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TREASURE ISLAND
SSIC NO. 5090.3.A

DEPARTMENT OF THE NAVY
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
1230 COLUMBIA STREET, SUITE 1100
SAN DIEGO, CA 92101-8571

5090
Ser BPMOW.JBS/0275
January 5, 2005

Mr. David Rist
California Environmental Protection Agency
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, CA 94710

Dear Mr. Rist:

Subj: PATH FORWARD AND RESPONSES TO REGULATORY AGENCY COMMENTS ON THE FINAL TECHNICAL MEMORANDUM SUMMARY OF SOIL GAS INVESTIGATION, INSTALLATION RESTORATION SITE 12, OF MAY 2, 2003, NAVAL STATION TREASURE ISLAND, SAN FRANCISCO, CALIFORNIA

Enclosure (1) presents the Navy responses to comments on the Final Technical Memorandum Summary of Soil Gas Investigation at Installation Restoration Site 12.

The Navy proposes that the path forward be to incorporate the results of the soil gas investigation into the Site 12 Remedial Investigation (RI) and address any soil gas issues through the RI process.

If you have any questions, please contact me at (619) 532-0966.

Sincerely,

JAMES B. SULLIVAN
BRAC Environmental Coordinator
By direction of the Director

Encl: (1) Responses to Regulatory Agency Comments on the Final Technical Memorandum Summary of Soil Gas Investigation, Installation Restoration Site 12, of May 2, 2003, Naval Station Treasure Island, San Francisco, California

Copy to:
Ms. Patti Collins, U.S. Environmental Protection Agency, Region IX
Mr. Alan Friedman, California Regional Water Quality Control Board
Mr. Jack Sylvan, Mayor's Office of Base Reuse and Development
Mr. Marc McDonald, Treasure Island Development Authority
Mr. Randall Smith, San Francisco Public Utilities Commission
Ms. Susan Glendening, San Francisco
Mr. Phil Burke, CH2M Hill

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Mr. Keith Sheets, CH2M Hill
Mr. Gary Foote, Geomatrix Consultants
Mr. James McClure, Geomatrix Consultants
Mr. John Baur, Shaw Environmental & Infrastructure
Mr. Pete Bourgeois, Shaw Environmental & Infrastructure
Ms. Marcie Rash, Tetra Tech EM Inc. (w/o encl)

January 5, 2005

RESPONSES TO REGULATORY AGENCY COMMENTS ON FINAL TECHNICAL MEMORANDUM SUMMARY OF SOIL GAS INVESTIGATION INSTALLATION RESTORATION SITE 12 OF MAY 2, 2003, NAVAL STATION TREASURE ISLAND, SAN FRANCISCO, CALIFORNIA

This document presents the U.S. Department of the Navy's (Navy) responses to comments from the California Regional Water Quality Control Board (Water Board), Department of Toxic Substances Control (DTSC), and Geomatrix Consultants on the Final Technical Memorandum Summary of Soil Gas Investigation Installation Restoration Site 12, Naval Station Treasure Island, San Francisco, California, dated May 2, 2003. The comments addressed below were received verbally from the DTSC and the Water Board during the June 2, 2003 BCT Meeting. The Navy does not plan to issue another version of the May 2, 2003 Final Technical Memorandum, but will incorporate any further changes within the Site 12 Remedial Investigation (RI) documentation.

RESPONSES TO GEOMATRIX COMMENTS

GENERAL COMMENTS

1. **Comment:** **Sample IDs are not included in Figure 1.**

   Response: Figure 1 will be updated in the Site 12 RI to include sample location identification.

RESPONSES TO DTSC COMMENTS

GENERAL COMMENTS

1. **Comment:** **DTSC believes that the Navy needs to fully characterize the contamination in the Gateview Avenue and Northpoint Drive area prior to transfer to ensure both the current and future protection of maintenance and utility workers. After characterization of the soil gas has been completed, this area should be included for evaluation in the Site 12 EE/CA.**

   Response:

   The Navy acknowledges the potential risk to utility or maintenance workers in this area. The Navy has restricted any underground work in this area for the protection of workers. Any proposed underground work in the area requires an Excavation Permit to be issued by the San Francisco Public Utilities Commission (SFPUC) with concurrence by the Navy. The results of the soil gas investigation will be incorporated into the Site 12 Remedial Investigation (RI). Any soil gas issues will be

addressed through the RI process. The Navy plans to complete the Site 12 RI in advance of any future decisions on removal or remedial actions within Site 12.

2. **Comment:** **DTSC believes that methane and VOCs are present in Solid Waste Disposal Area A at concentrations that could represent a high risk to utility or maintenance workers if ground-disturbing activities were initiated. DTSC further believes that the detected VOCs and methane are important drivers when considering the various alternatives for addressing contamination that is known to exist in Solid Waste Disposal Area A.**

   Response: See response to Comment 1. Area A is also vacant and fenced and has a limited level of activity in the area.

3. **Comment:** **<u>Figure 6</u>: Numerous sample points appear in the figure to be outside of the fence line when in actuality they are located within the fence line.**

   Response: Figure 6 will be updated in the Site 12 RI to correctly show the relationship between the sample points and the fence.

4. **Comment:** **Units are inconsistent between tables. For example, in Table 1 units are represented as ppbv while in Table 3 units are represented as ug/m^3.**

   Response: For easier comparison to RBSLs, attached Tables 1 and 2 present all VOC detections in ug/m^3.

5. **Comment:** **<u>Section 4.3.2:</u> Further explanation is necessary regarding the solubility of mercaptans and the correlation between a lack of mercaptans and the source of methane.**

   Response: Because of the relatively high solubility of mercaptans and the shallow water table, the BCT agreed that a degree of uncertainty existed when using a lack of mercaptans to eliminate the natural gas utility line as the source of methane. In Area A, a direct relationship between the observed soil gas methane and the source was evident when the gas utility line was capped and the soil gas was re-sampled; the methane in this area quickly dissipated after the gas line was capped.

6. **Comment:** **The Navy has identified an action level of 2.5 percent of the LEL for methane. The source of this number is required.**

   Response: Originally, based on California Integrated Waste Management Board guidance, the Navy proposed an action level of 5 percent of the LEL as a

conservative screening goal. The City of San Francisco recommended that considering the investigation took place within a residential area that a lower screening level (2.5 percent of the LEL) would be more appropriate. The landfill regulations can be found at: http://www.ciwmb.ca.gov/LEAAdvisory/55/AttachA.htm

RESPONSES TO WATER BOARD COMMENTS

GENERAL COMMENTS

1. **Comment:** **An update to the RBSLs was released by the Water Board in March 2003 and should be compared to those RBSLs used in the document.**

   Response: Results from the initial investigation were compared to the March 2003 Interim RBSLs. The attached tables (Tables 1 through 4) present a comparison of the 2000 and 2003 screening levels and all compounds exceeding the 2003 screening levels. Those compounds below the 2000 RBSLs but above the 2003 RBSLs are shown in bold type.

TABLE 1
VOCS DETECTED IN SOIL GAS AND INDOOR AIR DURING INITIAL INVESTIGATION
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result ($\mu g/m^3$)	2003 RBSL
12-AA004	ACETONE	10.12	73,000
12-AA004	METHYLENE CHLORIDE	8.83	2,400
12-AA005	1,4-DIOXANE	12.44	NA
12-AA005	ACETONE	11.57	73,000
12-AA005	CHLOROMETHANE	3.36	1,400
12-AA005	METHYLENE CHLORIDE	8.83	2,400
12-AA006	METHYLENE CHLORIDE	9.88	2,400
12-AA007	ACETONE	20.24	73,000
12-AA007	METHYLENE CHLORIDE	9.53	2,400
12-AA008	ETHANOL	14.98	NA
12-AA008	METHYLENE CHLORIDE	9.88	2,400
12-AA009	CHLOROMETHANE	2.52	1,400
12-AA009	METHYLENE CHLORIDE	10.24	2,400
12-AA010	ACETONE	9.40	73,000
12-AA010	CHLOROMETHANE	2.10	1,400
12-AA010	METHYLENE CHLORIDE	9.88	2,400
12-AA011	ACETONE	23.38	73,000
12-AA011	ETHANOL	9.60	NA
12-AA011	METHYLENE CHLORIDE	9.88	2,400
12-AA012	ACETONE	21.45	73,000
12-AA012	FREON 11	4.91	NA
12-AA013	ACETONE	11.81	73,000
12-AA013	FREON 11	18.27	NA
12-AA014	1,4-DIOXANE	27.82	NA
12-AA014	ACETONE	9.64	73,000
12-AA014	ACETONE	15.91	73,000
12-SG015	ACETONE	28.92	73,000
12-SG015	ACETONE	33.74	73,000
12-SG015	BENZENE	3.06	84
12-SG015	ETHANOL	12.29	NA
12-SG015	METHYLENE CHLORIDE	8.47	2,400
12-SG015	METHYLENE CHLORIDE	8.47	2,400
12-SG015	TOLUENE	3.03	83,000
12-SG016	1,2,4-TRIMETHYLBENZENE	5.50	NA
12-SG016	ACETONE	26.51	73,000
12-SG016	BENZENE	7.48	84
12-SG016	CHLOROFORM	5.46	460
12-SG016	CHLOROMETHANE	2.73	1,400
12-SG016	FREON 12	4.88	NA
12-SG016	M,P-XYLENES	5.29	21,000
12-SG016	METHYLENE CHLORIDE	5.30	2,400
12-SG016	TOLUENE	7.66	83,000
12-SG017	1,2,4-TRIMETHYLBENZENE	7.00	NA
12-SG017	2-BUTANONE	12.00	2,100,000
12-SG017	ACETONE	67.48	73,000
12-SG017	BENZENE	3.25	84
12-SG017	CHLOROETHANE	2.68	2,900
12-SG017	CHLOROMETHANE	3.15	1,400
12-SG017	ETHANOL	9.98	NA
12-SG017	HEXANE	11.10	NA
12-SG017	M,P-XYLENES	6.62	21,000
12-SG017	TOLUENE	6.89	83,000
12-SG018	1,2,4-TRIMETHYLBENZENE	5.50	NA
12-SG018	2-BUTANONE	19.80	2,100,000
12-SG018	ACETONE	77.12	73,000
12-SG018	BENZENE	9.10	84
12-SG018	ETHANOL	10.37	NA
12-SG018	HEPTANE	22.10	NA
12-SG018	HEXANE	32.22	NA
12-SG018	M,P-XYLENES	7.94	21,000
12-SG018	METHYLENE CHLORIDE	10.24	2,400
12-SG018	TOLUENE	10.34	83,000

TABLE 1
VOCS DETECTED IN SOIL GAS AND INDOOR AIR DURING INITIAL INVESTIGATION
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result ($\mu g/m^3$)	2003 RBSL
12-SG019	2-PROPANOL	10.50	NA
12-SG019	ACETONE	8.68	73,000
12-SG019	BENZENE	4.88	84
12-SG019	ETHYLBENZENE	8.38	2,200
12-SG019	M,P-XYLENES	9.26	21,000
12-SG019	METHYLENE CHLORIDE	4.59	2,400
12-SG019	O-XYLENE	3.92	21,000
12-SG019	TETRAHYDROFURAN	22.20	NA
12-SG019	TOLUENE	42.13	83,000
12-SG019	TRICHLOROETHENE	39.86	1,200
12-SG020	1,2,4-TRIMETHYLBENZENE	4.70	NA
12-SG020	2-BUTANONE	20.40	2,100,000
12-SG020	ACETONE	77.12	73,000
12-SG020	BENZENE	4.23	84
12-SG020	ETHANOL	9.98	NA
12-SG020	M,P-XYLENES	5.29	21,000
12-SG020	METHYLENE CHLORIDE	8.12	2,400
12-SG020	TOLUENE	5.75	83,000
12-SG021	2-BUTANONE	9.60	2,100,000
12-SG021	ACETONE	33.74	73,000
12-SG021	BENZENE	7.48	84
12-SG021	ETHANOL	6.14	NA
12-SG021	M,P-XYLENES	3.88	21,000
12-SG021	METHYLENE CHLORIDE	9.18	2,400
12-SG021	TOLUENE	4.21	83,000
12-SG022	2-BUTANONE	10.20	2,100,000
12-SG022	ACETONE	38.56	73,000
12-SG022	BENZENE	27.95	84
12-SG022	CHLOROFORM	4.66	460
12-SG022	ETHANOL	6.34	NA
12-SG022	ETHYLBENZENE	4.37	2,200
12-SG022	HEXANE	10.74	NA
12-SG022	M,P-XYLENES	8.38	21,000
12-SG022	METHYLENE CHLORIDE	8.12	2,400
12-SG022	O-XYLENE	3.35	21,000
12-SG022	TETRACHLOROETHENE	14.47	410
12-SG022	TOLUENE	27.96	83,000
12-SG023	2-BUTANONE	9.00	2,100,000
12-SG023	ACETONE	45.79	73,000
12-SG023	BENZENE	26.00	84
12-SG023	CHLOROFORM	8.43	460
12-SG023	M,P-XYLENES	6.17	21,000
12-SG023	TETRACHLOROETHENE	15.85	410
12-SG023	TOLUENE	17.62	83,000
12-SG024	ACETONE	139.78	73,000
12-SG024	**BENZENE**	**198.25**	**84**
12-SG024	CYCLOHEXANE	665.00	NA
12-SG024	HEXANE	429.60	NA
12-SG024	HYDROGEN SULFIDE	28.40	NA
12-SG024	M,P-XYLENES	20.29	21,000
12-SG024	TOLUENE	26.43	83,000
12-SG025	2-BUTANONE	9.00	2,100,000
12-SG025	ACETONE	17.35	73,000
12-SG025	ACETONE	33.74	73,000
12-SG025	CHLOROFORM	119.04	460
12-SG025	CHLOROFORM	128.96	460
12-SG025	ETHANOL	10.56	NA
12-SG025	M,P-XYLENES	5.29	21,000
12-SG025	M,P-XYLENES	5.73	21,000
12-SG025	METHYLENE CHLORIDE	3.28	2,400
12-SG025	METHYLENE CHLORIDE	10.94	2,400
12-SG025	TOLUENE	4.21	83,000
12-SG025	TOLUENE	4.60	83,000

TABLE 1
VOCS DETECTED IN SOIL GAS AND INDOOR AIR DURING INITIAL INVESTIGATION
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result (µg/m^3)	2003 RBSL
12-SG026	1,2,4-TRIMETHYLBENZENE	8.50	NA
12-SG026	2-BUTANONE	48.00	2,100,000
12-SG026	ACETONE	161.47	73,000
12-SG026	BENZENE	7.80	84
12-SG026	BROMOMETHANE	7.25	1,000
12-SG026	CHLOROFORM	6.94	460
12-SG026	ETHANOL	23.04	NA
12-SG026	ETHYLBENZENE	5.29	2,200
12-SG026	M,P-XYLENES	13.67	21,000
12-SG026	METHYLENE CHLORIDE	3.04	2,400
12-SG026	O-XYLENE	4.85	21,000
12-SG026	TOLUENE	22.60	83,000
12-SG027	1,2,4-TRIMETHYLBENZENE	5.00	NA
12-SG027	2-BUTANONE	9.60	2,100,000
12-SG027	ACETONE	40.97	73,000
12-SG027	BENZENE	7.48	84
12-SG027	CHLOROFORM	7.44	460
12-SG027	M,P-XYLENES	7.06	21,000
12-SG027	METHYLENE CHLORIDE	9.18	2,400
12-SG027	TETRACHLOROETHENE	31.69	410
12-SG027	TOLUENE	10.34	83,000
12-SG027	TRICHLOROETHENE	60.06	1,200
12-SG028	1,2,4-TRIMETHYLBENZENE	5.00	NA
12-SG028	2-BUTANONE	11.40	2,100,000
12-SG028	ACETONE	40.97	73,000
12-SG028	BENZENE	15.60	84
12-SG028	CHLOROFORM	15.87	460
12-SG028	ETHANOL	8.45	NA
12-SG028	HEPTANE	20.02	NA
12-SG028	HEXANE	39.38	NA
12-SG028	M,P-XYLENES	9.70	21,000
12-SG028	METHYLENE CHLORIDE	8.83	2,400
12-SG028	O-XYLENE	3.53	21,000
12-SG028	TETRACHLOROETHENE	16.54	410
12-SG028	TOLUENE	13.41	83,000
12-SG029	1,1-DICHLOROETHANE	49.32	1,500
12-SG029	1,2,4-TRIMETHYLBENZENE	45.00	NA
12-SG029	ACETONE	236.18	73,000
12-SG029	**BENZENE**	**305.50**	**84**
12-SG029	CIS-1,2-DICHLOROETHENE	68.51	7,300
12-SG029	HEXANE	537.00	NA
12-SG029	TOLUENE	37.53	83,000
12-SG029	VINYL CHLORIDE	104.00	31
12-SG030	**1,1,2,2-TETRACHLOROETHANE**	**167.52**	**42**
12-SG030	1,1-DICHLOROETHANE	357.57	1,500
12-SG030	1,1-DICHLOROETHENE	104.78	42,000
12-SG030	**BENZENE**	**221.00**	**84**
12-SG030	CIS-1,2-DICHLOROETHENE	685.10	7,300
12-SG030	CYCLOHEXANE	1,295.00	NA
12-SG030	HEPTANE	300.24	NA
12-SG030	HEXANE	3,580.00	NA
12-SG030	TETRACHLOROETHENE	110.24	410
12-SG030	TRICHLOROETHENE	305.76	1,200
12-SG030	VINYL CHLORIDE	241.80	31
12-SG031	1,2,4-TRIMETHYLBENZENE	20.50	NA
12-SG031	1,3,5-TRIMETHYLBENZENE	7.00	NA
12-SG031	4-ETHYLTOLUENE	27.90	NA
12-SG031	ACETONE	40.97	73,000
12-SG031	BENZENE	61.75	84
12-SG031	CHLOROMETHANE	1.93	1,400
12-SG031	CIS-1,2-DICHLOROETHENE	8.06	7,300
12-SG031	ETHANOL	8.45	NA

TABLE 1
VOCS DETECTED IN SOIL GAS AND INDOOR AIR DURING INITIAL INVESTIGATION
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result ($\mu g/m^3$)	2003 RBSL
12-SG031	ETHYLBENZENE	23.81	2,200
12-SG031	HEXANE	19.69	NA
12-SG031	M,P-XYLENES	57.33	21,000
12-SG031	O-XYLENE	19.85	21,000
12-SG031	TOLUENE	103.41	83,000
12-SG031	TRICHLOROETHENE	13.10	1,200
12-SG031	VINYL CHLORIDE	8.58	31
12-SG032	ACETONE	139.78	73,000
12-SG032	TETRACHLOROETHENE	19.29	410
12-SG032	TOLUENE	2.99	83,000
12-SG033	1,1,1-TRICHLOROETHANE	32.19	46,000
12-SG033	**1,1,2,2-TETRACHLOROETHANE**	**50.26**	**42**
12-SG033	ACETONE	23.62	73,000
12-SG033	CARBON DISULFIDE	16.80	NA
12-SG033	CHLOROFORM	6.45	460
12-SG033	CHLOROMETHANE	2.31	1,400
12-SG033	CIS-1,2-DICHLOROETHENE	3.59	7,300
12-SG033	M,P-XYLENES	4.15	21,000
12-SG033	TETRACHLOROETHENE	82.68	410
12-SG033	TOLUENE	7.66	83,000
12-SG033	TRICHLOROETHENE	147.42	1,200
12-SG034	1,2,4-TRIMETHYLBENZENE	18.00	NA
12-SG034	1,3,5-TRIMETHYLBENZENE	4.60	NA
12-SG034	1,4-DIOXANE	12.81	NA
12-SG034	ACETONE	53.02	73,000
12-SG034	BENZENE	3.90	84
12-SG034	CHLOROMETHANE	2.10	1,400
12-SG034	CIS-1,2-DICHLOROETHENE	18.54	7,300
12-SG034	ETHYLBENZENE	4.10	2,200
12-SG034	M,P-XYLENES	20.73	21,000
12-SG034	METHYLENE CHLORIDE	6.71	2,400
12-SG034	O-XYLENE	7.06	21,000
12-SG034	TOLUENE	14.55	83,000
12-SG034	TRICHLOROETHENE	245.70	1,200
12-SG035	2-BUTANONE	10.20	2,100,000
12-SG035	2-PROPANOL	19.75	NA
12-SG035	2-PROPANOL	52.50	NA
12-SG035	ACETONE	31.33	73,000
12-SG035	ACETONE	38.56	73,000
12-SG035	BENZENE	2.80	84
12-SG035	CARBON DISULFIDE	12.36	NA
12-SG035	CARBON DISULFIDE	28.85	NA
12-SG035	CHLOROFORM	8.93	460
12-SG035	CHLOROFORM	10.42	460
12-SG035	DIMETHYL DISULFIDE	30.96	NA
12-SG035	ETHANOL	38.40	NA
12-SG035	ETHANOL	67.20	NA
12-SG035	M,P-XYLENES	5.29	21,000
12-SG035	M,P-XYLENES	5.73	21,000
12-SG035	TETRACHLOROETHENE	13.09	410
12-SG035	TETRACHLOROETHENE	22.05	410
12-SG035	TOLUENE	4.98	83,000
12-SG035	TOLUENE	4.98	83,000
12-SG035	TRICHLOROETHENE	26.21	1,200
12-SG035	TRICHLOROETHENE	35.49	1,200
12-SG036	**1,1,2,2-TETRACHLOROETHANE**	**97.72**	**42**
12-SG036	1,2,4-TRIMETHYLBENZENE	5.50	NA
12-SG036	ACETONE	17.35	73,000
12-SG036	CHLOROFORM	10.42	460
12-SG036	CHLOROMETHANE	2.10	1,400
12-SG036	CIS-1,2-DICHLOROETHENE	4.43	7,300
12-SG036	M,P-XYLENES	7.50	21,000
12-SG036	TETRACHLOROETHENE	18.60	410
12-SG036	TOLUENE	6.51	83,000
12-SG036	TRICHLOROETHENE	81.90	1,200

TABLE 1
VOCS DETECTED IN SOIL GAS AND INDOOR AIR DURING INITIAL INVESTIGATION
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result ($\mu g/m^3$)	2003 RBSL
12-SG037	1,2,4-TRIMETHYLBENZENE	6.50	NA
12-SG037	2-BUTANONE	9.30	2,100,000
12-SG037	ACETONE	62.66	73,000
12-SG037	CHLOROFORM	9.42	460
12-SG037	ETHANOL	7.30	NA
12-SG037	FREON 113	22.59	NA
12-SG037	M,P-XYLENES	7.94	21,000
12-SG037	METHYLENE CHLORIDE	10.59	2,400
12-SG037	TETRACHLOROETHENE	14.47	410
12-SG037	TOLUENE	4.98	83,000
12-SG037	TRICHLOROETHENE	44.23	1,200
12-SG038	**1,1,2,2-TETRACHLOROETHANE**	**7,678.00**	**42**
12-SG038	**1,1,2-TRICHLOROETHANE**	**721.50**	**150**
12-SG038	CIS-1,2-DICHLOROETHENE	4,030.00	7,300
12-SG038	**TETRACHLOROETHENE**	**2,342.60**	**410**
12-SG038	TRANS-1,2-DICHLOROETHENE	3,627.00	15,000
12-SG038	**TRICHLOROETHENE**	**44,772.00**	**1,200**
12-SG039	**1,1,2,2-TETRACHLOROETHANE**	**54.44**	**42**
12-SG039	1,2,4-TRIMETHYLBENZENE	4.50	NA
12-SG039	1,4-DIOXANE	40.26	NA
12-SG039	ACETONE	13.74	73,000
12-SG039	CIS-1,2-DICHLOROETHENE	3.18	7,300
12-SG039	ETHANOL	5.95	NA
12-SG039	M,P-XYLENES	4.32	21,000
12-SG039	TETRACHLOROETHENE	7.58	410
12-SG039	TOLUENE	3.83	83,000
12-SG039	TRICHLOROETHENE	51.87	1,200
12-SG040	1,2,4-TRIMETHYLBENZENE	10.50	NA
12-SG040	1,4-DIOXANE	13.18	NA
12-SG040	ACETONE	50.61	73,000
12-SG040	CHLOROMETHANE	3.57	1,400
12-SG040	M,P-XYLENES	12.35	21,000
12-SG040	METHYLENE CHLORIDE	11.65	2,400
12-SG040	O-XYLENE	4.85	21,000
12-SG040	TOLUENE	7.28	83,000
12-SG041	**1,1,2,2-TETRACHLOROETHANE**	**153.56**	**42**
12-SG041	1,1,2-TRICHLOROETHANE	5.55	150
12-SG041	ACETONE	14.22	73,000
12-SG041	CHLOROFORM	4.71	460
12-SG041	CIS-1,2-DICHLOROETHENE	15.31	7,300
12-SG041	HYDROGEN SULFIDE	8.80	NA
12-SG041	TETRACHLOROETHENE	34.45	410
12-SG041	TRICHLOROETHENE	169.26	1,200
12-SG042	**1,1,2,2-TETRACHLOROETHANE**	**118.66**	**42**
12-SG042	1,2,4-TRIMETHYLBENZENE	3.80	NA
12-SG042	1,4-DIOXANE	16.84	NA
12-SG042	2-BUTANONE	9.00	2,100,000
12-SG042	ACETONE	31.33	73,000
12-SG042	CHLOROFORM	7.94	460
12-SG042	CIS-1,2-DICHLOROETHENE	6.05	7,300
12-SG042	M,P-XYLENES	4.41	21,000
12-SG042	TETRACHLOROETHENE	26.87	410
12-SG042	TOLUENE	3.83	83,000
12-SG042	TRICHLOROETHENE	125.58	1,200
12-SG043	1,2,4-TRIMETHYLBENZENE	17.50	NA
12-SG043	1,3,5-TRIMETHYLBENZENE	5.50	NA
12-SG043	ACETONE	19.28	73,000
12-SG043	CHLOROFORM	20.83	460
12-SG043	CHLOROMETHANE	1.89	1,400
12-SG043	M,P-XYLENES	22.93	21,000
12-SG043	O-XYLENE	7.94	21,000
12-SG043	TOLUENE	11.49	83,000

TABLE 1
VOCS DETECTED IN SOIL GAS AND INDOOR AIR DURING INITIAL INVESTIGATION
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result (µg/m^3)	2003 RBSL
12-SG044	**1,1,2,2-TETRACHLOROETHANE**	**111.68**	**42**
12-SG044	ACETONE	26.51	73,000
12-SG044	CARBON DISULFIDE	24.73	NA
12-SG044	CARBON DISULFIDE	41.21	NA
12-SG044	CARBONYL SULFIDE	22.50	NA
12-SG044	CIS-1,2-DICHLOROETHENE	6.85	7,300
12-SG044	ETHANOL	7.30	NA
12-SG044	TETRACHLOROETHENE	12.40	410
12-SG044	TOLUENE	3.06	83,000
12-SG044	TRICHLOROETHENE	98.28	1,200
12-SG045	1,2,4-TRIMETHYLBENZENE	4.45	NA
12-SG045	1,2,4-TRIMETHYLBENZENE	6.00	NA
12-SG045	ACETONE	28.92	73,000
12-SG045	ACETONE	57.84	73,000
12-SG045	CARBON DISULFIDE	15.22	NA
12-SG045	CHLOROFORM	128.96	460
12-SG045	CHLOROFORM	158.72	460
12-SG045	CHLOROMETHANE	1.93	1,400
12-SG045	ETHANOL	8.26	NA
12-SG045	ETHANOL	9.22	NA
12-SG045	FREON 12	4.07	NA
12-SG045	M,P-XYLENES	7.94	21,000
12-SG045	M,P-XYLENES	8.82	21,000
12-SG045	O-XYLENE	3.62	21,000
12-SG045	TOLUENE	8.43	83,000
12-SG045	TOLUENE	9.19	83,000
12-SG045	TRICHLOROETHENE	5.13	1,200
12-SG045	TRICHLOROETHENE	6.55	1,200
12-SG046	1,2,4-TRIMETHYLBENZENE	8.50	NA
12-SG046	ACETONE	31.33	73,000
12-SG046	BENZENE	2.83	84
12-SG046	CHLOROFORM	3.92	460
12-SG046	M,P-XYLENES	11.03	21,000
12-SG046	METHYLENE CHLORIDE	10.24	2,400
12-SG046	O-XYLENE	4.06	21,000
12-SG046	TOLUENE	9.96	83,000
12-SG047	1,2,4-TRIMETHYLBENZENE	9.00	NA
12-SG047	1,4-DIOXANE	23.42	NA
12-SG047	ACETONE	33.74	73,000
12-SG047	M,P-XYLENES	11.47	21,000
12-SG047	METHYLENE CHLORIDE	12.00	2,400
12-SG047	O-XYLENE	4.41	21,000
12-SG047	TOLUENE	7.66	83,000
12-SG048	1,2,4-TRIMETHYLBENZENE	10.00	NA
12-SG048	ACETONE	20.00	73,000
12-SG048	CARBON DISULFIDE	10.78	NA
12-SG048	CHLOROFORM	248.00	460
12-SG048	M,P-XYLENES	8.38	21,000
12-SG048	METHYLENE CHLORIDE	11.30	2,400
12-SG048	O-XYLENE	3.88	21,000
12-SG048	TOLUENE	6.51	83,000
12-SG049	1,2,4-TRIMETHYLBENZENE	21.00	NA
12-SG049	1,3,5-TRIMETHYLBENZENE	10.00	NA
12-SG049	1,4-DIOXANE	13.91	NA
12-SG049	4-ETHYLTOLUENE	20.65	NA
12-SG049	ACETONE	22.41	73,000
12-SG049	CHLOROMETHANE	15.33	1,400
12-SG049	ETHANOL	8.06	NA
12-SG049	FREON 11	12.56	NA
12-SG049	FREON 12	4.23	NA
12-SG049	M,P-XYLENES	17.20	21,000
12-SG049	O-XYLENE	7.94	21,000
12-SG049	TOLUENE	6.89	83,000

TABLE 1
VOCS DETECTED IN SOIL GAS AND INDOOR AIR DURING INITIAL INVESTIGATION
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result ($\mu g/m^3$)	2003 RBSL
12-SG050	1,2,4-TRIMETHYLBENZENE	8.50	NA
12-SG050	ACETONE	31.33	73,000
12-SG050	M,P-XYLENES	10.58	21,000
12-SG050	METHYLENE CHLORIDE	6.35	2,400
12-SG050	O-XYLENE	3.97	21,000
12-SG050	TOLUENE	6.89	83,000
12-SG050	TRICHLOROETHENE	4.70	1,200
12-SG051	ACETONE	24.10	73,000
12-SG051	TOLUENE	3.72	83,000
12-SG052	1,2,4-TRIMETHYLBENZENE	10.50	NA
12-SG052	2-BUTANONE	11.70	2,100,000
12-SG052	ACETONE	48.20	73,000
12-SG052	BENZENE	2.54	84
12-SG052	CHLOROFORM	18.85	460
12-SG052	FREON 12	3.97	NA
12-SG052	M,P-XYLENES	13.67	21,000
12-SG052	METHYLENE CHLORIDE	11.65	2,400
12-SG052	O-XYLENE	5.29	21,000
12-SG052	TETRACHLOROETHENE	6.89	410
12-SG052	TOLUENE	9.58	83,000
12-SG053	ACETONE	17.83	73,000
12-SG053	CHLOROFORM	5.95	460
12-SG053	M,P-XYLENES	5.29	21,000
12-SG053	TOLUENE	7.66	83,000
12-SG054	1,2,4-TRIMETHYLBENZENE	4.50	NA
12-SG054	ACETONE	22.65	73,000
12-SG054	BENZENE	2.63	84
12-SG054	CHLOROMETHANE	2.94	1,400
12-SG054	ETHANOL	6.53	NA
12-SG054	M,P-XYLENES	6.17	21,000
12-SG054	TOLUENE	8.04	83,000
12-SG055	1,2,4-TRIMETHYLBENZENE	6.00	NA
12-SG055	1,2,4-TRIMETHYLBENZENE	10.00	NA
12-SG055	ACETONE	20.00	73,000
12-SG055	ACETONE	24.10	73,000
12-SG055	BENZENE	3.19	84
12-SG055	BENZENE	6.50	84
12-SG055	CHLOROFORM	19.34	460
12-SG055	CHLOROFORM	22.82	460
12-SG055	CHLOROMETHANE	2.06	1,400
12-SG055	ETHANOL	7.49	NA
12-SG055	ETHANOL	26.88	NA
12-SG055	ETHYLBENZENE	5.73	2,200
12-SG055	M,P-XYLENES	7.50	21,000
12-SG055	M,P-XYLENES	18.08	21,000
12-SG055	O-XYLENE	6.62	21,000
12-SG055	TETRACHLOROETHENE	6.20	410
12-SG055	TOLUENE	11.11	83,000
12-SG055	TOLUENE	38.30	83,000
12-SG055	TRICHLOROETHENE	120.12	1,200
12-SG055	TRICHLOROETHENE	147.42	1,200
12-SG056	1,1,1-TRICHLOROETHANE	6.66	46,000
12-SG056	1,2,4-TRIMETHYLBENZENE	5.50	NA
12-SG056	ACETONE	22.41	73,000
12-SG056	BENZENE	9.10	84
12-SG056	CHLOROFORM	6.94	460
12-SG056	CHLOROMETHANE	1.74	1,400
12-SG056	ETHANOL	7.68	NA
12-SG056	M,P-XYLENES	8.82	21,000
12-SG056	TOLUENE	18.00	83,000
12-SG056	TRICHLOROETHENE	15.29	1,200

TABLE 1
VOCS DETECTED IN SOIL GAS AND INDOOR AIR DURING INITIAL INVESTIGATION
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result (µg/m^3)	2003 RBSL
12-SG057	1,2,4-TRIMETHYLBENZENE	6.00	NA
12-SG057	ACETONE	21.45	73,000
12-SG057	BENZENE	4.55	84
12-SG057	CARBON DISULFIDE	11.10	NA
12-SG057	CHLOROFORM	13.39	460
12-SG057	FREON 12	4.88	NA
12-SG057	M,P-XYLENES	7.50	21,000
12-SG057	METHYLENE CHLORIDE	6.71	2,400
12-SG057	TOLUENE	6.51	83,000
12-SG058	1,2,4-TRIMETHYLBENZENE	7.50	NA
12-SG058	ACETONE	38.56	73,000
12-SG058	CARBON DISULFIDE	24.41	NA
12-SG058	CHLOROMETHANE	2.52	1,400
12-SG058	ETHANOL	6.72	NA
12-SG058	FREON 12	4.02	NA
12-SG058	M,P-XYLENES	11.03	21,000
12-SG058	METHYLENE CHLORIDE	4.59	2,400
12-SG058	O-XYLENE	4.28	21,000
12-SG058	TOLUENE	11.11	83,000
12-SG059	1,2,4-TRIMETHYLBENZENE	10.00	NA
12-SG059	2-BUTANONE	11.10	2,100,000
12-SG059	ACETONE	57.84	73,000
12-SG059	BENZENE	3.58	84
12-SG059	CARBON DISULFIDE	22.19	NA
12-SG059	CHLOROMETHANE	3.36	1,400
12-SG059	ETHANOL	7.10	NA
12-SG059	FREON 12	5.53	NA
12-SG059	HEXANE	14.32	NA
12-SG059	M,P-XYLENES	12.79	21,000
12-SG059	METHYLENE CHLORIDE	6.35	2,400
12-SG059	O-XYLENE	3.79	21,000
12-SG059	TOLUENE	9.96	83,000
12-SG060	ACETONE	13.74	73,000
12-SG060	CHLOROFORM	7.44	460
12-SG060	FREON 113	17.14	NA
12-SG060	TOLUENE	4.60	83,000
12-SG061	1,2,4-TRIMETHYLBENZENE	5.00	NA
12-SG061	ACETONE	53.02	73,000
12-SG061	BENZENE	8.78	84
12-SG061	CHLOROFORM	11.90	460
12-SG061	FREON 11	9.71	NA
12-SG061	M,P-XYLENES	7.94	21,000
12-SG061	O-XYLENE	3.40	21,000
12-SG061	TOLUENE	10.72	83,000
12-SG062	1,2,4-TRIMETHYLBENZENE	4.95	NA
12-SG062	ACETONE	48.20	73,000
12-SG062	BENZENE	2.54	84
12-SG062	ETHANOL	8.45	NA
12-SG062	M,P-XYLENES	5.29	21,000
12-SG062	TOLUENE	5.36	83,000
12-SG063	1,2,4-TRIMETHYLBENZENE	6.50	NA
12-SG063	2-BUTANONE	10.50	2,100,000
12-SG063	ACETONE	96.40	73,000
12-SG063	BENZENE	3.25	84
12-SG063	CHLOROFORM	10.42	460
12-SG063	ETHANOL	6.34	NA
12-SG063	FREON 12	4.38	NA
12-SG063	HEPTANE	12.93	NA
12-SG063	HEXANE	10.74	NA
12-SG063	M,P-XYLENES	10.14	21,000
12-SG063	METHYLENE CHLORIDE	3.39	2,400
12-SG063	O-XYLENE	4.41	21,000
12-SG063	TOLUENE	10.72	83,000
12-SG064	1,2,4-TRIMETHYLBENZENE	10.50	NA
12-SG064	ACETONE	17.59	73,000

Location ID	Analyte	Result ($\mu g/m^3$)	2003 RBSL
12-SG064	CHLOROFORM	4.86	460
12-SG064	CHLOROMETHANE	2.31	1,400

TABLE 1
VOCS DETECTED IN SOIL GAS AND INDOOR AIR DURING INITIAL INVESTIGATION
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result ($\mu g/m^3$)	2003 RBSL
12-SG064	ETHANOL	8.06	NA
12-SG064	M,P-XYLENES	8.82	21,000
12-SG064	TOLUENE	5.75	83,000
12-SG065	1,2,4-TRIMETHYLBENZENE	9.00	NA
12-SG065	1,2,4-TRIMETHYLBENZENE	16.00	NA
12-SG065	1,3,5-TRIMETHYLBENZENE	4.50	NA
12-SG065	ACETONE	13.98	73,000
12-SG065	ACETONE	31.33	73,000
12-SG065	BENZENE	4.55	84
12-SG065	BENZENE	5.85	84
12-SG065	ETHANOL	8.06	NA
12-SG065	ETHANOL	13.06	NA
12-SG065	M,P-XYLENES	6.62	21,000
12-SG065	M,P-XYLENES	13.23	21,000
12-SG065	METHYLENE CHLORIDE	52.95	2,400
12-SG065	O-XYLENE	5.73	21,000
12-SG065	TOLUENE	7.66	83,000
12-SG065	TOLUENE	10.72	83,000
12-SG066	1,2,4-TRIMETHYLBENZENE	18.50	NA
12-SG066	1,3,5-TRIMETHYLBENZENE	5.00	NA
12-SG066	ACETONE	40.97	73,000
12-SG066	BENZENE	9.43	84
12-SG066	ETHANOL	7.10	NA
12-SG066	ETHYLBENZENE	7.50	2,200
12-SG066	M,P-XYLENES	25.14	21,000
12-SG066	O-XYLENE	8.82	21,000
12-SG066	TOLUENE	21.45	83,000
12-SG067	1,2,4-TRIMETHYLBENZENE	6.00	NA
12-SG067	ACETONE	26.51	73,000
12-SG067	CHLOROFORM	8.43	460
12-SG067	ETHANOL	6.53	NA
12-SG067	M,P-XYLENES	5.73	21,000
12-SG067	TOLUENE	3.83	83,000
12-SG068	ACETONE	31.33	73,000
12-SG068	ETHANOL	7.30	NA
12-SG069	2-BUTANONE	30.00	2,100,000
12-SG069	ACETONE	361.50	73,000
12-SG069	BENZENE	4.55	84
12-SG069	BROMOMETHANE	3.90	1,000
12-SG069	CARBON DISULFIDE	10.78	NA
12-SG069	CHLOROETHANE	4.29	2,900
12-SG069	CHLOROFORM	4.27	460
12-SG069	CHLOROMETHANE	16.59	1,400
12-SG069	ETHANOL	21.12	NA
12-SG069	TOLUENE	6.89	83,000
12-SG070	1,2,4-TRIMETHYLBENZENE	11.00	NA
12-SG070	ACETONE	15.42	73,000
12-SG070	M,P-XYLENES	9.70	21,000
12-SG070	METHYLENE CHLORIDE	5.65	2,400
12-SG070	TETRACHLOROETHENE	35.14	410
12-SG070	TOLUENE	7.28	83,000
12-SG071	1,2,4-TRIMETHYLBENZENE	13.50	NA
12-SG071	ACETONE	93.99	73,000
12-SG071	BENZENE	5.85	84
12-SG071	CHLOROFORM	11.41	460
12-SG071	M,P-XYLENES	14.99	21,000
12-SG071	TETRACHLOROETHENE	192.92	410
12-SG071	TOLUENE	14.17	83,000
12-SG072	1,2,4-TRIMETHYLBENZENE	7.50	NA
12-SG072	ACETONE	22.65	73,000
12-SG072	BENZENE	2.86	84
12-SG072	ETHYLBENZENE	3.79	2,200
12-SG072	M,P-XYLENES	11.91	21,000
12-SG072	O-XYLENE	4.01	21,000
12-SG072	TOLUENE	10.72	83,000

TABLE 1
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COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result (µg/m^3)	2003 RBSL
12-SG073	1,2,4-TRIMETHYLBENZENE	11.00	NA
12-SG073	1,3,5-TRIMETHYLBENZENE	4.00	NA
12-SG073	ACETONE	13.26	73,000
12-SG073	CHLOROFORM	7.44	460
12-SG073	M,P-XYLENES	13.23	21,000
12-SG073	O-XYLENE	4.41	21,000
12-SG073	PROPYLENE	4.90	NA
12-SG073	TOLUENE	9.19	83,000
12-SG074	ACETONE	15.42	73,000
12-SG074	M,P-XYLENES	9.70	21,000
12-SG074	TETRACHLOROETHENE	11.71	410
12-SG074	TOLUENE	9.19	83,000
12-SG075	1,2,4-TRIMETHYLBENZENE	9.50	NA
12-SG075	1,2,4-TRIMETHYLBENZENE	13.00	NA
12-SG075	ACETONE	17.35	73,000
12-SG075	ACETONE	18.56	73,000
12-SG075	CARBON DISULFIDE	9.83	NA
12-SG075	CHLOROMETHANE	2.10	1,400
12-SG075	M,P-XYLENES	8.38	21,000
12-SG075	M,P-XYLENES	11.91	21,000
12-SG075	METHYLENE CHLORIDE	3.21	2,400
12-SG075	METHYLENE CHLORIDE	3.25	2,400
12-SG075	O-XYLENE	3.44	21,000
12-SG075	O-XYLENE	4.15	21,000
12-SG075	TOLUENE	10.72	83,000
12-SG075	TOLUENE	17.24	83,000
12-SG076	ACETONE	13.50	73,000
12-SG076	BENZENE	3.90	84
12-SG076	M,P-XYLENES	4.06	21,000
12-SG076	TOLUENE	6.13	83,000
12-SG077	**1,1,2,2-TETRACHLOROETHANE**	**43.97**	**42**
12-SG077	1,2,4-TRIMETHYLBENZENE	42.50	NA
12-SG077	1,3,5-TRIMETHYLBENZENE	14.50	NA
12-SG077	2-BUTANONE	13.20	2,100,000
12-SG077	4-ETHYLTOLUENE	48.55	NA
12-SG077	ACETONE	48.20	73,000
12-SG077	CHLOROMETHANE	1.91	1,400
12-SG077	ETHANOL	16.13	NA
12-SG077	ETHYLBENZENE	10.58	2,200
12-SG077	HEPTANE	18.35	NA
12-SG077	HEXANE	18.62	NA
12-SG077	M,P-XYLENES	70.56	21,000
12-SG077	O-XYLENE	25.58	21,000
12-SG077	TETRACHLOROETHENE	7.58	410
12-SG077	TOLUENE	23.75	83,000
12-SG077	TRICHLOROETHENE	8.74	1,200
12-SG078	1,1,2,2-TETRACHLOROETHANE	25.83	42
12-SG078	1,2,4-TRIMETHYLBENZENE	9.00	NA
12-SG078	2-BUTANONE	9.90	2,100,000
12-SG078	ACETONE	38.56	73,000
12-SG078	CHLOROMETHANE	3.15	1,400
12-SG078	ETHANOL	21.12	NA
12-SG078	ETHYLBENZENE	3.40	2,200
12-SG078	M,P-XYLENES	13.23	21,000
12-SG078	O-XYLENE	4.37	21,000
12-SG078	TOLUENE	9.96	83,000
12-SG078	TRICHLOROETHENE	5.13	1,200
12-SG079	**1,1,2,2-TETRACHLOROETHANE**	**50.95**	**42**
12-SG079	2-BUTANONE	9.30	2,100,000
12-SG079	ACETONE	50.61	73,000
12-SG079	CHLOROFORM	79.36	460
12-SG079	CHLOROMETHANE	3.36	1,400
12-SG079	ETHANOL	6.14	NA

TABLE 1
VOCS DETECTED IN SOIL GAS AND INDOOR AIR DURING INITIAL INVESTIGATION
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result ($\mu g/m^3$)	2003 RBSL
12-SG079	HEPTANE	19.60	NA
12-SG079	HEXANE	21.12	NA
12-SG079	M,P-XYLENES	5.73	21,000
12-SG079	TOLUENE	6.89	83,000
12-SG079	TRICHLOROETHENE	8.74	1,200
12-SG080	1,1,2,2-TETRACHLOROETHANE	10.47	42
12-SG080	1,4-DIOXANE	19.76	NA
12-SG080	ACETONE	33.74	73,000
12-SG080	BENZENE	25.03	84
12-SG080	CHLOROMETHANE	3.15	1,400
12-SG080	ETHANOL	9.02	NA
12-SG080	ETHYLBENZENE	3.35	2,200
12-SG080	HEPTANE	30.02	NA
12-SG080	HEXANE	53.70	NA
12-SG080	M,P-XYLENES	4.01	21,000
12-SG080	TOLUENE	34.47	83,000
12-SG080	TRICHLOROETHENE	8.19	1,200
12-SG081	CYCLOHEXANE	490.00	NA
12-SG081	HEPTANE	8,757.00	NA
12-SG081	HEXANE	21,480.00	NA
12-SG082	**1,1,2,2-TETRACHLOROETHANE**	**111.68**	**42**
12-SG082	1,2,4-TRIMETHYLBENZENE	5.50	NA
12-SG082	2-BUTANONE	19.80	2,100,000
12-SG082	ACETONE	72.30	73,000
12-SG082	BENZENE	5.53	84
12-SG082	CHLOROFORM	11.90	460
12-SG082	CHLOROMETHANE	19.74	1,400
12-SG082	CYCLOHEXANE	210.00	NA
12-SG082	ETHANOL	32.64	NA
12-SG082	FREON 114	49.77	NA
12-SG082	FREON 12	39.74	NA
12-SG082	HEXANE	17.18	NA
12-SG082	M,P-XYLENES	7.94	21,000
12-SG082	METHYLENE CHLORIDE	22.24	2,400
12-SG082	TOLUENE	10.34	83,000
12-SG082	TRICHLOROETHENE	27.30	1,200
12-SG083	**1,1,2,2-TETRACHLOROETHANE**	**66.31**	**42**
12-SG083	1,2,4-TRIMETHYLBENZENE	8.00	NA
12-SG083	2-BUTANONE	13.20	2,100,000
12-SG083	ACETONE	62.66	73,000
12-SG083	CHLOROMETHANE	3.36	1,400
12-SG083	ETHANOL	21.12	NA
12-SG083	M,P-XYLENES	11.91	21,000
12-SG083	O-XYLENE	3.40	21,000
12-SG083	TETRACHLOROETHENE	6.41	410
12-SG083	TOLUENE	8.04	83,000
12-SG083	TRICHLOROETHENE	43.68	1,200
12-SG084	1,2,4-TRIMETHYLBENZENE	4.30	NA
12-SG084	ACETONE	18.32	73,000
12-SG084	CHLOROFORM	20.83	460
12-SG084	ETHANOL	6.91	NA
12-SG084	M,P-XYLENES	3.44	21,000

Bold text indicates analytes exceeding 2003 RBSL

TABLE 2
VOCS DETECTED IN SOIL GAS DURING STEP-OUT INVESTIGATIONS
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result ($\mu g/m^3$)	2003 RBSL
12-SG085	1,2,4-TRIMETHYLBENZENE	2.20	NA
12-SG085	CHLOROFORM	84.32	460
12-SG085	ETHANOL	4.80	NA
12-SG085	FREON 11	6.28	NA
12-SG085	FREON 12	2.46	NA
12-SG085	TETRACHLOROETHENE	10.34	410
12-SG085	TOLUENE	1.76	83,000
12-SG085	TRICHLOROETHENE	11.47	1,200
12-SG086	1,1,1-TRICHLOROETHANE	0.61	46,000
12-SG086	1,2,4-TRIMETHYLBENZENE	5.00	NA
12-SG086	CHLOROFORM	94.24	460
12-SG086	ETHANOL	2.88	NA
12-SG086	FREON 11	1.48	NA
12-SG086	M,P-XYLENES	2.25	21,000
12-SG086	PROPYLENE	3.50	NA
12-SG086	TETRACHLOROETHENE	3.72	410
12-SG086	TOLUENE	1.72	83,000
12-SG086	TRICHLOROETHENE	1.26	1,200
12-SG087	1,1,1-TRICHLOROETHANE	1.28	46,000
12-SG087	1,2,4-TRIMETHYLBENZENE	2.05	NA
12-SG087	BENZENE	12.03	84
12-SG087	CARBON DISULFIDE	2.12	NA
12-SG087	CHLOROFORM	3.17	460
12-SG087	CYCLOHEXANE	1.65	NA
12-SG087	ETHANOL	4.03	NA
12-SG087	FREON 11	3.43	NA
12-SG087	FREON 12	2.67	NA
12-SG087	HEXANE	2.72	NA
12-SG087	M,P-XYLENES	3.18	21,000
12-SG087	O-XYLENE	1.15	21,000
12-SG087	TETRACHLOROETHENE	2.27	410
12-SG087	TOLUENE	3.37	83,000
12-SG087	TRICHLOROETHENE	2.40	1,200
12-SG088	1,1,1-TRICHLOROETHANE	0.61	46,000
12-SG088	1,2,4-TRIMETHYLBENZENE	2.95	NA
12-SG088	4-METHYL-2-PENTANONE	0.87	NA
12-SG088	CHLOROFORM	2.83	460
12-SG088	ETHANOL	5.95	NA
12-SG088	ETHYLBENZENE	0.66	2,200
12-SG088	FREON 11	1.66	NA
12-SG088	FREON 12	3.02	NA
12-SG088	M,P-XYLENES	3.26	21,000

TABLE 2
VOCS DETECTED IN SOIL GAS DURING STEP-OUT INVESTIGATIONS
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result ($\mu g/m^3$)	2003 RBSL
12-SG088	TETRACHLOROETHENE	1.86	410
12-SG088	TOLUENE	2.07	83,000
12-SG088	TRICHLOROETHENE	2.24	1,200
12-SG089	1,2,4-TRIMETHYLBENZENE	14.50	NA
12-SG089	1,3,5-TRIMETHYLBENZENE	4.65	NA
12-SG089	4-ETHYLTOLUENE	9.00	NA
12-SG089	BENZENE	9.10	84
12-SG089	CARBON DISULFIDE	1.71	NA
12-SG089	CHLOROFORM	13.89	460
12-SG089	CIS-1,2-DICHLOROETHENE	6.45	7,300
12-SG089	ETHYLBENZENE	3.13	2,200
12-SG089	FREON 12	2.87	NA
12-SG089	M,P-XYLENES	17.64	21,000
12-SG089	O-XYLENE	8.82	21,000
12-SG089	TETRACHLOROETHENE	172.25	410
12-SG089	TOLUENE	14.17	83,000
12-SG089	TRANS-1,2-DICHLOROETHENE	5.64	15,000
12-SG089	**TRICHLOROETHENE**	**3,604**	**1,200**
12-SG090	1,1,1-TRICHLOROETHANE	1.11	46,000
12-SG090	1,1,2,2-TETRACHLOROETHANE	1.05	42
12-SG090	1,2,4-TRIMETHYLBENZENE	2.70	NA
12-SG090	1,4-DICHLOROBENZENE	1.22	220
12-SG090	BENZENE	0.94	84
12-SG090	CARBON DISULFIDE	20.29	NA
12-SG090	CHLOROFORM	1.93	460
12-SG090	ETHANOL	1.92	NA
12-SG090	ETHYLBENZENE	1.01	2,200
12-SG090	FREON 11	1.54	NA
12-SG090	FREON 12	3.02	NA
12-SG090	M,P-XYLENES	3.22	21,000
12-SG090	TETRACHLOROETHENE	16.54	410
12-SG090	TOLUENE	1.92	83,000
12-SG090	TRICHLOROETHENE	19.66	1,200
12-SG091	**1,1,2,2-TETRACHLOROETHANE**	**5,654**	**42**
12-SG091	1,1,2-TRICHLOROETHANE	122.10	150
12-SG091	CHLOROFORM	36.21	460
12-SG091	CIS-1,2-DICHLOROETHENE	644.80	7,300
12-SG091	TETRACHLOROETHENE	358.28	410
12-SG091	TRANS-1,2-DICHLOROETHENE	1,732.90	15,000
12-SG091	**TRICHLOROETHENE**	**98,280**	**1,200**
12-SG092	1,1,1-TRICHLOROETHANE	2.89	46,000
12-SG092	1,1,2,2-TETRACHLOROETHANE	3.21	42

TABLE 2
VOCS DETECTED IN SOIL GAS DURING STEP-OUT INVESTIGATIONS
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result ($\mu g/m^3$)	2003 RBSL
12-SG092	1,2,4-TRIMETHYLBENZENE	1.95	NA
12-SG092	4-METHYL-2-PENTANONE	0.92	NA
12-SG092	ACETONE	53.02	73,000
12-SG092	BENZENE	6.50	84
12-SG092	CARBON DISULFIDE	2.50	NA
12-SG092	CHLOROFORM	2.43	460
12-SG092	ETHANOL	10.75	NA
12-SG092	ETHYLBENZENE	1.28	2,200
12-SG092	FREON 11	1.60	NA
12-SG092	FREON 12	3.22	NA
12-SG092	HEPTANE	2.50	NA
12-SG092	M,P-XYLENES	2.78	21,000
12-SG092	O-XYLENE	1.28	21,000
12-SG092	TETRACHLOROETHENE	44.10	410
12-SG092	TOLUENE	4.98	83,000
12-SG092	TRANS-1,2-DICHLOROETHENE	1.29	15,000
12-SG092	TRICHLOROETHENE	70.98	1,200
12-SG093	1,1,1-TRICHLOROETHANE	2.00	46,000
12-SG093	1,2,4-TRIMETHYLBENZENE	1.10	NA
12-SG093	2-BUTANONE	156.00	2,100,000
12-SG093	BENZENE	11.38	84
12-SG093	CARBON DISULFIDE	6.02	NA
12-SG093	CHLOROFORM	2.08	460
12-SG093	CYCLOHEXANE	2.28	NA
12-SG093	ETHANOL	3.07	NA
12-SG093	ETHYLBENZENE	0.88	2,200
12-SG093	FREON 11	1.66	NA
12-SG093	FREON 12	2.92	NA
12-SG093	HEXANE	3.29	NA
12-SG093	M,P-XYLENES	4.85	21,000
12-SG093	O-XYLENE	1.41	21,000
12-SG093	TETRACHLOROETHENE	17.23	410
12-SG093	TOLUENE	12.64	83,000
12-SG093	TRICHLOROETHENE	13.10	1,200
12-SG094	1,1,1-TRICHLOROETHANE	0.89	46,000
12-SG094	1,2,4-TRIMETHYLBENZENE	2.00	NA
12-SG094	1,4-DIOXANE	3.00	NA
12-SG094	BENZENE	0.91	84
12-SG094	CARBON DISULFIDE	0.86	NA
12-SG094	CHLOROFORM	2.38	460
12-SG094	ETHANOL	2.88	NA
12-SG094	FREON 11	1.66	NA

TABLE 2
VOCS DETECTED IN SOIL GAS DURING STEP-OUT INVESTIGATIONS
COMPARISON TO 2003 RISK-BASED SCREENING LEVELS

Location ID	Analyte	Result ($\mu g/m^3$)	2003 RBSL
12-SG094	FREON 12	2.97	NA
12-SG094	M,P-XYLENES	1.94	21,000
12-SG094	PROPYLENE	2.45	NA
12-SG094	TETRACHLOROETHENE	5.93	410
12-SG094	TOLUENE	1.49	83,000
12-SG094	TRICHLOROETHENE	8.74	1,200
12-SG095	1,1,1-TRICHLOROETHANE	3.33	46,000
12-SG095	1,1,2,2-TETRACHLOROETHANE	3.91	42
12-SG095	1,2,4-TRIMETHYLBENZENE	1.45	NA
12-SG095	BENZENE	1.04	84
12-SG095	CARBON DISULFIDE	1.14	NA
12-SG095	CHLOROFORM	14.38	460
12-SG095	CIS-1,2-DICHLOROETHENE	3.14	7,300
12-SG095	ETHANOL	3.84	NA
12-SG095	FREON 11	1.48	NA
12-SG095	FREON 12	2.36	NA
12-SG095	M,P-XYLENES	1.32	21,000
12-SG095	TETRACHLOROETHENE	62.70	410
12-SG095	TOLUENE	1.19	83,000
12-SG095	TRICHLOROETHENE	600.60	1,200

Bold text indicates analytes exceeding 2003 RBSL.

TABLE 3

VOCS DETECTED IN SOIL GAS AT CONCENTRATIONS GREATER THAN MARCH 2003 INTERIM SHALLOW SOIL GAS SCREENING LEVELS DURING INITIAL INVESTIGATION

Sample ID			36912SG024	36912SG029	36912SG030	36912SG033	36912SG036	36912SG038	36912SG039	36912SG041
Location			12-SG024	12-SG029	12-SG030	12-SG033	12-SG036	12-SG038	12-SG039	12-SG041
Depth (ft bgs)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	2003 RBSL (µg/m3) [a]	2000 RBSL								
VOC over RBSL (µg/m3)										
1,1-Dichloroethene	15,000	24,000	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	150	2,900	--	--	--	--	--	**721**	--	--
1,1,2,2-Tetrachloroethane	42	450	--	--	**167.5**	**50.3**	**97.7**	7,678	**54.4**	**153.6**
Benzene	84	11,000	**198.3**	**305.5**	**221**	--	--	--	--	--
Tetrachloroethene	410	48,000	--	--	--	--	--	**2,343**	--	--
Trichloroethene	1,200	205,000	--	--	305.8	147.4	--	**44,772**	--	169.3
Vinyl Chloride	31	28,400	--	**103.9**	**241.6**	--	--	--	--	--

Notes:

[a] Table E-2. "Shallow Soil Gas Screening Levels for Evaluation of Potential Indoor-Air Impacts" (RWQCB 2003)

Bold indicates analytes where results is below 2000 RBSL but above 2003 RBSL

-- Not applicable

RBSL = Risk-Based Screening Level

TABLE 3

VOCS DETECTED IN SOIL GAS AT CONCENTRATIONS GREATER THAN MARCH 2003 INTERIM SHALLOW SOIL GAS SCREENING LEVELS DURING INITIAL INVESTIGATION

Sample ID	36912SG042	36912SG044	36912SG077	36912SG079	36912SG082	36912SG083
Location	12-SG042	12-SG044	12-SG077	12-SG079	12-SG082	12-SG083
Depth (ft bgs)	3.0	3.0	3.0	3.0	3.0	3.0
VOC over RBSL (µg/m3)						
1,1-Dichloroethene	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	**118.7**	**111.7**	**44**	**51**	**111.7**	**66.3**
Benzene	--	--	--	--	--	--
Tetrachloroethene	--	--	--	--	--	--
Trichloroethene	125.6	--	--	--	--	--
Vinyl Chloride	--	--	--	--	--	--

Notes:

[a] Table E-2. "Shallow Soil Gas Scr

Bold indicates analytes where result

-- Not applicable

RBSL = Risk-Based Screening Leve

TABLE 4

VOCS DETECTED IN SOIL GAS AT CONCENTRATIONS GREATER THAN MARCH 2003 INTERIM SHALLOW SOIL GAS SCREENING LEVELS DURING STEP-OUT INVESTIGATIONS

Sample ID			36912SG089	36912SG091
Location			12-SG089	12-SG091
Depth (ft bgs)			3.0	3.0
	2003 RBSL (µg/m3) [a]	2000 RBSL		
VOC over RBSL (µg/m3)				
1,1-Dichloroethene	15,000	24,000	--	--
1,1,2-Trichloroethane	150	2,900	--	--
1,1,2,2-Tetrachloroethane	42	450	--	5,654
Benzene	84	11,000	--	--
Tetrachloroethene	410	48,000	--	--
Trichloroethene	1,200	205,000	3,603	98,280
Vinyl Chloride	31	28,400	--	--

Notes:

[a] Table E-2. "Shallow Soil Gas Screening Levels for Evaluation of Potential Indoor-Air Impacts" (RWQCB 2003)

Bold indicates analytes where results is below 2000 RBSL but above 2003 RBSL

-- Not applicable

RBSL = Risk-Based Screening Level