Original PCE Concentrations (µg/l)

	PCE	TCE	DCE	Original PCE conc.	With 10% Margin of error	Indicates Free Product?
	Maximum Concentration					
Laundry	690	48	150	888	977	No
Napa Store	3,000	53	95	3,148	3,462	Yes
Facility	4,700	92	130	4,922	5,414	Yes

Additionally, research has shown that the relative age of a PCE release can be estimated by comparing the ratio of breakdown products with other sites. For instance, as PCE breaks down to TCE, the ratio of TCE divided by PCE is a decimal that approaches the number one. The smaller the decimal, 0.01 or less, the newer the release. The larger the decimal, 0.1 or more, the older the release.

Using this concept, the relative age of PCE releases can be compared at the Facility, Napa Store, and the Laundry. Table 4 shows the ratios calculated using groundwater results from past investigations. Only data showing a positive detection for PCE and breakdown products were included in the data set to calculate ratios; non-detect results were excluded. Data collected at off-site locations that could potentially be commingled with other plumes were also excluded from the calculations.

The table shows the maximum range for TCE and DCE and the average ratio of DCE for the Laundry is 0.1 or greater. This information suggests that the release is relatively old. In comparison, the maximum range and the average ratio of TCE and DCE for the Napa Store is 0.030 or greater, indicating the Napa Store release is younger than the Laundry

Table 4. Ratio of PCE Breakdown Products at Solvent Sites

	TCE	cis-1,2DCE	Average TCE DCE	Total No. of Water Samples Collected	Age of Release
Laundry	0.002 – 0.133	0.043 – 0.385	0.048 0.252	27	Oldest
Napa Store	0.010 – 0.10	0.018 – 0.10	0.030 0.047	36	Less than Laundry
Facility	0.013 – 0.068	0.011 – 0.057	0.027 0.031	6	Less than Napa

release. For the Facility, the maximum range and average ratio of TCE and DCE are less than those numbers for the Napa Store, implying the Facility's release was more recent. Lastly, both the average ratios for TCE and DCE are closer in value between the Facility and Napa Store than the Napa Store and the Laundry. This information suggests that the release at the Facility was closer in time to the release at the Napa Store than was the Napa Store release to the Laundry. The confidence level in these calculations is high for the Napa Store and the Laundry since each site contained a minimum of 27 water sample results. The confidence level of calculations for the Facility, however, is not as high since the results of only six water samples are available.

To summarize, calculations indicate that PCE free product is present at the Napa Store and the Facility but not at the Laundry site. Based upon TCE and DCE ratios calculated from PCE, the Laundry release is indicated as being the oldest of releases identified at the three sites. The Laundry release was followed by releases at the Napa Store and then the Facility. According to information provided to the Regional Board, the release at the Laundry ceased by 1979 when the self-service dry cleaning machine was removed. Thus, the Laundry release is at least 26 years old. The release at the Napa Store would then be less than 26 years old and the release at the Facility even younger still. It is noted that these results are based upon a limited data set available for the Facility. Additional sample results would improve the confidence level of the ratios calculated for the Facility.

D. Geology in the South Lake Tahoe Y Area

The Clement Well is screen from approximately 100 to 140 feet bgs in what was originally believed by District staff to be the most transmissive of three aquifers. However, extensive investigation in the Y area by other parties has provided a better understanding of subsurface conditions.

The geologic cross section in Figure 5 shows that the stratigraphy at the Clement Well is not continuous. Rather than an unconfined and two confined aquifers, the cross section shows one aquifer composed mostly of sand with discontinuous interbeds. The majority of the interbeds consist of silty sand and some clayey sand. Less common in the aquifer are silt and clay interbeds.

The cross section in Figure 6 shows the geology beneath the Laundry. The site is underlain by an extensive silty sand interbed that is separated by sand before another, but less extensive, silty sand interbed. Below the water table, generally at 20 feet bgs, is an extensive silty sand interbed at about 38 feet bgs. Below this layer are two more silty sand interbeds and then a thick clay layer at 80 feet. Because no free product is indicated at the Laundry, solvent compounds have been identified as residual contamination in the uppermost silty sand interbed immediately below ground surface. Further investigation should determine whether the second silty sand layer beneath the site has residual product as well.

While a geologic cross section is not available at the Facility, boring logs from the 2001 site investigation provide a good picture of subsurface conditions. The boring log for B-2 (Figure 7) at the Facility shows geologic conditions that are different than that at the Laundry site. The geology at B-2 shows sand from ground surface to 6 feet bgs. This is underlain by silty to clayey sand down to 46 feet bgs. From 46 to 51 feet, sand is identified. The water sample collected from boring B-2 contained the highest solvent concentrations at the site, with PCE detected at 4,700 µg/l. Yet, a soil sample collected at 20 feet bgs did not contain detectable concentrations of solvent compounds. Since the soil sample location was 14 feet below the top of the silty to clayey sand layer, sampling could have missed where solvent free product may have pooled on top before spreading laterally. A review of the two other boring logs (Figures 8 and 9) for the Facility shows that soil samples were collected in the sand below finer-grained layers in the vadose zone. Thus it is possible that soil samples at these locations having non-detectable concentrations of solvents also could have missed identifying where solvent free product may have spread laterally on top of overlying fine-grained layers. Additional investigations at the Facility would assist in determining whether this is the case or not.

VIII. Reconstruction of Well Extraction and Solvent Discharges

The location of the Clement Well, its pumping rate, and type and detected concentration of solvent compounds provide clues to the location and types of possible sources and timing of discharges.

A. Year 1989

It is likely that more than one PCE release existed in the Y area prior to the first time that the solvent compounds were analyzed for in municipal wells in 1989. Positive PCE detections indicated that PCE releases existed within the capture zones for the Julie Well, Clement Well, and Tata #4 Well.

Low concentrations of DCA (less than 2 µg/l) in the Clement Well in 1989 and 1990 indicate that the pumping influence likely encompassed the South Shore Motor contamination, 400 feet away. It is unlikely that solvent compounds detected at the South Shore Motors migrated there from off-site plumes. This is because the groundwater flow direction from South Shore Motors to the Clement Well would have been to the north, which would be cross gradient to groundwater flow at the Napa, Laundry, and the Facility. Therefore, solvent compounds detected in groundwater at the South Shore Motors probably represent a discharge that occurred on site. The property is likely a minor DCA source but not a major PCE source.

According to information available to the Regional Board, PCE discharges had probably occurred at the Laundry by 1979. It is unknown after that time whether PCE flowed with natural groundwater to the northeast or was captured by a municipal well. If the latter instance occurred, capture would most likely have been by the Tata #4 Well, which is located closer to the Laundry than are the Clement and Julie Lane Wells. If capture was not to the Tata #4 Well, then the dissolved plume from the Laundry would have migrated undetected to the northeast with natural groundwater.

Contrary to claims made by the Dischargers, there could not have been a solvent center-of-mass that migrated to the Facility from the Laundry since there did not appear to be free product at the Laundry. In addition, if PCE at the Laundry was being captured by the Tata #4 Well prior to late 1991, the direction would have been southwest instead of northeast towards the Facility. If, however, the Laundry was not within the Tata #4 capture zone, natural groundwater flow would still not have caused a solvent center-of-mass to migrate to the Facility from the Laundry since natural flow forces are not strong enough to overcome gravitational and soil tensional forces exerted on solvent. Instead, soil investigations suggest that residual contamination at the Laundry primarily exists within a silty sand la~~yer beneath the site. Therefore, data available for the Laundry does~~ not support the Discharger's theory of a migrating center-of-mass affecting the Facility.

The same logic applies as to whether the Napa Store could be a potential source for free product migrating to the Facility. Natural groundwater flow would not have been strong enough to overcome gravitational and soil-attraction forces at the Napa Store to move free product to the Facility.

Prior to late 1991 when the Clement Well capture zone did not reach the Napa Store, free product may have moved upon fine-grained layers that sloped or dipped towards the Facility. However, there is not sufficient information to know if laterally continuous fine-grained layers exist between the Napa Store and the Facility. Thus, it is unknown whether free product could have moved towards or away from the Facility on a fine-grained layer until further investigations are completed.

Based upon low to non-detectable PCE concentrations in the Clement Well between 1989 and late 1991, it is unlikely that PCE discharges at the Laundry and potentially at the Facility and Napa Store would have been affected by the Clement Well capture zone. Rather, with the Clement Well pumping at the rate of 70 gpm pumping rate, only PCE from South Shore Motors was likely reaching the well.

B. Late 1991
Groundwater conditions changed in the "Y" area starting in late 1991 with the startup of wellhead treatment at the Clement Well. Upon startup of expanded pumping at the Clement Well in December 1991, averaging up to 200 gpm, PCE concentrations detected from that well showed an immediate rise from those concentrations detected in the past. This information indicates that a PCE source or sources existed in the expanded Clement Well capture zone prior to expanded pumping.

The Laundry release had occurred prior to expanded pumping at the Clement Well in late 1991. The PCE plume from the Laundry would have been affected by the expanded Clement Well capture zone and pulled westward. Based upon breakdown product ratios, the next oldest release after the Laundry occurred at the Napa Store. Clement Well data indicates that the Napa release occurred prior to expanded pumping in late 1991. The time difference between the PCE release at the Laundry site and the Napa Store was likely no greater than 12 years. However, there exists insufficient data to determine an exact timing for the Napa Store release before late 1991.

Breakdown product ratios also imply that the PCE release at the Facility occurred after the release at the Napa Store. Since the ratios calculated at the Facility are closer to the ratios for the Napa Store, it can be surmised that the Facility release occurred significantly less than 12 years after the Napa release. DCE concentrations shown peaking in the Clement Well during October 1995 suggest that the Facility release had occurred before this time. If this were the case, the nine-month time lag for DCE migration to the Clement Well would place the Facility release at being no later than January 1995. It is possible that a release occurred at the Facility even prior to expanded pumping at the Clement Well, yet there is insufficient data to know whether this occurred.

Between late 1991 and early 1999, expanded pumping at the Clement Well may have affected free product at the Napa Store and the Facility. Pumping forces could have moved free product at the Napa Store westward, which is away from the Facility. Likewise, free product at the Facility could also have been pulled westward, possible affecting the Napa Store. Investigations at off-site properties would be necessary to determine whether this was the case or not.

C. Year 1999
Groundwater conditions changed again in 1999 following the shut down of "Y" area municipal wells due to MTBE contamination. Groundwater flow returned to the natural northeast direction. All plumes not affected by remediation wells on the east side of Lake Tahoe Boulevard at other sites were, therefore, acted on by natural groundwater flow. This includes the solvent plumes previously captured by the Clement Well.

From all indications, the release at the Facility had more likely occurred by this time than did not. This conclusion is based upon (1) the amount of TCE and DCE that were detected during the 2001 site investigation, (2) the breakdown product ratios indicating a release not too far in time from the Napa Sore release prior to late 1991, and (3) possibly, the DCE peak concentration in the Clement Well suggesting a release by January 1995. However, as with the Napa Store, there is insufficient data to provide an exact timing for the release or releases at the Facility.

When groundwater samples were collected at the Facility in October 2001, more than 600 days had passed following the shut down of municipal wells. Aquifer tests conducted in the "Y" area by dischargers at other sites in 1999 and later indicate that natural groundwater flows at a rate of about half a foot or more per day. Using this rate, solvent plumes previously pulled to the Clement Well would then have migrated at least 300 feet in the northeast direction by that time. New plumes formed at the Facility, Laundry, and Napa Store would also have migrated the same distance. High PCE concentrations detected in groundwater across Glorene Avenue from the Napa Store during the 2004 investigation could either be from that site or the Facility.

Groundwater sampling beneath Lake Tahoe Boulevard conducted for the Laundry reflect two solvent plumes migrating in the aquifer upgradient and cross gradient of the Facility. Investigation results between the Napa Store and the Laundry site do not support a migrating center-of-mass theory affecting the Facility. Rather, since the concentrations of solvent compounds detected on the Facility's upgradient boundaries are at only a fraction of the concentration of solvent compounds detected in the middle of the Facility, a source is indicated at the Facility.

Figure 10 is a conceptual model of the formation of a PCE commingled plume in the "Y" area from 1991 to 2004. The figure shows that ~~starting in 1999, when the Clement Well~~ ceased pumping, plumes from the Napa Store and the Laundry may have commingled with the plume beneath the Facility. The latter commingled plume migrates from the Facility to downgradient properties in the northeast direction. A portion of the Laundry and Facility plumes may have been captured by extraction wells for the Shell Station. In mid-2003, groundwater extraction at the Shell Station was scaled back as a result of decreasing MTBE levels in the aquifer. That action likely resulted in a loss of capture of a portion the plumes that were drawn to the Shell Station.

The status today is that municipal wells remain off in the "Y" area. The District has not stated a timetable for resuming operation of the wells. Thus, it is assumed that none of the solvent plumes emanating from the Napa Store, Laundry, and the Facility are being captured, except potentially by a few domestic wells located north of "Y" area.

IX. Discharge at the Facility

The exact time of solvent discharge at the Facility is unknown. The 2001 investigation results imply that PCE has been around long enough (greater than five years) to break down to TCE and DCE. This indicates that the release was not a recent one but rather one that had been present for more than just a few years.

Data does not support the Dischargers' theory of a migrating center-of-mass being the sole source of contamination beneath the Facility. The absence of free product at the

Laundry eliminates the possibility of a migrating center-of-mass from that site. In addition, the lack of free product beneath Lake Tahoe Boulevard refutes the Discharger's contention that the source migrated from the Laundry and settled under the road before the Facility. Without free product, the theory of the Laundry being a single point of release for PCE contamination in the Y area is unsupported. Since PCE concentrations increase appreciably as groundwater migrates beneath the Facility, it is apparent that a solvent source at the Facility is contributing to the pollution.

The above conclusion is based upon the assumption that solvent concentrations detected in groundwater at the Laundry reflect that of the original discharge. This theory is more reasonable than the Discharger's implication of a free product release. The Discharger's theory is unrealistic because many studies have shown that solvent free product does not naturally attenuate to levels less than one percent of the solubility level without active remediation. Since active remediation has not occurred at the Laundry, solvent concentrations in groundwater represent those close to that of the original discharge.

Furthermore, data does not support a migrating center-of-mass originating at the Napa Store. While free product is indicated by solvent concentrations at the Napa Store, there is insufficient information indicating lateral movement on a fine-grained layer or an external force from the northeast direction. Rather, there is just as much probability that free product from the Facility migrated towards the Napa Store during the time of expanded pumping at the Clement Well. Since there is insufficient data indicating that either the Laundry or the Napa Store are sources for a migrating center-of-mass, the groundwater pollution at the ~~Facility most likely originated~~ at the ~~Facility~~.

This leads to three possible scenarios for the timing of the discharge or discharges at the Facility. The first scenario is that the initial discharge occurred prior to 1991. In this scenario, the plume emanating from the site migrated undetected with natural groundwater flow in the northeast direction. After wellhead treatment began at the Clement Well in late 1991, the plume was pulled to the northwest to the Clement Well, along with the plumes originating from the Laundry and the Napa Store, if a release had occurred there by then. When all "Y" area municipal wells were shut down in 1999 due to MTBE contamination, the solvent plumes ceased being pulled to the Clement Well and were acted on by natural groundwater flow to the northeast. In addition, plumes continued to form from sources at the Facility, Laundry, and the Napa Store, flowing with natural groundwater in a northeast direction. Downgradient portions of the Laundry and Facility plumes may have been affected by off-site extraction being conducted at other sites.

The second scenario is that the discharge at the Facility originally began sometime after wellhead treatment was initiated at the Clement Well in late 1991. Groundwater contamination beneath the Facility would have been captured by the Clement Well. The release would not have occurred too much after this period since breakdown product ratios indicate a timing fairly close to the timing of the Napa Store release, which was prior to late 1991. Peaking DCE concentrations in the Clement Well suggest that a release occurred no later than January 1995. After the Clement Well ceased pumping in early 1999, the source beneath the Facility continued to form a plume that was acted on by natural groundwater flow to the northeast.

The third scenario is that the discharge at the Facility occurred after the Clement Well ceased pumping in early 1999. The site investigation conducted two-and-a-half years later discovered solvent compounds in groundwater beneath the Facility. This scenario seems unlikely based upon the presence and concentrations of TCE and DCE as PCE breakdown products. On average, TCE and DCE concentrations were detected at the Facility one-order of magnitude less than were PCE concentrations. According to research papers, PCE breakdown is often a slow process taking a number of years to occur and only then in a reduced environment. Since two-and-a-half years is a relatively short time for PCE breakdown to occur, the difference between PCE concentrations and TCE and DCE concentrations should be much greater. This is especially true at the water table, which is an aerobic environment that does not promote PCE breakdown.

Of the three discharge scenarios described above, the first and second scenarios seem most likely. The third scenario is the least likely scenario given the short time available for PCE breakdown.

X. Dischargers

Based upon data indicating that an on-site discharge of solvent waste is contributing to groundwater pollution at the Facility and off site, it is reasonable to list parties and entities as dischargers for purposes of cleaning up and abating the pollution. The property owner and operators of the Facility are considered dischargers during the time of the first indication of pollution for solvent compounds. In addition, the current property owner and lessee are considered responsible parties since they control site access.

The first indication of a PCE discharge at the Facility is not exactly known. A release may have originally occurred prior to start up of expanded pumping at the Clement Well in late 1991. Yet, there is no data to confirm this theory. Data, however, is available indicating that a solvent source existed after expanded pumping began in late 1991. According the DCE data, the release likely occurred no later than January 1995.

El Dorado County records reflect that David and Kathleen Barnett were the owners of the subject property from the 1970s to 1996. The property was then recorded under CAD Enterprises, LLC, which is managed by the Barnetts. Therefore, the Barnetts are considered dischargers since they were the property owner when the release probably occurred after late 1991. CAD Enterprises is also a responsible party since it is the current landowner and controls access to the site.

Documents submitted to the Regional Board reflect that Lightnin II, Incorporated became the operator in 1994 and has continuously been the operator to date. Based on the estimated release date being no later than January 1995, Lightnin II, Incorporated is considered a discharger for cleaning up and abating hazardous waste because its times of operating the Facility coincide with the period indicating discharge(s) at the Facility.

Lastly, the Dischargers had previously requested that Board staff name the operator of the Big "O" Tires Store prior to CAMCO, as a responsible party for discharges of waste. This request is not justified. The Regional Board has no information indicating that discharges occurred at the site prior to 1985, when CAMCO became the operator. Hence, there is no justification for the Regional Board to name the prior operator of the site as a responsible party in enforcement orders.

XI. Conclusion

Information provided to the Regional Board about off-site contamination being the source of pollution at the Facility is not supported by data. Investigation results at the Laundry do not indicate the presence of free-product that is necessary to support the Dischargers' migrating center-of-mass theory. Nor do the results support the single point of release theory put forth affecting other PCE-identified sites in the Y area. Rather, results at the Laundry point to shallow, residual contamination in soil that in turn created a shallow groundwater plume having concentrations much less than those detected in the middle of the Facility. Should the Laundry plume extend to the Facility, its affect on water quality there is secondary compared to contaminant concentration from the on-site source. Likewise for the plume migrating to the Facility from the Napa Store; its concentrations are secondary compared to concentrations detected at the Facility.

Since the Facility is the primary source of solvent waste detected in soil and groundwater, an enforcement action is justified ~~requiring the dischargers to clean up and abate the~~ affects of the discharge to protect beneficial uses. The entities Lightnin II, Incorporated and David and Kathleen Barnett are appropriately named as dischargers in CAO R6T-2003-031. These entities were either operating the Facility or owned the property in January 1995 when a solvent discharge was indicated at the site. CAD Enterprises is also appropriately named as a responsible party in CAO R6T-2003-031 since it is the current property owner controlling access to the site.

XII. Recommendation for Additional Enforcement Action

The October 2001 site investigation at the Facility was a limited characterization that did not define the extent of groundwater pollution. Nor did the investigation locate the source of solvent discharge. Previous soil samples collected below fine-grained layers may have missed horizontal movement of solvent free product above. Therefore, further investigation is required to locate solvent waste and define the extent of groundwater pollution.

The four corrective actions listed in CAO R6T-2003-031 still need to be completed. An amended Order containing a revised compliance schedule is necessary for implementing these corrective actions. In addition, interim corrective measures are needed in an amended Order, to abate pollution affecting beneficial uses.

References

2005, PES Environmental, Additional Site Investigation Results, Lake Tahoe Laundry Works

2004, PES Environmental, Supplemental Site Investigation Results, Lake Tahoe Laundry Works

2004, Secor, Soil and Groundwater Investigation Results, Lakeside Automotive Napa Store

2004, Sierra-Pacific Group, Review and Interpretation of Hydrogeologic Data, Big O Tire Facility

2003, PES Environmental, Groundwater Investigation Results, Lake Tahoe Laundry Works

2002, Secor, Groundwater Characterization Report, Lakeside Automotive Napa Store

2001, Battelle Press, Anaerobic Degradation of Chlorinated Solvents

2001, Harding ESE, Groundwater Investigation, Big O Tire Center

1999, Batelle Press, Engineered Approaches for In Situ Bioremediation of Chlorinated Solvent Contamination

1998, South Tahoe Public Utility District, Clement Well Pump Test

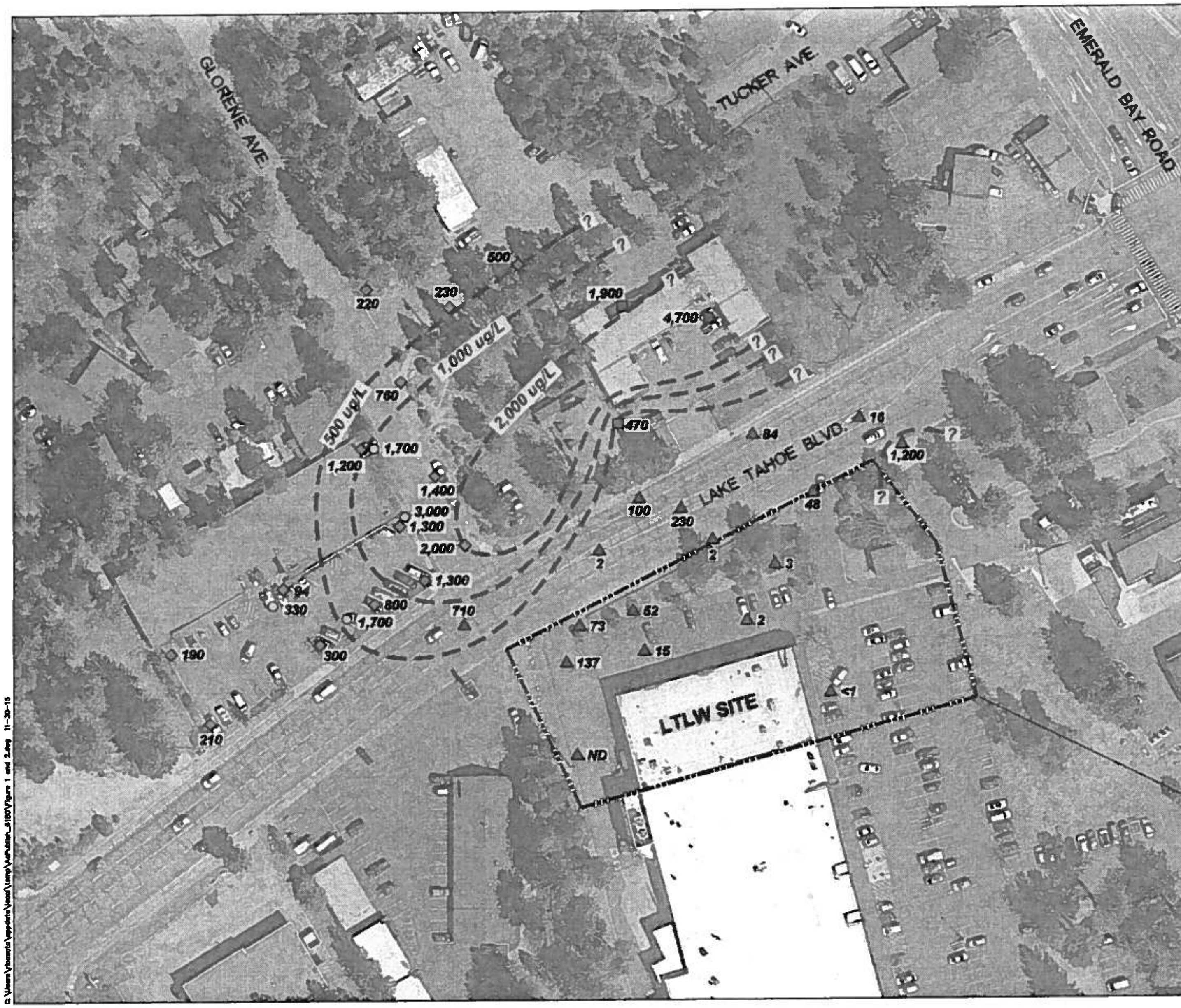
1998, Batelle Press, Nonaqueous-Phased Liquids, Remediation of Chlorinated and Recalcitrant Compounds

Figures: Figure 1-Map of South "Y" area of South Lake Tahoe
Figure 2-PCE Map of Big O Tires Store and nearby properties
Figure 3-Capture Map for Clement Well
Figure 4-~~Shallow Zone Potentiometric Map for "Y" area, 2002~~
Figure 5-Geologic Cross Section Southeast of the Clement Well
Figure 6-Geologic Cross Section Northeast of the Julie Well
Figure 7-Boring Log for B-2, Big O Tires Store
Figure 7-Boring Log for B-1, Big O Tires Store
Figure 7-Boring Log for B-3 Big O Tires Store
Figure 10-Conceptual PCE Plume Map, 1991-2004

Attachments: 1.Table of Influent VOC Concentrations at the Clement Well
2. Table of Influent VOC Concentrations at the Julie Well
3. Table of Influent VOC Concentrations at the Tata #4 Well

FIGURE 1

Middle-Zone Groundwater PCE Concentrations (2001-2008)
prepared by Erler & Kalinowski, Inc.



N

0 80 160

(Approximate Scale in Feet)

Legend:

- Big O Tire Investigation (October 2001) (47 ft - 51 ft bgs)
- Lakeside Auto Investigation (January 2002) (48 ft bgs)
- Lakeside Auto Investigation (November 2003) (44 ft - 46 ft bgs)
- LTLW Investigation (October 2003) (44 ft - 47 ft bgs); (September 2004) (44 ft - 51 ft bgs); (August 2008) (32 ft - 57 ft bgs)
- Generalized PCE Concentration Contour Lines (not all PCE data used to generate contour lines)

Abbreviations:

ft bgs = feet below ground surface
ug/L = micrograms per liter
ND = not detected
PCE = tetrachloroethene

Notes:

1. All locations are approximate.
2. Basemap source: Google Earth Pro, date of imagery 16 April 2015.

Erler & Kalinowski, Inc.

MIDDLE-ZONE GROUNDWATER PCE CONCENTRATIONS (ug/L) (2001 - 2008)

Figure 1

EXHIBIT WW

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

AMENDED CLEANUP AND ABATEMENT ORDER NO. R6T-2003-031A1

WDID NO. 6A090307N01

**REQUIRING
CAD ENTERPRISES LLC,
DAVID AND KATHLEEN BARNETT,
LIGHTNIN II INCORPORATED, CAMCO,
AND BOT 65 INCORPORATED
TO INVESTIGATE FOR FUTURE CLEANUP AND ABATEMENT OF
THE EFFECTS OF THE DISCHARGE OF
CHLORINTAED HYDROCARBON PRODUCTS TO THE
GROUND WATERS OF THE
LAKE TAHOE HYDROLOGIC UNIT AT
BIG O TIRES STORE LOCATED AT
1961 LAKE TAHOE BOULEVARD IN SOUTH LAKE TAHOE**

El Dorado County

The California Regional Water Quality Control Board, Lahontan Region (Water Board), finds:

1. The Water Board Executive Officer issued Cleanup and Abatement Order (CAO) No. R6T-2003-031 on August 8, 2003. The Order requires CAD Enterprises, David and Kathleen Barnett, CAMCO, BOT 65 Incorporated and Lightnin II Incorporated (hereinafter referred to collectively as the Dischargers) to clean up and abate the discharge and threatened discharge of chlorinated hydrocarbon products to the ground waters of the Lake Tahoe Hydrologic Unit at the Big O Tires Store Lake Tahoe (hereinafter referred to as the Facility). The Facility is located at 1961 Lake Tahoe Boulevard in South Lake Tahoe. The Order required the Dischargers to: 1) submit a workplan for investigating the extent of contamination in soil and groundwater; 2) implement the site investigation; 3) submit a technical report that describes the results of the site investigation; and 4) submit a corrective action plan to abate impacts to soil and groundwater. Contamination from the site threatens multiple municipal and domestic drinking water wells in the area.

2. On September 25, 2003, the Dischargers submitted a workplan for conducting a soil and groundwater investigation, in accordance with the first requirement in CAO R6T-2003-031. In a November 25, 2003 response, Board staff stated that the workplan was deemed incomplete because it did not propose sufficient sampling points to fully characterize contamination in either soil or groundwater. In the letter the Dischargers were directed to submit a revised workplan within 21 days that would meet the requirements of the Order.

3. On January 15, 2004, the Regional Board received a document entitled, "Review and Interpretation of Hydrologic Data, Big O Tire Facility." The document, prepared by the Sierra-Pacific Group on behalf of the Dischargers, presented the theory that a solvent center-of-mass, mostly consisting of tetrachloroethene (PCE), migrated in groundwater to the Facility from a laundromat business located across the street at 1024 Lake Tahoe Boulevard. The business, now called the Lake Tahoe Laundry Works (Laundry), at one time contained a

self-service dry cleaning machine for public use. Based upon this theory of an off-site source, the Dischargers did not propose a revised workplan for implementing a site investigation.

4. On March 1, 2004, the Regional Board Executive Officer issued a letter to the Dischargers agreeing to hold in abeyance the requirement for the revised workplan for a site investigation. The letter stated that the action is being taken until Board staff could research the validity of the migrating center-of-mass theory and review the results of other PCE investigations being conducted in the area. Following receipt of this information, a decision would be made regarding further compliance with CAO R6T-2003-031.

5. Multiple site investigations have been completed on parcels near to the Facility since 2003. Investigation information indicates that PCE plumes from the Laundry and another nearby PCE source exist at different depths in groundwater beneath Lake Tahoe Boulevard before reaching the Facility. Yet, no solvent free product was detected at the Laundry, indicating the site is not a center-of-mass source as suggested by the Dischargers. Because PCE concentrations at the Facility, 4,700 micrograms per liter, are the highest detected in groundwater in the vicinity of the site, data suggest the Facility is a pollution source adversely affecting water quality.

6. On August 23, 2005, a draft amended cleanup and abatement order was mailed to the responsible parties listed in this order and to other interested parties for comments. The draft Order listed the Barnetts, CAD Enterprises, and Lightnin II, Inc., as dischargers. CAMCO and BOT 65, Inc., were not included in that draft as responsible parties because municipal well data indicated a potential discharge had occurred no later than January 1995, which was after their times of operation at the Facility. Relevant comments that were received were incorporated into this amended Order.

7. The Dischargers' theory that the Facility is not a source of solvent pollution needs further investigation. Sampling is required at all potential release sources and waste disposal areas to evaluate whether solvent compounds were discharged on site.

8. Based upon past data indicating that a solvent source is contributing to groundwater pollution at the Facility, all operators of the Facility back to the first indication of pollution are listed as dischargers. Lightnin II, Inc., has been the operator at the Facility since 1994 and is thus listed in this Order as a discharger. This Order also lists CAMCO and Bot 65, Inc. as they were the operators of the site when PCE was detected in the Clement municipal well in 1991 and before then when PCE was a commonly used parts degreaser and brake cleaner. Since data indicates that the release occurred no later than January 1995, both operators are named as dischargers in this Order since the change in operation occurred sometime in 1994. In addition, this Order lists Kathleen and David Barnett and CAD Enterprises as dischargers since they were or are the property owners of the Facility since the time when solvent compounds were detected in municipal wells beginning in 1991.

9. The October 2001 site investigation at the Facility was a limited characterization that did not define or determine a pollution source or sources. Therefore, further investigation is needed to attempt to locate the source area(s). The investigation must be comprehensive, evaluating <u>all</u> on-site potential release areas and waste disposal areas.

10. An El Dorado County Department of Environmental Health report documenting an inspection of the Facility on April 6, 2005, identified a receipt for contaminated soil taken to a transfer disposal facility. Neither the Water Board nor El Dorado County has information showing the release was reported to either agency. The Dischargers must provide all details of the release and the nature of the contaminated soil removed from the site as it may be contributing to the groundwater pollution at the Facility.

11. Site investigations listed in CAO R6T-2003-031 still need to be completed. This amended Order contains a revised compliance schedule for implementing an on-site source area investigation: 1) submit a workplan for conducting a site investigation to evaluate potential pollution releases, 2) implement a soil and groundwater investigation, and 3) submit a technical report describing the results of the site investigation and whether the site is a likely source of pollution to groundwater. Based on discussions with the dischargers, the workplan (task 1) is nearly complete; therefore, this Order provides only a very short period for submittal of this workplan.

12. This enforcement action is being taken by this regulatory agency to enforce the provisions of the California Water Code and as such is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000 et. seq.) in accordance with Section 15321, Chapter 3, Title 14, of the California Code of Regulation.

THEREFORE, IT IS HEREBY ORDERED that pursuant to Water Code sections 13267 and 13304, CAD Enterprises, David and Kathleen Barnett, Lightnin II, Inc., CAMCO, and BOT 65, Inc. (collectively referred to hereafter as the "Dischargers"), shall investigate potential pollution sources at the Facility to assist in future cleanup and abatement of chlorinated hydrocarbons and other potential contaminants to waters of the State. The Dischargers shall comply with the provisions of this order:

1. Conduct all investigation and cleanup tasks by or under the direction of a California registered geologist or civil engineer experienced in the area of groundwater pollution cleanup. All technical documents submitted to the Water Board shall contain the signature and stamp of the registered individual overseeing investigation and corrective actions.

2. Do not cause or permit any additional waste to be discharged or deposited where it is, or probably will be, discharged into waters of the State.

3. **Site Investigation.**

   3.1. __By March 15, 2006,__ submit a revised workplan to the Water Board that proposes a comprehensive investigation to identify potential solvent releases and waste disposal areas. The revised workplan must address all comments in Water Board staff's November 25, 2003 letter. The workplan must include a map showing all potential source areas, such as floor drains, sewer lines, parts cleaning sinks, chemical storage areas, sumps, dry wells, outdoor work areas, and discharge locations from wash-down and waste disposal activities. The workplan must include a survey designed to identify the location of sewer collection lines on the property and their connections to the municipal sewer. The workplan must also propose to collect samples to define water quality beneath the site. The investigation must be designed in a manner that does not promote the vertical migration of contaminants to lower portions of the aquifer. A comprehensive sampling program must be proposed in the back area, between the building and Tucker Avenue, to identify potential waste disposal areas.

3.2. **By March 30, 2006,** begin implementation of the revised workplan to determine the location of potential discharges at the Facility and to characterize contamination in soil and groundwater. Begin implementation means: obtained all required permits; contracted with all contractor(s) necessary to complete the work; and, completed all necessary preparations for implementing the required work.

3.3. **By May 26, 2006,** submit a technical report to the Water Board that describes the soil and groundwater investigation conducted at the site in accordance with the accepted workplan. All maps shall be drawn to scale. At a minimum, the report must:

3.3.1. Provide a narrative description of work performed and information obtained.
3.3.2. Include boring logs, monitoring well designs for all constructed wells, and all analytical data obtained.
3.3.3. Include site maps showing the location of all borings and sampling points, and potential release sources, such as part cleaning sinks, floor drains, sumps, dry wells, utility lines, outdoor work areas, and runoff collection points.
3.3.4. Describe the geology beneath the Facility.
3.3.5. List the depth of first-encountered groundwater at all points sampled. State whether perched zones were encountered and the basis for this finding. Describe whether the contaminants are following in preferential pathways and the basis for that conclusion.
3.3.6. Provide a conclusion regarding the source for waste at the Facility and affects upon water quality.

4. Report on Contaminated soil Removed From the Site

By **April 15, 2006**, submit a technical report to the Water Board that, at a minimum, addresses the following:

4.1. The amount and nature (quality) of the contaminated soil removed from the Facility as identified in the receipt described in Finding No.10 of this Order.
4.2. Describe the incident that resulted in the contaminated soil that was removed from the facility and/or the action that caused the owner or operator of the Facility to characterize and/or contract for the removal of this contaminated soil.
4.3. Identify the person or persons who initiated the removal of this contaminated soil.
4.4. Identify on a map of the Facility the location where the soil was removed along with an indication of the depth of the excavation.
4.5. Describe and include any data that was collected prior to and during the removal of this contaminated soil that defined the basis for the lateral and vertical extent of the soil removal action.

4.6. Include a copy of the receipt for the contaminated soil disposal and identify the transfer station where this contaminated soil was taken.
4.7. Describe any other contaminated soil removal activities at the Facility.

It is expected that sections 4.1 through 4.6 of this report will be prepared and submitted by Lightnin II, Inc and/or CAD Enterprises as these dischargers were the operator and owner of the Facility, respectively, since 1994, which includes the eleven-year period prior to the inspection noted in Finding No. 10 of this Order. A response to section 4.7 must be submitted by all dischargers, either as individual reports or as part of a jointly prepared report that addresses all periods when the dischargers either owned or operated the Facility.

Failure to comply with the terms or conditions of this Order will result in additional enforcement action that may include the imposition of administrative civil liability pursuant to sections 13268 and 13350 of the Water Code, or referral to the Attorney General of the State of California for such legal action as he may deem appropriate.

Ordered by: Harold J. Singer Dated: March 7, 2006
HAROLD J. SINGER
EXECUTIVE OFFICER

California Environmental Protection Agency – Regional Water Quality Control Board, Lahontan Region

Fact Sheet – Requirements for Submitting Technical Reports Under Section 13267 of the California Water Code

June 3, 2005

What does it mean when the regional water board requires a technical report?

Section 13267[1] of the California Water Code provides that "...the regional board may require that any person who has discharged, discharges, or who is suspected of having discharged... waste that could affect the quality of waters...shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires".

This requirement for a technical report seems to mean that I am guilty of something, or at least responsible for cleaning something up. What if that is not so?

Providing the required information in a technical report is not an admission of guilt or responsibility. However, the information provided can be used by the regional water board to clarify whether a given party has responsibility.

Are there limits to what the regional water board can ask for?

Yes. The information required must relate to an actual or suspected discharge of waste, and the burden of compliance must bear a reasonable relationship to the need for the report and the benefits obtained. The regional water board is required to explain the reasons for its request.

What if I can provide the information, but not by the date specified?

A time extension can be given for good cause. Your request should be submitted in writing, giving reasons. A request for a time extension should be made as soon as it is apparent that additional time will be needed and preferably before the due date for the information.

Are there penalties if I don't comply?

Depending on the situation, the regional water board can impose a fine of up to $1,000 per day, and a court can impose fines of up to $25,000 per day as well as criminal penalties. A person who submits false information is guilty of a misdemeanor and may be fined as well.

[1] All code sections referenced herein can be found by going to www.leginfo.ca.gov . Copies of the regulations cited are available from the Regional Board upon request.

What if I disagree with the 13267 requirement and the regional water board staff will not change the requirement and/or date to comply?

You have two options. First, if you want to preserve your right of appeal you must file a petition with the State Water Resources Control Board within 30 days of the requirement to submit the report (See http://www.waterboards.ca.gov/wqpetitions/index.html and 23CCR §2050 et seq for details on what is needed in a petition.) Second, you may request that the regional water board reconsider the requirement. You may pursue this second course of action whether or not you file a petition with the State Water Resources Control Board.

Claim of Copyright or other Protection

Any and all reports and other documents submitted to the Regional Board pursuant to this request will need to be copied for some or all of the following reasons: 1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, 2) any further proceedings of the Regional Board and the State Water Resources Control Board, 3) any court proceeding that may involve the document, and 4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the discharger or its contractor claims any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying stated above will render the document unusable for the Regional Board's purposes, and will result in the document being returned to the discharger as if the task had not been completed.

If I have more questions, who do I ask?

Requirements for technical reports normally indicate the name, telephone number, and email address of the regional water board staff person involved at the end of the letter.

EXHIBIT XX

The EDR Radius Map
with GeoCheck®

South Y Center
1022-1074 Emerald Bay Road
South Lake Tahoe, CA 96150

Inquiry Number: 1977841.2s

July 13, 2007

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

FORM-STD-BRU

TABLE OF CONTENTS

SECTION **PAGE**

GEOCHECK ADDENDUM

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1022-1074 EMERALD BAY ROAD
SOUTH LAKE TAHOE, CA 96150

COORDINATES

Latitude (North):	38.912600 - 38˚ 54' 45.4''
Longitude (West):	120.005600 - 120˚ 0' 20.2''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	759640.9
UTM Y (Meters):	4311134.0
Elevation:	6272 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	38120-H1 EMERALD BAY, CA
Most Recent Revision:	1994
East Map:	38119-H8 SOUTH LAKE TAHOE, CA
Most Recent Revision:	1994

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 6 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
SOUTH Y CENTER (OR MEANS PROPERTY 1056 EMERALD BAY RD SLT, CA	LUST Cortese	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL_ National Priority List

EXECUTIVE SUMMARY

Proposed NPL	Proposed National Priority List Sites
Delisted NPL	National Priority List Deletions
NPL LIENS	Federal Superfund Liens
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
CORRACTS	Corrective Action Report
RCRA-TSDF	Resource Conservation and Recovery Act Information
RCRA-LQG	Resource Conservation and Recovery Act Information
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
US BROWNFIELDS	A Listing of Brownfields Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
SSTS	Section 7 Tracking Systems
LIENS 2	CERCLA Lien Information
RADINFO	Radiation Information Database
US CDL	Clandestine Drug Labs
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
ICIS	Integrated Compliance Information System
LUCIS	Land Use Control Information System
DOT OPS	Incident and Accident Data
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

HIST Cal-Sites	Historical Calsites Database
CA BOND EXP. PLAN	Bond Expenditure Plan
SCH	School Property Evaluation Program
Toxic Pits	Toxic Pits Cleanup Act Sites
SWF/LF	Solid Waste Information System
CA WDS	Waste Discharge System
SWRCY	Recycler Database
AST	Aboveground Petroleum Storage Tank Facilities
LIENS	Environmental Liens Listing
CHMIRS	California Hazardous Material Incident Report System
DEED	Deed Restriction Listing
VCP	Voluntary Cleanup Program Properties
CLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
CDL	Clandestine Drug Labs
RESPONSE	State Response Sites
HAZNET	Facility and Manifest Data

EXECUTIVE SUMMARY

EMI - Emissions Inventory Data
ENVIROSTOR - EnviroStor Database

TRIBAL RECORDS

INDIAN RESERV - Indian Reservations
INDIAN LUST - Leaking Underground Storage Tanks on Indian Land
INDIAN UST - Underground Storage Tanks on Indian Land

EDR PROPRIETARY RECORDS

Manufactured Gas Plants - EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 02/27/2007 has revealed that there is 1 CERCLIS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
LAKE TAHOE BASIN	***870 EMERALD BAY RD***	***1/4 - 1/2 NNW***	***42***	***52***

RCRAInfo: RCRAInfo is EPA’s comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS). The database includes selective information on sites which generate, transport, store , treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over

1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-SQG list, as provided by EDR, and dated 06/13/2006 has revealed that there are 3 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
RALEYS DRUG CTR 167	***1045 EMERALD BAY RD***	***0 - 1/8 ESE***	***E14***	***19***
PACIFIC BELL	***1900 LAKE TAHOE BLVD***	***1/8 - 1/4 WSW***	***23***	***26***

Lower Elevation	Address	Dist / Dir	Map ID	Page
PACIFIC BELL	***DUNLAP AND ELOISE***	***1/8 - 1/4 N***	***32***	***39***

STATE AND LOCAL RECORDS

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there are 2 WMUDS/SWAT sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
SOUTH TAHOE REFUSE MRF	2140 RUTH AVE	1/4 - 1/2 NNE	Q51	60
SO TAHOE REFUSE CO	***2140 RUTH AVE***	***1/4 - 1/2 NNE***	***Q52***	***61***

CORTESE: This database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration. The source is the California Environmental Protection Agency/Office of Emergency Information.

A review of the Cortese list, as provided by EDR, and dated 04/01/2001 has revealed that there are 10 Cortese sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
NATIONAL CAR RENTAL	***1101 EMERALD BAY ROAD***	***1/8 - 1/4 SE***	***I25***	***28***
U-HAUL CENTER OF SOUTH LAKE TA	***1105 EMERALD BAY RD***	***1/8 - 1/4 SE***	***I28***	***31***
USA GAS #7 (OASIS SERVICE	1140 EMERALD BAY	1/4 - 1/2 SE	M40	51

Lower Elevation	Address	Dist / Dir	Map ID	Page
SOUTH Y SHELL	***1020 EMERALD BAY ROAD***	***0 - 1/8 E***	***C7***	***10***
SOUTH TAHOE SHELL	***1020 EMERALD BAY RD***	***0 - 1/8 E***	***C10***	***12***
RUNNELS AUTOMOTIVE	***986 EMERALD BAY RD***	***0 - 1/8 NNE***	***13***	***15***
FIVE STAR TEXACO	2037 LAKE TAHOE	1/8 - 1/4 NE	F16	21
BEACON SWISS MART	***913 EMERALD BAY RD***	***1/8 - 1/4 NNW***	***J33***	***40***
REDWOOD OIL CO.	***2060 ELOISE***	***1/4 - 1/2 NNE***	***L36***	***46***
MEYERS MARINE	***2140 DUNLAP DRIVE***	***1/4 - 1/2 NNE***	***48***	***57***

EXECUTIVE SUMMARY

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 04/10/2007 has revealed that there are 19 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
KMART #9153	***1056 EMERALD BAY RD***	***1/8 - 1/4 ESE***	***E15***	***20***
Facility Status: Case Closed				
FORMER CHEVRON 9-0672	1069 EMERALD BAY ROAD	1/8 - 1/4 SE	H21	23
Facility Status: Case Closed				
NATIONAL CAR RENTAL	***1101 EMERALD BAY ROAD***	***1/8 - 1/4 SE***	***I25***	***28***
Facility Status: Case Closed				
U-HAUL CENTER OF SOUTH LAKE TA	***1105 EMERALD BAY RD***	***1/8 - 1/4 SE***	***I28***	***31***
Facility Status: Case Closed				
U.S.A. STATION NO. 7	***1140 EMERALD BAY RD***	***1/4 - 1/2 SE***	***M39***	***48***
Facility Status: Remedial action (cleanup) Underway				
1X BARTON MEMORIAL HOSPITAL	***2170 SOUTH AVENUE***	***1/4 - 1/2 E***	***P49***	***58***
Facility Status: Case Closed				
BARTON HOSPITAL	2170 SOUTH AVENUE	1/4 - 1/2 E	P50	60

Lower Elevation	Address	Dist / Dir	Map ID	Page
SHELL STATION	1020 EMERALD BAY ROAD	0 - 1/8 E	C6	10
SOUTH Y SHELL	***1020 EMERALD BAY ROAD***	***0 - 1/8 E***	***C7***	***10***
Facility Status: Case Closed				
SOUTH Y SHELL	1020 EMERALD BAY ROAD	0 - 1/8 E	C8	11
RUNNELS AUTOMOTIVE	***986 EMERALD BAY RD***	***0 - 1/8 NNE***	***13***	***15***
Facility Status: Case Closed				
FORMER FIVE STAR TEXACO	2037 LAKE TAHOE BLVD	1/8 - 1/4 NE	F17	21
BEACON SWISS MART	***913 EMERALD BAY RD***	***1/8 - 1/4 NNW***	***J33***	***40***
Facility Status: Case Closed				
Facility Status: Post remedial action monitoring				
SWISS MART - BEACON	***913 EMERALD BAY RD***	***1/8 - 1/4 NNW***	***J34***	***44***
REDWOOD OIL CO.	***2060 ELOISE***	***1/4 - 1/2 NNE***	***L36***	***46***
Facility Status: Remedial action (cleanup) Underway				
REDWOOD OIL COMPANY	2060 ELOISE	1/4 - 1/2 NNE	L37	48
HATCH ELECTRIC	921 ELOISE AVE	1/4 - 1/2 N	41	51
Facility Status: Case Closed				
BERRY HINKLEY INDUSTRIES	2070 JAMES	1/4 - 1/2 NE	N43	54
MEYERS MARINE	***2140 DUNLAP DRIVE***	***1/4 - 1/2 NNE***	***48***	***57***
Facility Status: Case Closed				

CA FID: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 9 CA FID UST sites within approximately 0.25 miles of the target property.

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
SOUTH LAKE TAHOE	***1920 LAKE TAHOE BLVD***	***1/8 - 1/4 WSW***	***G18***	***22***
T-SHIRT OUTLET	***1101 EMERALD BAY RD***	***1/8 - 1/4 SE***	***I24***	***26***
U-HAUL CENTER OF SOUTH LAKE TA	***1105 EMERALD BAY RD***	***1/8 - 1/4 SE***	***I28***	***31***
SOUTH SHORE MOTORS	***1875 LAKE TAHOE BLVD***	***1/8 - 1/4 WSW***	***31***	***36***

Lower Elevation	Address	Dist / Dir	Map ID	Page
SOUTH "Y" EXXON	***1000 EMERALD BAY RD***	***0 - 1/8 NE***	***B5***	***8***
RUNNELS AUTOMOTIVE	***986 EMERALD BAY RD***	***0 - 1/8 NNE***	***13***	***15***
CP NATURAL GAS	***2071 DUNLAP***	***1/8 - 1/4 NNE***	***K29***	***35***
BEACON SWISS MART	***913 EMERALD BAY RD***	***1/8 - 1/4 NNW***	***J33***	***40***
PACIFIC BELL	***2090 DUNLAP ROAD***	***1/8 - 1/4 NNE***	***K35***	***45***

CA SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 04/10/2007 has revealed that there are 11 SLIC sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
LAKESIDE NAPA STORE	1935 LAKE TAHOE BLVD.	0 - 1/8 WSW	D11	15
LAKESIDE NAPA AUTOMOTIVE STORE	1935 LAKE TAHOE BOULEVA	0 - 1/8 WSW	D12	15
Facility Status: Case Open				
TAHOE VERDE MOBILE HOME PARK	1080 JULIE LANE	1/4 - 1/2 SSW	O46	56
NEWPORT PACIFIC TAHOE VERDE LP	***1080 JULIE LANE***	***1/4 - 1/2 SSW***	***O47***	***56***
Facility Status: Case Closed				

Lower Elevation	Address	Dist / Dir	Map ID	Page
BIG O TIRE STORE	1961 LAKE TAHOE BLVD.	0 - 1/8 WNW	A2	6
BIG O TIRES	1961 LAKE TAHOE BOULEVA	0 - 1/8 WNW	A3	6
HURZEL PROPERTIES LLC	949 EMERALD BAY ROAD	1/8 - 1/4 N	20	23
TCI BUILDING	924 EMERALD BAY ROAD	1/8 - 1/4 NNW	J26	31
TCI BUILDING	924 EMERALD BAY ROAD	1/8 - 1/4 NNW	J27	31
Facility Status: Inactive Due to Bad Debt				
BI STATE PETROLEUM	***2070 JAMES AVE***	***1/4 - 1/2 NE***	***N44***	***55***
Facility Status: Verification Monitoring Underway				
BERRY-HINCKLEY - SLT	2070 JAMES AVENUE	1/4 - 1/2 NE	N45	56

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board’s Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 04/10/2007 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
SWISS MART - BEACON	***913 EMERALD BAY RD***	***1/8 - 1/4 NNW***	***J34***	***44***

EXECUTIVE SUMMARY

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 6 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
SOUTH LAKE TAHOE	1920 LAKE TAHOE BLVD	1/8 - 1/4 WSW	G19	22
NATIONAL CAR RENTAL	***1101 EMERALD BAY ROAD***	***1/8 - 1/4 SE***	***I25***	***28***
U-HAUL CENTER OF SOUTH LAKE TA	***1105 EMERALD BAY RD***	***1/8 - 1/4 SE***	***I28***	***31***
SOUTH SHORE MOTORS	***1875 LAKE TAHOE BLVD***	***1/8 - 1/4 WSW***	***31***	***36***

Lower Elevation	Address	Dist / Dir	Map ID	Page
SOUTH "Y" EXXON	1000 EMERALD BAY RD	0 - 1/8 NE	B4	6
CP NATURAL GAS	2071 DUNLAP DR	1/8 - 1/4 NNE	K30	36

SWEEPS: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1980's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 12 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
SOUTH LAKE TAHOE	***1920 LAKE TAHOE BLVD***	***1/8 - 1/4 WSW***	***G18***	***22***
CHEVRON #90672	1069 EMERAL BAY RD	1/8 - 1/4 SE	H22	24
T-SHIRT OUTLET	***1101 EMERALD BAY RD***	***1/8 - 1/4 SE***	***I24***	***26***
U-HAUL CENTER OF SOUTH LAKE TA	***1105 EMERALD BAY RD***	***1/8 - 1/4 SE***	***I28***	***31***
SOUTH SHORE MOTORS	***1875 LAKE TAHOE BLVD***	***1/8 - 1/4 WSW***	***31***	***36***

Lower Elevation	Address	Dist / Dir	Map ID	Page
SOUTH "Y" EXXON	***1000 EMERALD BAY RD***	***0 - 1/8 NE***	***B5***	***8***
SHELL OIL COMPANY	1020 EMERALD BAY RD	0 - 1/8 E	C9	11
SOUTH TAHOE SHELL	***1020 EMERALD BAY RD***	***0 - 1/8 E***	***C10***	***12***
RUNNELS AUTOMOTIVE	***986 EMERALD BAY RD***	***0 - 1/8 NNE***	***13***	***15***
CP NATURAL GAS	***2071 DUNLAP***	***1/8 - 1/4 NNE***	***K29***	***35***
BEACON SWISS MART	***913 EMERALD BAY RD***	***1/8 - 1/4 NNW***	***J33***	***40***
PACIFIC BELL	***2090 DUNLAP ROAD***	***1/8 - 1/4 NNE***	***K35***	***45***

NOTIFY 65: Notify 65 records contain facility notifications about any release that could impact drinking water and thereby expose the public to a potential health risk. The data come from the State Water Resources Control Board's Proposition 65 database.

A review of the Notify 65 list, as provided by EDR, and dated 10/21/1993 has revealed that there are 2 Notify 65 sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
LITTLE TRUCKEE MHP	***2333 ELOISE***	***1/2 - 1 NE***	***53***	***67***

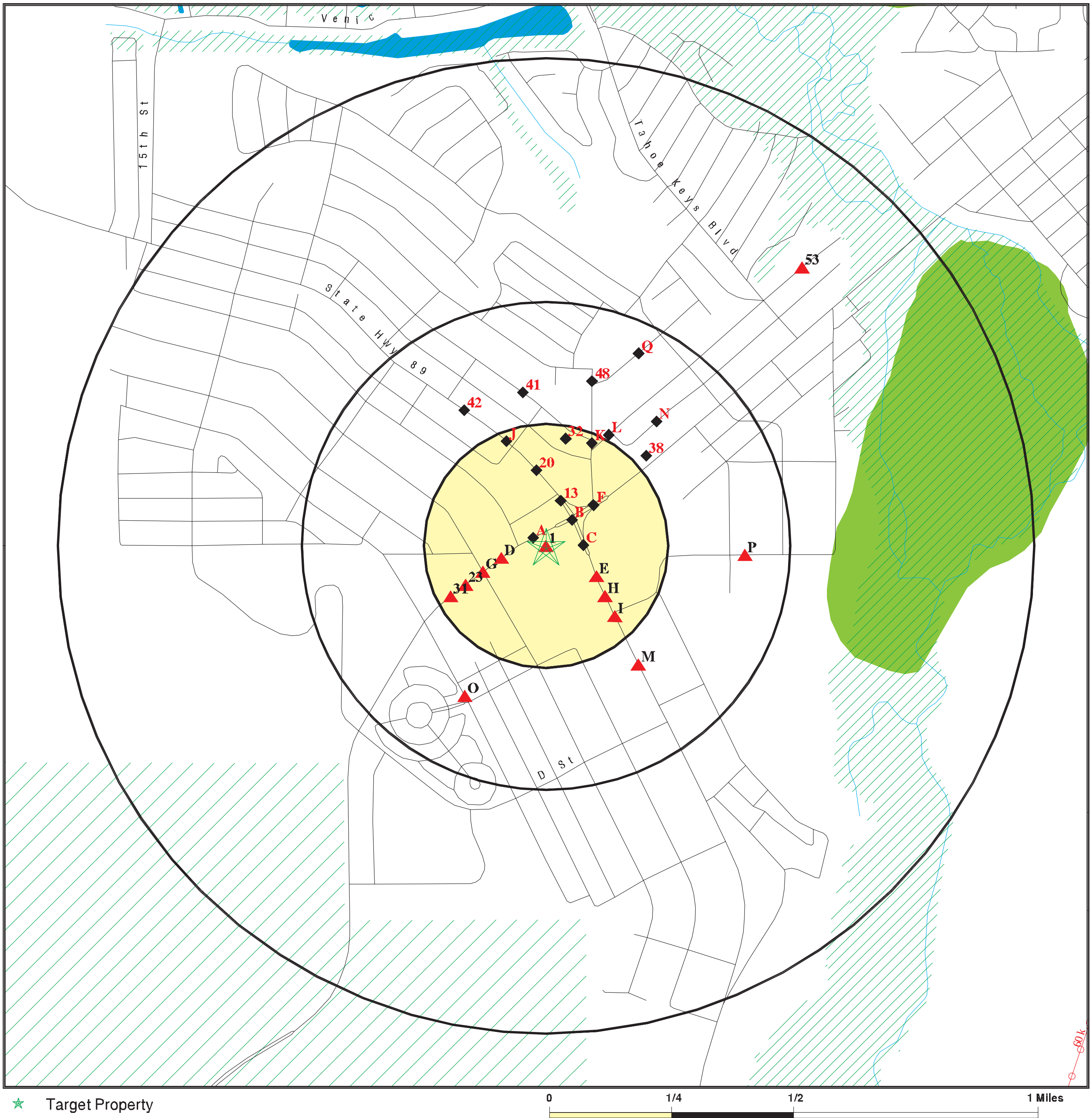
Lower Elevation	Address	Dist / Dir	Map ID	Page
TERRIBLE HERBST GAS STATION	2762 LAKE TAHOE BLVD.	1/4 - 1/2 NE	38	48

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
TOM SOMMERMIER HOME	SWEEPS UST
PACIFIC BELL C/O ALLEN TB484	RCRA-SQG, FINDS, CA FID UST, HIST UST, SWEEPS UST
RICHARDSON RESORT	CA FID UST, SWEEPS UST
BUDGET RENT-A-CAR SYSTEMS INC.	SWEEPS UST
FOX SERVICE STATION	SWEEPS UST
TAHOE ONE HOUR CLEANERS	HAZNET, CLEANERS
JOHNS CLEANERS	CLEANERS
PARADISE CHEVRON	LUST, Cortese
TAHOE MINI STORAGE (SUPPLY ONE)	LUST
AMERICAN TOWER	LUST
BUDGET RENT-A-CAR SYSTEMS INC.	HIST UST
SOUTH TAHOE PUBLIC UTILITY DISTRICT	HAZNET
SOUTH TAHOE REDEVELOPMENT AGENCY	HAZNET
FIVE STAR TEXACO	RCRA-SQG, FINDS
CALTRANS DISTRICT 03	RCRA-SQG, FINDS
SOUTH TAHOE PUD	FINDS
US FOREST SERVICE	SLIC
SOUTH SHORE MOTORS	CA WDS
SOUTH LAKE TAHOE MAINTENANCE	CA WDS
BIJOU COMMERCIAL CENTER	CA WDS
SOUTH TAHOE RECYCLING CENTER	SWRCY

OVERVIEW MAP - 1977841.2s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines

100-year flood zone

500-year flood zone

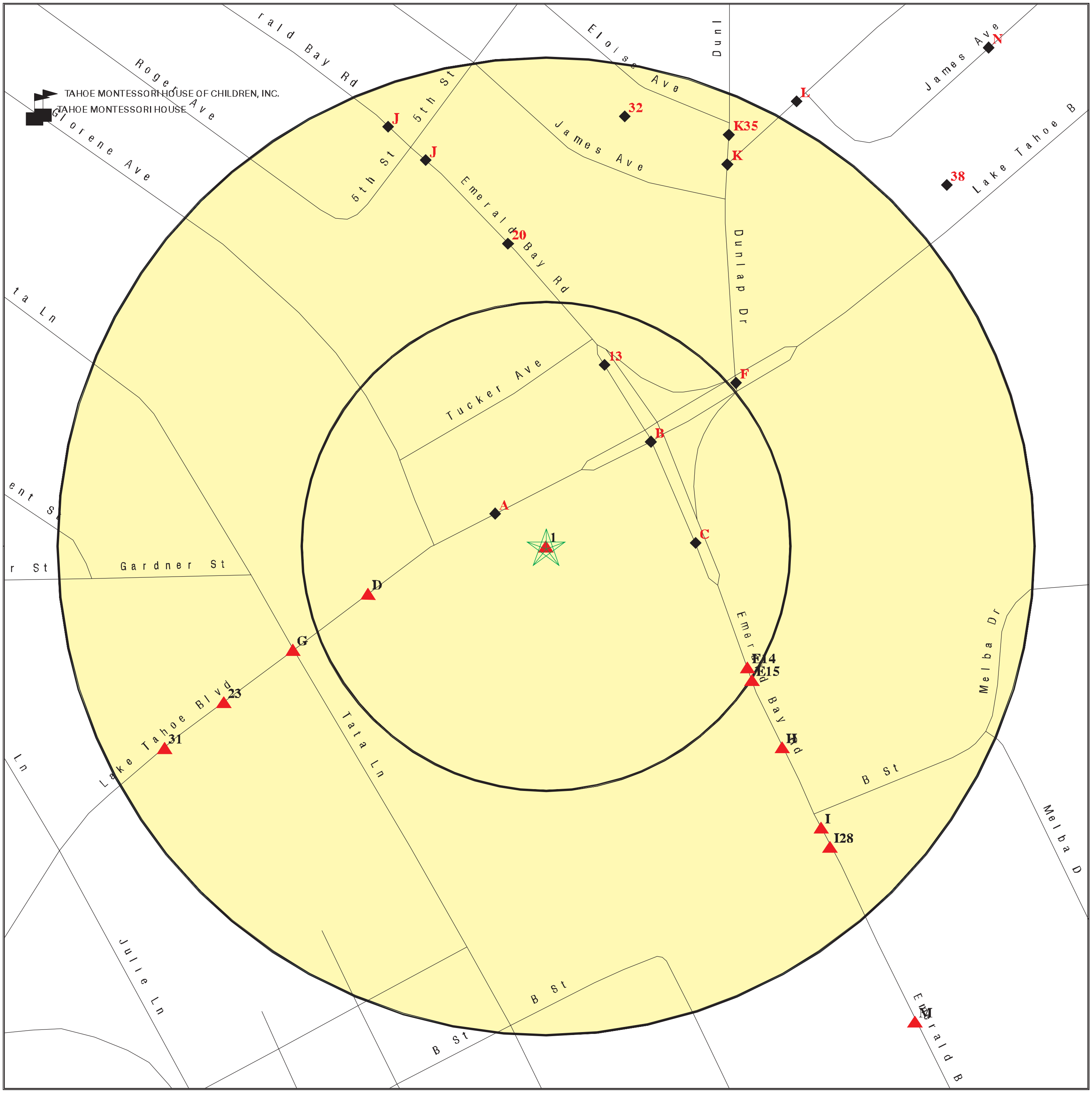
National Wetland Inventory

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: South Y Center ADDRESS: 1022-1074 Emerald Bay Road South Lake Tahoe CA 96150 LAT/LONG: 38.9126 / 120.0056	CLIENT: Erler & Kalinowski, Inc. CONTACT: Paul Hoffey INQUIRY #: 1977841.2s DATE: July 13, 2007 12:08 pm

DETAIL MAP - 1977841.2s



★	Target Property
▲	Sites at elevations higher than or equal to the target property
◆	Sites at elevations lower than the target property
	Manufactured Gas Plants
	Sensitive Receptors
	National Priority List Sites
	Dept. Defense Sites
	Indian Reservations BIA
	Oil & Gas pipelines
	100-year flood zone
	500-year flood zone
	Areas of Concern

0 1/16 1/8 1/4 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	South Y Center	CLIENT:	Erler & Kalinowski, Inc.
ADDRESS:	1022-1074 Emerald Bay Road South Lake Tahoe CA 96150	CONTACT:	Paul Hoffey
LAT/LONG:	38.9126 / 120.0056	INQUIRY #:	1977841.2s
		DATE:	July 13, 2007 12:08 pm

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL RECORDS								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
CERCLIS		0.500	0	0	1	NR	NR	1
CERC-NFRAP		0.500	0	0	0	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRA TSD		0.500	0	0	0	NR	NR	0
RCRA Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRA Sm. Quan. Gen.		0.250	1	2	NR	NR	NR	3
ERNS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
LIENS 2		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
DOT OPS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
STATE AND LOCAL RECORDS								
Hist Cal-Sites		1.000	0	0	0	0	NR	0
CA Bond Exp. Plan		1.000	0	0	0	0	NR	0
SCH		0.250	0	0	NR	NR	NR	0
Toxic Pits		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	0	NR	NR	0
CA WDS		TP	NR	NR	NR	NR	NR	0
WMUDS/SWAT		0.500	0	0	2	NR	NR	2
Cortese	X	0.500	3	4	3	NR	NR	10

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SWRCY		0.500	0	0	0	NR	NR	0
LUST	X	0.500	4	7	8	NR	NR	19
CA FID UST		0.250	2	7	NR	NR	NR	9
SLIC		0.500	4	3	4	NR	NR	11
UST		0.250	0	1	NR	NR	NR	1
HIST UST		0.250	1	5	NR	NR	NR	6
AST		0.250	0	0	NR	NR	NR	0
LIENS		TP	NR	NR	NR	NR	NR	0
SWEEPS UST		0.250	4	8	NR	NR	NR	12
CHMIRS		TP	NR	NR	NR	NR	NR	0
Notify 65		1.000	0	0	1	1	NR	2
DEED		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
WIP		0.250	0	0	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
RESPONSE		1.000	0	0	0	0	NR	0
HAZNET		TP	NR	NR	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
ENVIROSTOR		1.000	0	0	0	0	NR	0
TRIBAL RECORDS								
INDIAN RESERV		1.000	0	0	0	0	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1 Target Property | **SOUTH Y CENTER (OR MEANS PROPERTY?)**
1056 EMERALD BAY RD
SLT, CA | **LUST Cortese** | **S102437773 N/A**

Actual: 6272 ft.

LUST:
Region: 6L
Case Number: 6T0 181 A
Active OR Closed Site: Closed
Date Closed: 7/28/95
Type Of Site: UST

Cortese:
Region: CORTESE
Facility Addr2: Not reported

A2 WNW < 1/8 163 ft. | **BIG O TIRE STORE**
1961 LAKE TAHOE BLVD.
SLT, CA | **SLIC** | **S105960326 N/A**

Site 1 of 2 in cluster A

Relative: Lower

Actual: 6271 ft.

SLIC:
Region: 6L
Case Number: T6S034
Active or Closed: Active
Date Open or Closed: 8/5/03

A3 WNW < 1/8 163 ft. | **BIG O TIRES**
1961 LAKE TAHOE BOULEVARD
SOUTH LAKE TAHOE, CA 96150 | **SLIC** | **S106855347 N/A**

Site 2 of 2 in cluster A

Relative: Lower

Actual: 6271 ft.

SLIC:
Region: STATE
Global Id: SL0601729739
Assigned Name: SLICSITE
Lead Agency Contact: LISA DERNBACH
Lead Agency: LAHONTAN RWQCB (REGION 6T)
Lead Agency Case Number: T6S034
Responsible Party: MARK STRONG
Recent Dtw: Not reported
Substance Released: 127184
Facility Status: Not reported

B4 NE < 1/8 401 ft. | **SOUTH "Y" EXXON**
1000 EMERALD BAY RD
SOUTH LAKE TAHOE, CA 95731 | **HIST UST** | **U001614904 N/A**

Site 1 of 2 in cluster B

Relative: Lower

Actual: 6270 ft.

HIST UST:
Region: STATE
Facility ID: 00000057652
Tank Num: 001
Container Num: 1

SOUTH "Y" EXXON (Continued) **U001614904**

Year Installed:	Not reported
Tank Capacity:	00010000
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0004
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	Visual, Stock Inventor, Pressure Test
Contact Name:	OWNER
Telephone:	9165417826
Owner Name:	RAYMOND J. AND BARBARA A. LEBL
Owner Address:	P.O. BOX 10710
Owner City,St,Zip:	SOUTH LAKE TAHOE, CA 95731

Region:	STATE
Facility ID:	00000057652
Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00010000
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0004
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Visual, Stock Inventor, Pressure Test
Contact Name:	OWNER
Telephone:	9165417826
Owner Name:	RAYMOND J. AND BARBARA A. LEBL
Owner Address:	P.O. BOX 10710
Owner City,St,Zip:	SOUTH LAKE TAHOE, CA 95731

Region:	STATE
Facility ID:	00000057652
Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00000350
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0004
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported
Leak Detection:	Visual, Stock Inventor, Pressure Test
Contact Name:	OWNER
Telephone:	9165417826
Owner Name:	RAYMOND J. AND BARBARA A. LEBL
Owner Address:	P.O. BOX 10710
Owner City,St,Zip:	SOUTH LAKE TAHOE, CA 95731

Region:	STATE
Facility ID:	00000057652
Tank Num:	004
Container Num:	4

SOUTH "Y" EXXON (Continued) **U001614904**

Year Installed:	Not reported
Tank Capacity:	00000350
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0004
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	Not reported
Leak Detection:	Visual, Stock Inventor, Pressure Test
Contact Name:	OWNER
Telephone:	9165417826
Owner Name:	RAYMOND J. AND BARBARA A. LEBL
Owner Address:	P.O. BOX 10710
Owner City,St,Zip:	SOUTH LAKE TAHOE, CA 95731

B5
NE
< 1/8
401 ft.

SOUTH "Y" EXXON
1000 EMERALD BAY RD
SOUTH LAKE TAHOE, CA 95731

CA FID UST **S101628141**
SWEEPS UST **N/A**

Site 2 of 2 in cluster B

Relative:
Lower

Actual:
6270 ft.

CA FID UST:

Facility ID:	09000095
Regulated By:	UTNKA
Regulated ID:	00057652
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	9165417826
Mail To:	Not reported
Mailing Address:	P O BOX
Mailing Address 2:	Not reported
Mailing City,St,Zip:	SOUTH LAKE TAHOE 95731
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	Not reported
Comp Number:	57652
Number:	Not reported
Board Of Equalization:	44-003113
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	09-000-057652-000001
Actv Date:	Not reported
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	PRODUCT
Content:	LEADED
Number Of Tanks:	4

SOUTH "Y" EXXON (Continued) **S101628141**

Status: Not reported
Comp Number: 57652
Number: Not reported
Board Of Equalization: 44-003113
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 09-000-057652-000002
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: PRODUCT
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 57652
Number: Not reported
Board Of Equalization: 44-003113
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 09-000-057652-000003
Actv Date: Not reported
Capacity: 350
Tank Use: M.V. FUEL
Stg: PRODUCT
Content: DIESEL
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 57652
Number: Not reported
Board Of Equalization: 44-003113
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 09-000-057652-000004
Actv Date: Not reported
Capacity: 350
Tank Use: OIL
Stg: WASTE
Content: WASTE OIL
Number Of Tanks: Not reported

C6 **SHELL STATION** **LUST** **S105698729**
East **1020 EMERALD BAY ROAD** **N/A**
< 1/8 **SLT, CA**
406 ft.

Site 1 of 5 in cluster C

Relative:
Lower

Actual:
6271 ft.

LUST:

Region:	6L
Case Number:	6T0 072 A
Active OR Closed Site:	Closed
Date Closed:	Not reported
Type Of Site:	UST

C7 **SOUTH Y SHELL** **LUST** **S103587766**
East **1020 EMERALD BAY ROAD** **Cortese** **N/A**
< 1/8 **SOUTH LAKE TAHOE, CA 96150**
406 ft.

Site 2 of 5 in cluster C

Relative:
Lower

Actual:
6271 ft.

LUST:

Region:	STATE
Case Type:	Drinking Water Aquifer affected
Cross Street:	Not reported
Enf Type:	NA
Funding:	R
How Discovered:	Not reported
How Stopped:	Not reported
Leak Cause:	Not reported
Leak Source:	Not reported
Global Id:	T0601700150
Stop Date:	Not reported
Confirm Leak:	1998-09-30 00:00:00
Workplan:	1998-12-07 00:00:00
Prelim Assess:	Not reported
Pollution Char:	2001-11-16 00:00:00
Remed Plan:	2002-04-17 00:00:00
Remed Action:	2006-01-05 00:00:00
Monitoring:	2002-10-01 00:00:00
Close Date:	2006-06-26 00:00:00
Discover Date:	Not reported
Enforcement Dt:	1998-12-29 00:00:00
Release Date:	1998-11-20 00:00:00
Review Date:	2002-10-04 00:00:00
Enter Date:	2002-07-01 00:00:00
MTBE Date:	1998-11-02 00:00:00
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	30200
Max MTBE Soil ppb:	Not reported
County:	09
Org Name:	Not reported
Reg Board:	6T
Status:	Case Closed
Chemical:	Gasoline
Contact Person:	Not reported
Responsible Party:	DENIS L. BROWN
RP Address:	P.O. BOX 7869
Interim:	Yes
Oversight Prgm:	LUST
MTBE Class:	Not reported

SOUTH Y SHELL (Continued) **S103587766**

MTBE Conc: 389
MTBE Fuel: 1
MTBE Tested: MTBE Detected. Site tested for MTBE and MTBE detected
Staff: TML
Staff Initials: VH
Lead Agency: Regional Board
Local Agency: 09000
Hydr Basin #: TAHOE VALLEY SOUTH (
Beneficial: Not reported
Priority: A1
Cleanup Fund Id: 4995
Work Suspended: Not reported
Local Case #: Not reported
Case Number: 6T0300A
Qty Leaked: Not reported
Abate Method: Pump and Treat Ground Water - generally employed to remove dissolved contaminants
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: CAO issued 12/98. Interim groundwater remediation system in place. RP currently in compliance with CAO. Site not in Cleanup Fund.

Cortese:
Region: CORTESE
Facility Addr2: 1020 Emerald Bay Road

C8
East
< 1/8
406 ft.

SOUTH Y SHELL
1020 EMERALD BAY ROAD
SLT, CA 96150

LUST **U003879954**
N/A

Site 3 of 5 in cluster C

Relative:
Lower

Actual:
6271 ft.

LUST:
Region: 6L
Case Number: 6T0 300 A
Active OR Closed Site: Active
Date Closed: Not reported
Type Of Site: UST

C9
East
< 1/8
406 ft.

SHELL OIL COMPANY
1020 EMERALD BAY RD
SO LAKE TAHOE, CA 96150

SWEEPS UST **S106932087**
N/A

Site 4 of 5 in cluster C

Relative:
Lower

Actual:
6271 ft.

SWEEPS UST:
Status: Not reported
Comp Number: 159
Number: Not reported
Board Of Equalization: Not reported
Ref Date: Not reported
Act Date: Not reported

SHELL OIL COMPANY (Continued) **S106932087**

Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 09-000-000159-000004
Actv Date: Not reported
Capacity: 550
Tank Use: OIL
Stg: PRODUCT
Content: HEATING OIL
Number Of Tanks: 2

Status: Not reported
Comp Number: 159
Number: Not reported
Board Of Equalization: Not reported
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 09-000-000159-000005
Actv Date: Not reported
Capacity: 550
Tank Use: OIL
Stg: WASTE
Content: WASTE OIL
Number Of Tanks: Not reported

C10
East
< 1/8
406 ft.

SOUTH TAHOE SHELL
1020 EMERALD BAY RD
SOUTH LAKE TAHOE, CA 95731

HAZNET **S103620593**
Cortese **N/A**
SWEEPS UST

Site 5 of 5 in cluster C

Relative:
Lower

Actual:
6271 ft.

HAZNET:
Gepaid: CAD981460637
Contact: EQUILON ENTERPRISES LLC
Telephone: 7132412258
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 2099
Mailing City,St,Zip: HOUSTON, TX 772522099
Gen County: 9
TSD EPA ID: CAD028409019
TSD County: Los Angeles
Waste Category: Other inorganic solid waste
Disposal Method: Transfer Station
Tons: 0.045
Facility County: 9

Gepaid: CAD981460637
Contact: EQUILON ENTERPRISES LLC
Telephone: 7132412258
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 2099
Mailing City,St,Zip: HOUSTON, TX 772522099
Gen County: 9

SOUTH TAHOE SHELL (Continued) **S103620593**

TSD EPA ID:	CAD083166728
TSD County:	Stanislaus
Waste Category:	Waste oil and mixed oil
Disposal Method:	Recycler
Tons:	.6255
Facility County:	9

Gepaid:	CAD981460637
Contact:	EQUILON ENTERPRISES LLC
Telephone:	7132412258
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 2099
Mailing City,St,Zip:	HOUSTON, TX 772522099
Gen County:	9
TSD EPA ID:	AZD982441263
TSD County:	99
Waste Category:	Other inorganic solid waste
Disposal Method:	Not reported
Tons:	.6000
Facility County:	9

Gepaid:	CAD981460637
Contact:	SONDRA BIENVENU-RDC SUPERVISOR
Telephone:	7132412258
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 2099
Mailing City,St,Zip:	HOUSTON, TX 772522099
Gen County:	El Dorado
TSD EPA ID:	Not reported
TSD County:	Los Angeles
Waste Category:	Aqueous solution with less than 10% total organic residues
Disposal Method:	Recycler
Tons:	6.25
Facility County:	Not reported

Gepaid:	CAD981460637
Contact:	EQUILON ENTERPRISES LLC
Telephone:	7132412258
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 2099
Mailing City,St,Zip:	HOUSTON, TX 772522099
Gen County:	9
TSD EPA ID:	CAD009466392
TSD County:	7
Waste Category:	Empty containers less than 30 gallons
Disposal Method:	Recycler
Tons:	.1500
Facility County:	9

Click this hyperlink while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

Cortese:

Region:	CORTESE

SOUTH TAHOE SHELL (Continued) **S103620593**

Facility Addr2: Not reported

SWEEPS UST:

Status:	A
Comp Number:	972
Number:	2
Board Of Equalization:	Not reported
Ref Date:	10-21-93
Act Date:	04-12-94
Created Date:	04-12-94
Tank Status:	A
Owner Tank Id:	4139-0208-RU-1
Swrcb Tank Id:	09-000-000972-000001
Actv Date:	10-21-93
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	3

Status:	A
Comp Number:	972
Number:	2
Board Of Equalization:	Not reported
Ref Date:	10-21-93
Act Date:	04-12-94
Created Date:	04-12-94
Tank Status:	A
Owner Tank Id:	4139-0208-SU-1
Swrcb Tank Id:	09-000-000972-000002
Actv Date:	10-21-93
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	PRM UNLEADED
Number Of Tanks:	Not reported

Status:	A
Comp Number:	972
Number:	2
Board Of Equalization:	Not reported
Ref Date:	10-21-93
Act Date:	04-12-94
Created Date:	04-12-94
Tank Status:	A
Owner Tank Id:	4139-0208-OU-1
Swrcb Tank Id:	09-000-000972-000003
Actv Date:	10-21-93
Capacity:	10000
Tank Use:	M.V. FUEL
Stg:	P
Content:	LEADED
Number Of Tanks:	Not reported

Map ID Direction Distance Distance (ft.) Elevation	Site	Database(s)	EDR ID Number EPA ID Number

MAP FINDINGS

D11
WSW
< 1/8
496 ft.

LAKESIDE NAPA STORE
1935 LAKE TAHOE BLVD.
SLT, CA

SLIC **S105960327** **N/A**

Site 1 of 2 in cluster D

Relative: **Higher**

Actual: **6276 ft.**

SLIC:

Region:	6L
Case Number:	T6S035
Active or Closed:	Active
Date Open or Closed:	8/5/03

D12
WSW
< 1/8
496 ft.

LAKESIDE NAPA AUTOMOTIVE STORE
1935 LAKE TAHOE BOULEVARD
SOUTH LAKE TAHOE, CA 96150

SLIC **S106855348** **N/A**

Site 2 of 2 in cluster D

Relative: **Higher**

Actual: **6276 ft.**

SLIC:

Region:	STATE
Global Id:	SL0601756146
Assigned Name:	SLICSITE
Lead Agency Contact:	LISA DERNBACH
Lead Agency:	LAHONTAN RWQCB (REGION 6T)
Lead Agency Case Number:	T6S035
Responsible Party:	BYRON AND MABEL ZEEK
Recent Dtw:	Not reported
Substance Released:	13
Facility Status:	**Case Open**

13
NNE
< 1/8
516 ft.

RUNNELS AUTOMOTIVE
986 EMERALD BAY RD
SOUTH LAKE TAHOE, CA 96150

HAZNET
LUST
Cortese
CA FID UST
SWEEPS UST

S101581025 **N/A**

Relative: **Lower**

Actual: **6269 ft.**

HAZNET:

Gepaid:	CAL000011126
Contact:	JOHN W RUNNELS
Telephone:	0000000000
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 9047
Mailing City,St,Zip:	SOUTH LAKE TAHOE, CA 961580000
Gen County:	9
TSD EPA ID:	CAL000051079
TSD County:	Sacramento
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Transfer Station
Tons:	7.7145
Facility County:	9

Gepaid:	CAL000011126
Contact:	JOHN W RUNNELS
Telephone:	0000000000
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 9047

RUNNELS AUTOMOTIVE (Continued) **S101581025**

Mailing City,St,Zip:	SOUTH LAKE TAHOE, CA 961580000
Gen County:	9
TSD EPA ID:	CAD009466392
TSD County:	7
Waste Category:	Other empty containers 30 gallons or more
Disposal Method:	Recycler
Tons:	18.2500
Facility County:	9

LUST:

Region:	STATE
Case Type:	Undefined
Cross Street:	LAKE TAHOE BLVD
Enf Type:	None Taken
Funding:	R
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global Id:	T0601700134
Stop Date:	Not reported
Confirm Leak:	Not reported
Workplan:	Not reported
Prelim Assess:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Close Date:	1999-04-28 00:00:00
Discover Date:	1995-09-20 00:00:00
Enforcement Dt:	1965-01-01 00:00:00
Release Date:	1995-10-02 00:00:00
Review Date:	1999-03-03 00:00:00
Enter Date:	1996-03-19 00:00:00
MTBE Date:	1995-09-20 00:00:00
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	0
Max MTBE Soil ppb:	Not reported
County:	09
Org Name:	Not reported
Reg Board:	6T
Status:	Case Closed
Chemical:	Gasoline
Contact Person:	Not reported
Responsible Party:	JOHN RUNNELS
RP Address:	PO BOX 9047
Interim:	No
Oversight Prgm:	LUST
MTBE Class:	Not reported
MTBE Conc:	1
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE and MTBE detected
Staff:	CLC
Staff Initials:	VH
Lead Agency:	Regional Board
Local Agency:	09000

RUNNELS AUTOMOTIVE (Continued) **S101581025**

Hydr Basin #: TAHOE VALLEY SOUTH (
Beneficial: Not reported
Priority: B3
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: Not reported
Case Number: 6T0228A
Qty Leaked: Not reported
Abate Method: Excavate and Dispose - remove contaminated soil and dispose in approved site
Operator: JOHN RUNNELS
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: 8/8/1997: Notice to Submit a workplan to conduct GW investigation issued by Board, following Board's decision to deny RP's request for closure of site. RP is petitioning for review of Board's decision not to close site as of 8/22/1997. No furtheractiv

LUST:
Region: 6L
Case Number: 6T0 228 A
Active OR Closed Site: Closed
Date Closed: 4/28/99
Type Of Site: UST

Cortese:
Region: CORTESE
Facility Addr2: Not reported

CA FID UST:
Facility ID: 07001187
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 9165415710
Mail To: Not reported
Mailing Address: 986 EMERALD BAY RD
Mailing Address 2: Not reported
Mailing City,St,Zip: SOUTH LAKE TAHOE 96150
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: A
Comp Number: 457
Number: 2

RUNNELS AUTOMOTIVE (Continued) **S101581025**

Board Of Equalization:	Not reported
Ref Date:	02-11-92
Act Date:	02-11-92
Created Date:	02-11-92
Tank Status:	A
Owner Tank Id:	1
Swrcb Tank Id:	07-000-000457-000001
Actv Date:	02-11-92
Capacity:	10000
Tank Use:	EMPTY
Stg:	P
Content:	Not reported
Number Of Tanks:	5

Status:	A
Comp Number:	457
Number:	2
Board Of Equalization:	Not reported
Ref Date:	02-11-92
Act Date:	02-11-92
Created Date:	02-11-92
Tank Status:	A
Owner Tank Id:	2
Swrcb Tank Id:	07-000-000457-000002
Actv Date:	02-11-92
Capacity:	8000
Tank Use:	EMPTY
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported

Status:	A
Comp Number:	457
Number:	2
Board Of Equalization:	Not reported
Ref Date:	02-11-92
Act Date:	02-11-92
Created Date:	02-11-92
Tank Status:	A
Owner Tank Id:	3
Swrcb Tank Id:	07-000-000457-000003
Actv Date:	02-11-92
Capacity:	8000
Tank Use:	EMPTY
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported

Status:	A
Comp Number:	457
Number:	2
Board Of Equalization:	Not reported
Ref Date:	02-11-92
Act Date:	02-11-92
Created Date:	02-11-92
Tank Status:	A
Owner Tank Id:	4

RUNNELS AUTOMOTIVE (Continued) **S101581025**

Swrcb Tank Id: 07-000-000457-000004
Actv Date: 02-11-92
Capacity: 400
Tank Use: OIL
Stg: W
Content: WASTE OIL
Number Of Tanks: Not reported

Status: A
Comp Number: 457
Number: 2
Board Of Equalization: Not reported
Ref Date: 02-11-92
Act Date: 02-11-92
Created Date: 02-11-92
Tank Status: A
Owner Tank Id: 5
Swrcb Tank Id: 07-000-000457-000005
Actv Date: 02-11-92
Capacity: 400
Tank Use: M.V. FUEL
Stg: P
Content: DIESEL
Number Of Tanks: Not reported

E14 **ESE** **< 1/8** **636 ft.**	**RALEYS DRUG CTR 167** **1045 EMERALD BAY RD** **SOUTH LAKE TAHOE, CA 96150**	**RCRA-SQG** **FINDS**	**1000818942** **CAD983648809**

Relative:
Equal

Actual:
6272 ft.

Site 1 of 2 in cluster E

RCRAInfo:
Owner: RALEYS
(916) 373-3333
EPA ID: CAD983648809

Contact: PAT MCCUTCHEON
(916) 541-5140

Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site

California - Hazardous Waste Tracking System - Datamart

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	Database(s)	EDR ID Number EPA ID Number
E15 **ESE** **1/8-1/4** **664 ft.**	**KMART #9153** **1056 EMERALD BAY RD** **SOUTH LAKE TAHOE, CA 96150**	**HAZNET** **LUST**	**S103621549** **N/A**

Relative:
Equal

Actual:
6272 ft.

Site 2 of 2 in cluster E

HAZNET:

Gepaid:	CAL000021337
Contact:	KMART CORPORATION
Telephone:	2486376544
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	3100 W BIG BEAVER RD
Mailing City,St,Zip:	TROY, MI 480843136
Gen County:	9
TSD EPA ID:	CAD980887418
TSD County:	1
Waste Category:	Aqueous solution with less than 10% total organic residues
Disposal Method:	Not reported
Tons:	.2919
Facility County:	9

LUST:

Region:	STATE
Case Type:	Undefined
Cross Street:	HWY 50
Enf Type:	None Taken
Funding:	R
How Discovered:	OM
How Stopped:	Not reported
Leak Cause:	Structure Failure
Leak Source:	Tank
Global Id:	T0601700124
Stop Date:	1994-06-20 00:00:00
Confirm Leak:	Not reported
Workplan:	Not reported
Prelim Assess:	1994-09-30 00:00:00
Pollution Char:	1995-05-15 00:00:00
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Close Date:	1995-07-28 00:00:00
Discover Date:	1994-06-20 00:00:00
Enforcement Dt:	1965-01-01 00:00:00
Release Date:	1994-06-23 00:00:00
Review Date:	1996-01-22 00:00:00
Enter Date:	1994-09-20 00:00:00
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	09
Org Name:	Not reported
Reg Board:	6T
Status:	Case Closed
Chemical:	Diesel
Contact Person:	Not reported
Responsible Party:	DOROTHY LYDDOW

KMART #9153 (Continued) **S103621549**

RP Address: 5530 BIRDCAGE ST, STE. 220
Interim: Yes
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
Staff: TML
Staff Initials: VH
Lead Agency: Local Agency
Local Agency: 09000
Hydr Basin #: TAHOE VALLEY SOUTH (
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: Not reported
Case Number: 6T0181A
Qty Leaked: Not reported
Abate Method: Excavate and Dispose - remove contaminated soil and dispose in approved site
Operator: DOROTHY LYDDOW
Water System Name:Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

F16
NE
1/8-1/4
678 ft.

FIVE STAR TEXACO — **Cortese** — **S105026690** / **N/A**
2037 LAKE TAHOE
SOUTH LAKE TAHOE, CA 96158

Site 1 of 2 in cluster F

Relative:
Lower

Actual:
6270 ft.

Cortese:
Region: CORTESE
Facility Addr2: Not reported

F17
NE
1/8-1/4
678 ft.

FORMER FIVE STAR TEXACO — **LUST** — **S105698730** / **N/A**
2037 LAKE TAHOE BLVD
SLT, CA

Site 2 of 2 in cluster F

Relative:
Lower

Actual:
6270 ft.

LUST:
Region: 6L
Case Number: 6T0 075 A
Active OR Closed Site: Closed
Date Closed: Not reported
Type Of Site: UST

Map ID Direction Distance Distance (ft.) Elevation	Site	Database(s)	EDR ID Number EPA ID Number
G18 **WSW** **1/8-1/4** **737 ft.**	**SOUTH LAKE TAHOE** **1920 LAKE TAHOE BLVD** **SOUTH LAKE TAHOE, CA 95731**	**CA FID UST** **SWEEPS UST**	**S101628142** **N/A**

Site 1 of 2 in cluster G

Relative:
Higher

Actual:
6278 ft.

CA FID UST:

Facility ID:	09000248
Regulated By:	UTNKA
Regulated ID:	00021169
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	9165445236
Mail To:	Not reported
Mailing Address:	1920 LAKE TAHOE BLVD
Mailing Address 2:	Not reported
Mailing City,St,Zip:	SOUTH LAKE TAHOE 95731
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	A
Comp Number:	21169
Number:	9
Board Of Equalization:	44-002948
Ref Date:	07-01-85
Act Date:	Not reported
Created Date:	10-13-88
Tank Status:	A
Owner Tank Id:	4063
Swrcb Tank Id:	09-000-021169-000001
Actv Date:	07-01-85
Capacity:	Not reported
Tank Use:	OIL
Stg:	W
Content:	WASTE OIL
Number Of Tanks:	1

G19 **WSW** **1/8-1/4** **737 ft.**	**SOUTH LAKE TAHOE** **1920 LAKE TAHOE BLVD** **SOUTH LAKE TAHOE, CA 95731**	**HIST UST**	**U001614905** **N/A**

Site 2 of 2 in cluster G

Relative:
Higher

Actual:
6278 ft.

HIST UST:

Region:	STATE
Facility ID:	00000021169
Tank Num:	001
Container Num:	4063
Year Installed:	1972
Tank Capacity:	00000000
Facility Type:	Other
Other Type:	RETAIL DEPT. STORE
Total Tanks:	0001

SOUTH LAKE TAHOE (Continued) **U001614905**

Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	Not reported
Leak Detection:	Visual
Contact Name:	CLINT BRIDGES
Telephone:	9165445236
Owner Name:	MONTGOMERY WARD
Owner Address:	ONE MONTGOMERY WARD PLAZA
Owner City,St,Zip:	CHICAGO, IL 60671

20
North
1/8-1/4
824 ft.

HURZEL PROPERTIES LLC
949 EMERALD BAY ROAD
SOUTH LAKE TAHOE, CA 96150

SLIC **S106483518**
N/A

Relative:
Lower

Actual:
6265 ft.

SLIC:

Region:	STATE
Global Id:	SL0601790916
Assigned Name:	SLICSITE
Lead Agency Contact:	LISA DERNBACH
Lead Agency:	LAHONTAN RWQCB (REGION 6T)
Lead Agency Case Number:	T6S044
Responsible Party:	RICK HURZEL
Recent Dtw:	Not reported
Substance Released:	34475
Facility Status:	**Not reported**

H21
SE
1/8-1/4
838 ft.

FORMER CHEVRON 9-0672
1069 EMERALD BAY ROAD
SOUTH LAKE TAHOE, CA 96150

LUST **S106874616**
N/A

Site 1 of 2 in cluster H

Relative:
Higher

Actual:
6274 ft.

LUST:

Region:	STATE
Case Type:	Soil only
Cross Street:	B STREET
Enf Type:	CLOS
Funding:	LOC
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	UNK
Leak Source:	Piping
Global Id:	T0601781532
Stop Date:	Not reported
Confirm Leak:	2000-05-30 00:00:00
Workplan:	Not reported
Prelim Assess:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Close Date:	2001-09-19 00:00:00
Discover Date:	2000-05-30 00:00:00
Enforcement Dt:	Not reported
Release Date:	2000-05-30 00:00:00

FORMER CHEVRON 9-0672 (Continued) **S106874616**

Review Date: Not reported
Enter Date: Not reported
MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: Not reported
Max MTBE Soil ppb: Not reported
County: 09
Org Name: Not reported
Reg Board: 6T
Status: Case Closed
Chemical: 8006619,1203
Contact Person: Not reported
Responsible Party: TOM BAUHS
RP Address: 6001 BOLLINGER CANYON ROAD, K-2236
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
Staff: BDG
Staff Initials: VK
Lead Agency: Local Agency
Local Agency: 09000
Hydr Basin #: Not reported
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: Not reported
Case Number: 6t0376a
Qty Leaked: Not reported
Abate Method: Not reported
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

H22 **CHEVRON #90672** **SWEEPS UST** **S106924308**
SE **1069 EMERAL BAY RD** **N/A**
1/8-1/4 **SOUTH LAKE TAHOE, CA 95730**
838 ft.

Site 2 of 2 in cluster H

Relative:
Higher

Actual:
6274 ft.

SWEEPS UST:
Status: A
Comp Number: 61875
Number: 1
Board Of Equalization: 44-031913
Ref Date: 09-16-93
Act Date: 04-11-94
Created Date: 10-13-88
Tank Status: A
Owner Tank Id: 1

CHEVRON #90672 (Continued) **S106924308**

Swrcb Tank Id:	09-000-061875-000006
Actv Date:	09-16-93
Capacity:	12000
Tank Use:	M.V. FUEL
Stg:	P
Content:	PRM UNLEADED
Number Of Tanks:	4

Status:	A
Comp Number:	61875
Number:	1
Board Of Equalization:	44-031913
Ref Date:	09-16-93
Act Date:	04-11-94
Created Date:	10-13-88
Tank Status:	A
Owner Tank Id:	3
Swrcb Tank Id:	09-000-061875-000007
Actv Date:	09-16-93
Capacity:	12000
Tank Use:	M.V. FUEL
Stg:	P
Content:	PLUS UNLEADED
Number Of Tanks:	Not reported

Status:	A
Comp Number:	61875
Number:	1
Board Of Equalization:	44-031913
Ref Date:	09-16-93
Act Date:	04-11-94
Created Date:	10-13-88
Tank Status:	A
Owner Tank Id:	2
Swrcb Tank Id:	09-000-061875-000008
Actv Date:	09-16-93
Capacity:	12000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	A
Comp Number:	61875
Number:	1
Board Of Equalization:	44-031913
Ref Date:	09-16-93
Act Date:	04-11-94
Created Date:	10-13-88
Tank Status:	A
Owner Tank Id:	4
Swrcb Tank Id:	09-000-061875-000009
Actv Date:	06-22-92
Capacity:	1000
Tank Use:	OIL
Stg:	W
Content:	WASTE OIL

CHEVRON #90672 (Continued) **S106924308**

Number Of Tanks: Not reported

23
WSW
1/8-1/4
966 ft.

PACIFIC BELL
1900 LAKE TAHOE BLVD
SOUTH LAKE TAHOE, CA 96150

RCRA-SQG **1000251554**
FINDS **CAT080024532**

Relative:
Higher

Actual:
6278 ft.

RCRAInfo:
Owner: NOT REQUIRED
(415) 555-1212
EPA ID: CAT080024532

Contact: Not reported

Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

I24
SE
1/8-1/4
1064 ft.

T-SHIRT OUTLET
1101 EMERALD BAY RD
SOUTH LAKE TAHOE, CA 95723

CA FID UST **S101581240**
SWEEPS UST **N/A**

Site 1 of 3 in cluster I

Relative:
Higher

Actual:
6277 ft.

CA FID UST:
Facility ID: 09000101
Regulated By: UTNKA
Regulated ID: 047
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 9165440969
Mail To: Not reported
Mailing Address: PO BOX
Mailing Address 2: Not reported
Mailing City,St,Zip: SOUTH LAKE TAHOE 95723
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

T-SHIRT OUTLET (Continued) **S101581240**

SWEEPS UST:

Status:	Not reported
Comp Number:	58507
Number:	Not reported
Board Of Equalization:	44-003123
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	09-000-058507-000001
Actv Date:	Not reported
Capacity:	6000
Tank Use:	EMPTY
Stg:	PRODUCT
Content:	EMPTY
Number Of Tanks:	4

Status:	Not reported
Comp Number:	58507
Number:	Not reported
Board Of Equalization:	44-003123
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	09-000-058507-000002
Actv Date:	Not reported
Capacity:	250
Tank Use:	OIL
Stg:	WASTE
Content:	WASTE OIL
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	58507
Number:	Not reported
Board Of Equalization:	44-003123
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	09-000-058507-000003
Actv Date:	Not reported
Capacity:	6000
Tank Use:	EMPTY
Stg:	PRODUCT
Content:	EMPTY
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	58507
Number:	Not reported
Board Of Equalization:	44-003123
Ref Date:	Not reported

T-SHIRT OUTLET (Continued) **S101581240**

Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	09-000-058507-000004
Actv Date:	Not reported
Capacity:	6000
Tank Use:	M.V. FUEL
Stg:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	Not reported

I25
SE
1/8-1/4
1065 ft.

NATIONAL CAR RENTAL
1101 EMERALD BAY ROAD
SLT, CA 96150

LUST
Cortese
HIST UST

U001614898
N/A

Site 2 of 3 in cluster I

Relative:
Higher

Actual:
6277 ft.

LUST:

Region:	STATE
Case Type:	Drinking Water Aquifer affected
Cross Street:	B STREET
Enf Type:	CLOS
Funding:	R
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global Id:	T0601700140
Stop Date:	1996-09-24 00:00:00
Confirm Leak:	1996-12-05 00:00:00
Workplan:	1997-11-13 00:00:00
Prelim Assess:	1998-09-18 00:00:00
Pollution Char:	Not reported
Remed Plan:	1999-05-19 00:00:00
Remed Action:	1999-08-20 00:00:00
Monitoring:	2004-08-17 00:00:00
Close Date:	2005-01-07 00:00:00
Discover Date:	1996-09-24 00:00:00
Enforcement Dt:	2000-05-05 00:00:00
Release Date:	1996-09-25 00:00:00
Review Date:	2002-09-09 00:00:00
Enter Date:	1996-12-19 00:00:00
MTBE Date:	2000-03-31 00:00:00
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	6.8
Max MTBE Soil ppb:	Not reported
County:	09
Org Name:	Not reported
Reg Board:	6T
Status:	Case Closed
Chemical:	NOT_SELECTED
Contact Person:	Not reported
Responsible Party:	General Motors Corporation
RP Address:	1210 South 5th Street, Ste. 2
Interim:	Yes
Oversight Prgm:	LUST

NATIONAL CAR RENTAL (Continued) **U001614898**

MTBE Class: Not reported
MTBE Conc: 56
MTBE Fuel: 0
MTBE Tested: MTBE Detected. Site tested for MTBE and MTBE detected
Staff: JEB
Staff Initials: VH
Lead Agency: Regional Board
Local Agency: 09000
Hydr Basin #: TAHOE VALLEY SOUTH (
Beneficial: Not reported
Priority: A3
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Local Case #: Not reported
Case Number: 6T0246A
Qty Leaked: Not reported
Abate Method: Excavate and Dispose - remove contaminated soil and dispose in approved site
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Letter to RP, mailed 2/1/99, requests WP for additional GW investigation and CAP for remediation of contam. soil and GW. Letter states that failure to comply may result in CAO and/or ACL (signed by HS) MW-3 had SPH present prior to purging 200 ug/l be

LUST:
Region: 6L
Case Number: 6T0 246 A
Active OR Closed Site: Active
Date Closed: Not reported
Type Of Site: UST

Cortese:
Region: CORTESE
Facility Addr2: 1101 EMERALD BAY RD

HIST UST:
Region: STATE
Facility ID: 00000058507
Tank Num: 001
Container Num: 086-03-1
Year Installed: Not reported
Tank Capacity: 00006000
Facility Type: Other
Other Type: FLEET OPERATOR
Total Tanks: 0003
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor
Contact Name: JUNE DUNN
Telephone: 9165412277

NATIONAL CAR RENTAL (Continued) **U001614898**

Owner Name: NATIONAL CAR RENTAL SYSTEM
Owner Address: 7700 FRANCE AVE SO
Owner City,St,Zip: MINNEAPOLIS, MN 55431

Region: STATE
Facility ID: 00000058507
Tank Num: 002
Container Num: 086-03-3
Year Installed: Not reported
Tank Capacity: 00000250
Facility Type: Other
Other Type: FLEET OPERATOR
Total Tanks: 0003
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: None
Contact Name: JUNE DUNN
Telephone: 9165412277
Owner Name: NATIONAL CAR RENTAL SYSTEM
Owner Address: 7700 FRANCE AVE SO
Owner City,St,Zip: MINNEAPOLIS, MN 55431

Region: STATE
Facility ID: 00000058507
Tank Num: 003
Container Num: 086-03-2
Year Installed: Not reported
Tank Capacity: 00006000
Facility Type: Other
Other Type: FLEET OPERATOR
Total Tanks: 0003
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor
Contact Name: JUNE DUNN
Telephone: 9165412277
Owner Name: NATIONAL CAR RENTAL SYSTEM
Owner Address: 7700 FRANCE AVE SO
Owner City,St,Zip: MINNEAPOLIS, MN 55431

Region: STATE
Facility ID: 00000067209
Tank Num: 001
Container Num: 086-03-04
Year Installed: Not reported
Tank Capacity: 00001000
Facility Type: Other
Other Type: FLEET OPERATOR
Total Tanks: 0001
Tank Used for: WASTE
Type of Fuel: 3
Tank Construction: Unkown centimeters
Leak Detection: None
Contact Name: JUNE DUNN
Telephone: 9165412277

NATIONAL CAR RENTAL (Continued) **U001614898**

Owner Name: NATIONAL CAR RENTAL SYSTEM, IN
Owner Address: 7700 FRANCE AVE SOUTH
Owner City,St,Zip: MINNEAPOLIS, MN 55431

J26
NNW
1/8-1/4
1092 ft.

TCI BUILDING
924 EMERALD BAY ROAD
SLT, CA

SLIC **S105754308**
N/A

Site 1 of 4 in cluster J

Relative:
Lower

Actual:
6265 ft.

SLIC:
Region: 6L
Case Number: T6S017
Active or Closed: Active
Date Open or Closed: Not reported

J27
NNW
1/8-1/4
1092 ft.

TCI BUILDING
924 EMERALD BAY ROAD
SOUTH LAKE TAHOE, CA

SLIC **S106483513**
N/A

Site 2 of 4 in cluster J

Relative:
Lower

Actual:
6265 ft.

SLIC:
Region: STATE
Global Id: SL0601746499
Assigned Name: SLICSITE
Lead Agency Contact: Not reported
Lead Agency: Not reported
Lead Agency Case Number: Not reported
Responsible Party: ROSS GROELZ, D.D.S.
Recent Dtw: Not reported
Substance Released: PCE
Facility Status: **Inactive Due to Bad Debt**

I28
SE
1/8-1/4
1117 ft.

U-HAUL CENTER OF SOUTH LAKE TA
1105 EMERALD BAY RD
SOUTH LAKE TAHOE, CA 95731

HAZNET
LUST
Cortese
CA FID UST
HIST UST
SWEEPS UST

1000160000
N/A

Site 3 of 3 in cluster I

Relative:
Higher

Actual:
6278 ft.

HAZNET:
Gepaid: CAC001005448
Contact: U-HAUL
Telephone: 0000000000
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 1105 EMERALD BAY RD
Mailing City,St,Zip: SOUTH LAKE TAHOE, CA 961480000
Gen County: 9
TSD EPA ID: CAD004771168
TSD County: San Francisco
Waste Category: Other empty containers 30 gallons or more
Disposal Method: Recycler
Tons: 5.2750

U-HAUL CENTER OF SOUTH LAKE TA (Continued) **1000160000**

Facility County: 9

LUST:

Region:	STATE
Case Type:	Soil only
Cross Street:	Not reported
Enf Type:	None Taken
Funding:	R
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global Id:	T0601700126
Stop Date:	1994-07-06 00:00:00
Confirm Leak:	Not reported
Workplan:	1994-07-11 00:00:00
Prelim Assess:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Close Date:	1996-04-15 00:00:00
Discover Date:	1994-07-06 00:00:00
Enforcement Dt:	1965-01-01 00:00:00
Release Date:	1994-07-01 00:00:00
Review Date:	1996-04-15 00:00:00
Enter Date:	1994-12-09 00:00:00
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	09
Org Name:	Not reported
Reg Board:	6T
Status:	Case Closed
Chemical:	Waste Oil
Contact Person:	Not reported
Responsible Party:	U-HAUL OF SACRAMENTO
RP Address:	1650 CAMINO AVE
Interim:	No
Oversight Prgm:	LUST
MTBE Class:	*
MTBE Conc:	0
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
Staff:	TML
Staff Initials:	VH
Lead Agency:	Local Agency
Local Agency:	09000
Hydr Basin #:	TAHOE VALLEY SOUTH (
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Local Case #:	Not reported
Case Number:	6T0188A

U-HAUL CENTER OF SOUTH LAKE TA (Continued) **1000160000**

Qty Leaked: Not reported
Abate Method: Excavate and Dispose - remove contaminated soil and dispose in approved site
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: Not reported

LUST:
Region: 6L
Case Number: 6T0 188 A
Active OR Closed Site: Closed
Date Closed: 4/15/96
Type Of Site: UST

Cortese:
Region: CORTESE
Facility Addr2: 1105 EMERALD BAY RD

CA FID UST:
Facility ID: 09000485
Regulated By: UTNKA
Regulated ID: 00058912
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 9165417471
Mail To: Not reported
Mailing Address: P O BOX
Mailing Address 2: Not reported
Mailing City,St,Zip: SOUTH LAKE TAHOE 95731
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

HIST UST:
Region: STATE
Facility ID: 00000058912
Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00010000
Facility Type: Other
Other Type: TRK. & TLR. RENTALS
Total Tanks: 0002
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: Stock Inventor

U-HAUL CENTER OF SOUTH LAKE TA (Continued) **1000160000**

Contact Name: MIKE WHITNEY
Telephone: 9165417471
Owner Name: U-HAUL CO. OF SACRAMENTO
Owner Address: 1650 EL CAMINO AVE.
Owner City,St,Zip: SACRAMENTO, CA 95815

Region: STATE
Facility ID: 00000058912
Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00000000
Facility Type: Other
Other Type: TRK. & TLR. RENTALS
Total Tanks: 0002
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: Stock Inventor
Contact Name: MIKE WHITNEY
Telephone: 9165417471
Owner Name: U-HAUL CO. OF SACRAMENTO
Owner Address: 1650 EL CAMINO AVE.
Owner City,St,Zip: SACRAMENTO, CA 95815

SWEEPS UST:
Status: A
Comp Number: 58912
Number: 9
Board Of Equalization: 44-003125
Ref Date: 07-01-85
Act Date: Not reported
Created Date: 10-13-88
Tank Status: A
Owner Tank Id: 1
Swrcb Tank Id: 09-000-058912-000001
Actv Date: 07-01-85
Capacity: 10000
Tank Use: M.V. FUEL
Stg: P
Content: LEADED
Number Of Tanks: 2

Status: A
Comp Number: 58912
Number: 9
Board Of Equalization: 44-003125
Ref Date: 07-01-85
Act Date: Not reported
Created Date: 10-13-88
Tank Status: A
Owner Tank Id: 2
Swrcb Tank Id: 09-000-058912-000002
Actv Date: 01-28-93
Capacity: 550
Tank Use: OIL
Stg: W

Map ID Direction Distance Distance (ft.) Elevation	Site	Database(s)	EDR ID Number EPA ID Number

U-HAUL CENTER OF SOUTH LAKE TA (Continued) **1000160000**

Content: WASTE OIL
Number Of Tanks: Not reported

K29 **NNE** **1/8-1/4** **1142 ft.**	**CP NATURAL GAS** **2071 DUNLAP** **SOUTH LAKE TAHOE, CA 94520**	**CA FID UST** **SWEEPS UST**	**S101623547** **N/A**

Relative:
Lower

Actual:
6267 ft.

Site 1 of 3 in cluster K

CA FID UST:

Facility ID: 09000179
Regulated By: UTNKA
Regulated ID: 00002375
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 9155410300
Mail To: Not reported
Mailing Address: BOX
Mailing Address 2: Not reported
Mailing City,St,Zip: SOUTH LAKE TAHOE 94520
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:

Status: Not reported
Comp Number: 2375
Number: Not reported
Board Of Equalization: Not reported
Ref Date: Not reported
Act Date: Not reported
Created Date: Not reported
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: 09-000-002375-000001
Actv Date: Not reported
Capacity: 10000
Tank Use: M.V. FUEL
Stg: PRODUCT
Content: REG UNLEADED
Number Of Tanks: 1

K30 **NNE** **1/8-1/4** **1142 ft.**	**CP NATURAL GAS** **2071 DUNLAP DR** **SOUTH LAKE TAHOE, CA 94520**	**HIST UST**	**U001596530** **N/A**

Site 2 of 3 in cluster K

Relative: **Lower**

Actual: **6267 ft.**

HIST UST:

Region:	STATE
Facility ID:	00000002375
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00010000
Facility Type:	Other
Other Type:	UTILITY CO-NATURAL G
Total Tanks:	0001
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	None
Contact Name:	A.B. SLABACK
Telephone:	9155410300
Owner Name:	CP NATIONAL
Owner Address:	1355 WILLOW WAY
Owner City,St,Zip:	CONCORD, CA 94520

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31 **WSW** **1/8-1/4** **1164 ft.**	**SOUTH SHORE MOTORS** **1875 LAKE TAHOE BLVD** **SOUTH LAKE TAHOE, CA 95731**	**HAZNET** **CA FID UST** **HIST UST** **SWEEPS UST**	**1000406744** **N/A**

Relative: **Higher**

Actual: **6278 ft.**

HAZNET:

Gepaid:	CAD045995941
Contact:	FRED STREETER
Telephone:	7023223700
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 8495
Mailing City,St,Zip:	SOUTH LAKE TAHOE, CA 961581495
Gen County:	9
TSD EPA ID:	CA0000084517
TSD County:	Sacramento
Waste Category:	Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method:	Transfer Station
Tons:	0.444
Facility County:	9

Gepaid:	CAD045995941
Contact:	FRED STREETER
Telephone:	7023223700
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 8495
Mailing City,St,Zip:	SOUTH LAKE TAHOE, CA 961581495
Gen County:	9
TSD EPA ID:	CA0000084517
TSD County:	Sacramento
Waste Category:	Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method:	Transfer Station
Tons:	.3880

SOUTH SHORE MOTORS (Continued) **1000406744**

Facility County: 9

Gepaid: CAD045995941
Contact: ZAK SALAH PRESIDENT
Telephone: 5305414070
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 8495
Mailing City,St,Zip: SOUTH LAKE TAHOE, CA 961581495
Gen County: El Dorado
TSD EPA ID: CA0000084517
TSD County: Sacramento
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Not reported
Tons: 0.02
Facility County: Not reported

Gepaid: CAD045995941
Contact: FRED STREETER
Telephone: 7023223700
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 8495
Mailing City,St,Zip: SOUTH LAKE TAHOE, CA 961581495
Gen County: 9
TSD EPA ID: CA0000084517
TSD County: Sacramento
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Tons: .0166
Facility County: 9

Gepaid: CAD045995941
Contact: FRED STREETER
Telephone: 7023223700
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: PO BOX 8495
Mailing City,St,Zip: SOUTH LAKE TAHOE, CA 961581495
Gen County: 9
TSD EPA ID: CA0000084517
TSD County: Sacramento
Waste Category: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method: Transfer Station
Tons: .4060
Facility County: 9

Click this hyperlink while viewing on your computer to access
18 additional CA_HAZNET: record(s) in the EDR Site Report.

CA FID UST:
Facility ID: 09000511
Regulated By: UTNKA
Regulated ID: 00065125
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 9165414070

SOUTH SHORE MOTORS (Continued) **1000406744**

Mail To:	Not reported
Mailing Address:	P O BOX
Mailing Address 2:	Not reported
Mailing City,St,Zip:	SOUTH LAKE TAHOE 95731
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

HIST UST:

Region:	STATE
Facility ID:	00000065125
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00002000
Facility Type:	Other
Other Type:	AUTOMOBILE DEALER
Total Tanks:	0002
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	Not reported
Leak Detection:	None
Contact Name:	FRED STEETER
Telephone:	9165414070
Owner Name:	FRED STREETER
Owner Address:	MCFALL
Owner City,St,Zip:	ZEPHYR COVE, NV 89448

Region:	STATE
Facility ID:	00000065125
Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00000000
Facility Type:	Other
Other Type:	AUTOMOBILE DEALER
Total Tanks:	0002
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	None
Contact Name:	FRED STEETER
Telephone:	9165414070
Owner Name:	FRED STREETER
Owner Address:	MCFALL
Owner City,St,Zip:	ZEPHYR COVE, NV 89448

SWEEPS UST:

Status:	Not reported
Comp Number:	65125
Number:	Not reported
Board Of Equalization:	Not reported

SOUTH SHORE MOTORS (Continued) **1000406744**

Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	09-000-065125-000001
Actv Date:	Not reported
Capacity:	2000
Tank Use:	OIL
Stg:	WASTE
Content:	WASTE OIL
Number Of Tanks:	2

Status:	Not reported
Comp Number:	65125
Number:	Not reported
Board Of Equalization:	Not reported
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	09-000-065125-000002
Actv Date:	Not reported
Capacity:	1
Tank Use:	M.V. FUEL
Stg:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	Not reported

32
North
1/8-1/4
1181 ft.

PACIFIC BELL
DUNLAP AND ELOISE
SOUTH LAKE TAHOE, CA 96150

RCRA-SQG **1000251553**
FINDS **CAT080024516**

Relative:
Lower

Actual:
6263 ft.

RCRAInfo:

Owner:	NOT REQUIRED (415) 555-1212
EPA ID:	CAT080024516
Contact:	Not reported
Classification:	Small Quantity Generator
TSDF Activities:	Not reported
Violation Status:	No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Map ID Direction Distance Distance (ft.) Elevation	Site	Database(s)	EDR ID Number EPA ID Number
J33 **NNW** **1/8-1/4** **1211 ft.**	**BEACON SWISS MART** **913 EMERALD BAY RD** **SOUTH LAKE TAHOE, CA 96150**	**HAZNET** **LUST** **Cortese** **CA FID UST** **SWEEPS UST**	**S101581256** **N/A**

Site 3 of 4 in cluster J

Relative:
Lower

Actual:
6266 ft.

HAZNET:

Gepaid:	CAC001266640
Contact:	BEACON SWISS MART
Telephone:	0000000000
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	913 EMERALD BAY AVE
Mailing City,St,Zip:	SOUTH LAKE TAHOE, CA 961500000
Gen County:	9
TSD EPA ID:	CAD044003556
TSD County:	Yolo
Waste Category:	Tank bottom waste
Disposal Method:	Transfer Station
Tons:	1.4595
Facility County:	9

LUST:

Region:	STATE
Case Type:	Soil only
Cross Street:	5TH ST.
Enf Type:	None Taken
Funding:	R
How Discovered:	Nuisance Conditions
How Stopped:	Not reported
Leak Cause:	Loose Fitting
Leak Source:	Piping
Global Id:	T0601700123
Stop Date:	1994-06-04 00:00:00
Confirm Leak:	1994-06-04 00:00:00
Workplan:	Not reported
Prelim Assess:	Not reported
Pollution Char:	Not reported
Remed Plan:	Not reported
Remed Action:	Not reported
Monitoring:	Not reported
Close Date:	1995-11-08 00:00:00
Discover Date:	1994-06-03 00:00:00
Enforcement Dt:	1965-01-01 00:00:00
Release Date:	1994-09-12 00:00:00
Review Date:	1995-11-02 00:00:00
Enter Date:	1994-06-11 00:00:00
MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Max MTBE GW ppb:	Not reported
Max MTBE Soil ppb:	Not reported
County:	09
Org Name:	Not reported
Reg Board:	6T
Status:	Case Closed
Chemical:	Unleaded Gasoline
Contact Person:	Not reported
Responsible Party:	SWISS MART