3.0 Monitoring Results

This section presents the VOC sampling results from January 1, 2008 to June 30, 2008.

3.1 Repository Monitoring Data

The repository VOC monitoring results for this reporting period are summarized in Table 3. The individual monitoring results for all nine target analytes for each sample collected at location VOC-A and VOC-B are provided in Attachment 1.

Table 3. Summary of Repository VOC Monitoring Results

Target Compound	No. of Samples	Maximum Detected Value VOC-A (ppbv)	Maximum Detected Value VOC-B (ppbv)	MRLs (ppbv) Per Table N-2 HWFP	No. of Samples > MRL
Carbon Tetrachloride	102	58.81	ND	2	51
Chlorobenzene	102	ND	ND	2	0
Chloroform	102	1.41 J	ND	2	0
1,1-Dichloroethene	102	5.05 J	ND	5	0
1,2-Dichloroethane	102	ND	ND	2	0
Methylene Chloride	102	14.32	ND	5	2
1,1,2,2-Tetrachloroethane	102	ND	ND	2	0
Toluene	102	2.28 J	5.17 J	5	0
1,1,1-Trichloroethane	102	47.38	ND	5	50

ppbv = part per billion by volume

Analytical results qualified as "J" indicate that the compound is above the Practical Quantitation Limit (PQL) but below the MRL. Since these results are below the MRL, they are not used to evaluate concentration differences between VOC-A and VOC-B. Only VOC-A values above the MRL are used to evaluate concentration differences between VOC-A and VOC-B. If VOC-A results are above the MRL, those results are compared to the VOC-B reported results. If the corresponding VOC-B sample is a Non Detect (ND) or an estimated value (J), it will be assigned a value of zero. This comparison is conservative in that it assumes that there is no concentration of the target compound in the background.

Repository sample results are normalized based on airflow requirements described in the HWFP. Some values that were normalized are qualified by the laboratory with a "J" flag even though the final results were above the MRL. The laboratory qualification is still applicable and the normalized concentrations are treated as estimated values. Additionally, some normalized results

The running annual average of sample set differences is compared to the COC. Carbon tetrachloride, 1,1,1-Tetrachloroethane, and methylene chloride each had values reported above the individual MRL from sampling at VOC A. Table 4 shows that, during this reporting period, none of the running annual average concentrations of target VOCs exceeded the associated COC and the average concentrations for seven of the target compounds were less than the MRL.

Table 4. Summary of Concentration Differences (7/1/2007-6/30/2008)

Target Compound	Running Annual Average Concentration Difference Value (ppbv)	MRLs (ppbv)	COC (ppbv)
Carbon Tetrachloride	13.61	2	165
Chlorobenzene	<MRL	2	220
Chloroform	<MRL	2	180
1,1-Dichloroethene	<MRL	5	100
1,2-Dichloroethane	<MRL	2	45
Methylene Chloride	<MRL	5	1930
1,1,2,2-Tetrachloroethane	<MRL	2	50
Toluene	<MRL	5	190
1,1,1-Trichloroethane	11.71	5	590

ppbv = part per billion by volume
MRL= Method Reporting Limit
COC= Concentration of Concern

3.2 Disposal Room Monitoring Data

The following summarizes disposal room monitoring results for the reporting period. Associated data are reported in Attachment 2A and Attachment 2B.

3.2.1 Waste Disposal Activities

Waste disposal is the determining factor in which VOC monitoring locations are activated. As soon as a room receives waste, it is subject to monitoring at one location (exhaust side). When "filled" the disposal room continues to be monitored, and the inlet side is added to the sampling schedule. On January 1, 2008 the active CH waste emplacement was in Room 4 of Panel 4, the active RH emplacement was in Room 3 of Panel 4. At this stage of filling a panel, Rooms 7, 6, and 5 have two active monitoring locations (exhaust and inlet) and Rooms 4, and 3 have one (exhaust) monitoring location. Continued monitoring in Panel 3 occurred throughout the reporting period. On April 1, 2008 the sample collection from filled Panel 3 transitioned from 13 monitoring locations to the single exhaust location for Room 1. This transition was initiated by new HWFP conditions contained in Attachment N.

VOC Monitoring Program Data - Station VOC-A

For Samples Collected Between 1/1/2008 and 6/30/2008 – Concentration (ppbV)

Sample Date	Analysis Date	Lab ID	Sample ID	111TA	1122T	11DCE	12DCA	CCL4	CHBNZ	CHFRM	DCM	C7H8
1/3/2008	1/9/2008	0801070_01A	2927	17.16*	ND	1.90* J	ND	22.88*	ND	0.48* J	4.61* J	ND
1/4/2008	1/9/2008	0801070_03	2929	15.87*	ND	1.59* J	ND	19.96*	ND	0.41* J	4.38* J	0.36* J
1/9/2008	1/15/2008	0801140_02A	2945	17.19*	ND	1.40* J	ND	21.14*	ND	0.46* J	4.67* J	0.49* J
1/16/2008	1/24/2008	0801180_01A	2957	9.52*	ND	ND	ND	9.56*	ND	ND	3.53* J	2.28* J
1/17/2008	1/24/2008	0801180_03	2959	12.63*	ND	ND	ND	12.24*	ND	0.38* J	4.46* J	ND
1/22/2008	1/28/2008	0801240_01A	2975	11.95*	ND	0.47* J	ND	12.83*	ND	0.33* J	3.86* J	0.35* J
1/23/2008	1/28/2008	0801240_03	2977	15.67*	ND	1.19* J	ND	19.65*	ND	0.42* J	4.34* J	0.51* J
1/29/2008	2/7/2008	0802010_01A	2987	9.58*	ND	ND	ND	9.17*	ND	ND	3.63* J	0.37* J
1/30/2008	2/7/2008	0802010_03	2989	17.58*	ND	1.36* J	ND	22.04*	ND	0.46* J	5.00* J	0.34* J
2/5/2008	2/12/2008	0802070_01A	3005	13.00*	ND	0.46* J	ND	13.93*	ND	0.38* J	4.43* J	ND
2/6/2008	2/12/2008	0802070_03	3007	11.82*	ND	0.51* J	ND	13.17*	ND	0.33* J	3.74* J	0.33* J
2/12/2008	2/15/2008	0802140_01A	3017	11.70*	ND	ND	ND	11.35*	ND	0.34* J	4.25* J	ND
2/13/2008	2/15/2008	0802140_03	3019	16.88*	ND	0.94* J	ND	19.23*	ND	0.43* J	5.46* J	0.35* J
2/19/2008	2/25/2008	0802210_01A	3035	11.32*	ND	1.13* J	ND	11.72*	ND	0.36* J	4.06* J	0.53* J
2/20/2008	2/25/2008	0802210_03	3037	12.78*	ND	1.30* J	ND	13.73*	ND	0.40* J	4.38* J	0.86* J
2/26/2008	3/4/2008	0802290_01A	3047	10.83*	ND	ND	ND	9.29*	ND	0.37* J	4.07* J	0.47* J
2/27/2008	3/4/2008	0802290_03	3049	14.53*	ND	1.30* J	ND	16.43*	ND	0.39* J	4.46* J	0.69* J
3/4/2008	3/7/2008	0803060_01A	3065	20.11*	ND	1.37* J	ND	21.50*	ND	0.55* J	6.17* J	0.58* J
3/5/2008	3/7/2008	0803060_03	3067	13.48*	ND	0.56* J	ND	13.44*	ND	0.41* J	4.40* J	0.31* J
3/11/2008	3/19/2008	0803130_01A	3077	14.93*	ND	1.01* J	ND	14.40*	ND	0.45* J	4.83* J	0.75* J
3/12/2008	3/19/2008	0803130_03	3079	15.58*	ND	1.46* J	ND	15.70*	ND	0.50* J	5.10* J	0.83* J
3/18/2008	3/25/2008	0803240_01A	3095	12.51*	ND	0.72* J	ND	12.48*	ND	0.47* J	4.74* J	0.51* J
3/19/2008	3/25/2008	0803240_03	3097	9.88*	ND	ND	ND	8.59*	ND	0.39* J	4.00* J	0.65* J
3/25/2008	4/1/2008	0803270_02A	3109	14.70*	ND	0.92* J	ND	16.63*	ND	0.47* J	4.76* J	0.60* J
3/26/2008	4/1/2008	0803270_04	3111	12.70*	ND	0.51* J	ND	13.61*	ND	0.44* J	4.28* J	0.52* J
4/1/2008	4/4/2008	0804030_02A	3127	9.55*	ND	ND	ND	8.87*	ND	0.35* J	3.46* J	0.44* J
4/2/2008	4/4/2008	0804030_04	3129	13.63*	ND	1.08* J	ND	15.34*	ND	0.43* J	4.47* J	0.54* J
4/8/2008	4/11/2008	0804100_02A	3135	18.33*	ND	0.49* J	ND	19.62*	ND	0.77* J	6.63* J	0.68* J
4/9/2008	4/11/2008	0804100_04	3137	47.38*	ND	5.05* J	ND	58.81*	ND	1.41* J	14.32*	1.98* J
4/15/2008	4/18/2008	0804170_02A	3145	15.46*	ND	1.00* J	ND	17.37*	ND	0.54* J	4.93* J	0.43* J
4/16/2008	4/18/2008	0804170_04	3147	18.45*	ND	1.76* J	ND	23.61*	ND	0.63* J	5.55* J	0.65* J
4/22/2008	4/29/2008	0804250_02A	3153	9.69*	ND	ND	ND	10.59*	ND	0.41* J	3.51* J	0.37* J
4/23/2008	4/29/2008	0804250_04	3155	11.33*	ND	0.72* J	ND	13.79*	ND	0.47* J	3.75* J	0.59* J
4/29/2008	5/2/2008	0805010_02	3181	13.40*	ND	1.09* J	ND	17.74*	ND	0.52* J	4.57* J	0.33* J
4/30/2008	5/2/2008	0805010_04	3183	15.12*	ND	1.14* J	ND	19.37*	ND	0.60* J	5.08* J	0.42* J
5/7/2008	5/12/2008	0805090_02A	3189	8.62*	ND	0.79* J	ND	12.09*	ND	0.37* J	3.12* J	0.31* J
5/8/2008	5/12/2008	0805090_04	3191	11.31*	ND	ND	ND	11.42*	ND	0.45* J	3.94* J	0.42* J
5/13/2008	5/19/2008	0805150_01A	3199	11.22*	ND	ND	ND	11.51*	ND	0.46* J	4.02* J	0.37* J
5/14/2008	5/19/2008	0805150_03	3201	9.90*	ND	ND	ND	10.45*	ND	0.43* J	3.76* J	0.32* J
5/21/2008	5/23/2008	0805220_01A	3225	9.01*	ND	0.68* J	ND	10.22*	ND	0.36* J	2.91* J	0.40* J
5/22/2008	5/23/2008	0805220_03	3227	9.03*	ND	0.45* J	ND	9.79*	ND	0.31* J	3.12* J	0.30* J
5/28/2008	6/4/2008	0806020_02A	3237	5.91*	ND	ND	ND	6.69*	ND	0.33* J	2.36* J	0.27* J
5/29/2008	6/4/2008	0806020_04	3239	7.62*	ND	ND	ND	7.98*	ND	0.35* J	3.10* J	0.35* J
6/3/2008	6/9/2008	0806060_01A	3245	8.52*	ND	ND	ND	9.64*	ND	0.42* J	3.28* J	0.30* J
6/4/2008	6/9/2008	0806060_03	3247	11.20*	ND	0.39* J	ND	12.99*	ND	0.49* J	3.97* J	0.45* J
6/10/2008	6/18/2008	0806160_02A	3257	7.55* J	ND	0.44* J	ND	10.13*	ND	0.42* J	3.15* J	0.37* J
6/11/2008	6/18/2008	0806160_04	3259	9.99*	ND	0.57* J	ND	12.68*	ND	0.45* J	4.02* J	0.30* J
6/17/2008	6/24/2008	0806200_01A	3265	7.40*	ND	ND	ND	9.42*	ND	0.45* J	3.11* J	0.34* J
6/18/2008	6/24/2008	0806200_03	3267	6.46*	ND	ND	ND	9.36*	ND	0.46* J	3.15* J	0.26* J
6/24/2008	7/1/2008	0806260_02A	3295	18.44*	ND	0.49* J	ND	29.92*	ND	1.22* J	7.73*	0.71* J
6/25/2008	7/1/2008	0806260_04	3297	11.15*	ND	0.34* J	ND	15.06*	ND	0.53* J	3.99* J	0.31* J

Number of Samples: 51

Detection Summary

Compound	Detection Average	Detection Count
1,1,1-Trichloroethane	13.12	51
1,1,2,2-Tetrachloroethane	0	0
1,1-Dichloroethene	1.04	35
1,2-Dichloroethane	0	0
Carbon Tetrachloride	15.08	51
Chlorobenzene	0	0
Chloroform	0.47	49
Methylene Chloride	4.44	51
Toluene	0.52	47

Legend

111TA = 1,1,1-Trichloroethane

1122T = 1,1,2,2-Tetrachloroethane

11DCE = 1,1-Dichloroethene

12DCA = 1,2-Dichloroethane

CCL4 = Carbon tetrachloride

CHBNZ = Chlorobenzene

CHFRM = Chloroform

DCM = Methylene chloride

C7H8 = Toluene

Flags

B = Compound present in the laboratory blank, background subtraction not performed.

J = Estimated value: Below Method Reporting Limits (MRL), but above Practical Quantitation Limits (PQL).

* = Normalized concentration

ND/U = Compound not detected above Method Detection Limit (MDL)

!!! = Compound exceeds concentration of concern

VOC Monitoring Program Data - Station VOC-B

For Samples Collected Between 1/1/2008 and 6/30/2008 – Concentration (ppbV)

Sample Date	Analysis Date	Lab ID	Sample ID	111TA	1122T	11DCE	12DCA	CCL4	CHBNZ	CHFRM	DCM	C7H8
1/3/2008	1/9/2008	0801070_02	2928	ND	ND	ND	ND	ND	ND	ND	ND	ND
1/4/2008	1/9/2008	0801070_04	2930	ND	ND	ND	ND	ND	ND	ND	ND	ND
1/9/2008	1/15/2008	0801140_03	2946	ND	ND	ND	ND	ND	ND	ND	ND	5.17* J
1/16/2008	1/24/2008	0801180_02	2958	ND	ND	ND	ND	ND	ND	ND	ND	2.66* J
1/17/2008	1/24/2008	0801180_04	2960	ND	ND	ND	ND	ND	ND	ND	ND	ND
1/22/2008	1/28/2008	0801240_02	2976	ND	ND	ND	ND	ND	ND	ND	ND	ND
1/23/2008	1/28/2008	0801240_04	2978	ND	ND	ND	ND	ND	ND	ND	ND	ND
1/29/2008	2/7/2008	0802010_02	2988	ND	ND	ND	ND	ND	ND	ND	ND	ND
1/30/2008	2/7/2008	0802010_04	2990	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/5/2008	2/12/2008	0802070_02	3006	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/6/2008	2/12/2008	0802070_04	3008	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/12/2008	2/15/2008	0802140_02	3018	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/13/2008	2/15/2008	0802140_04	3020	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/19/2008	2/25/2008	0802210_02	3036	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/20/2008	2/25/2008	0802210_04	3038	ND	ND	ND	ND	ND	ND	ND	ND	0.33* J
2/26/2008	3/4/2008	0802290_02	3048	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/27/2008	3/4/2008	0802290_04	3050	ND	ND	ND	ND	ND	ND	ND	ND	0.32* J
3/4/2008	3/7/2008	0803060_02	3066	ND	ND	ND	ND	ND	ND	ND	ND	ND
3/5/2008	3/7/2008	0803060_04	3068	ND	ND	ND	ND	ND	ND	ND	ND	ND
3/11/2008	3/19/2008	0803130_02	3078	ND	ND	ND	ND	ND	ND	ND	ND	ND
3/12/2008	3/19/2008	0803130_04	3080	ND	ND	ND	ND	ND	ND	ND	ND	0.28* J
3/18/2008	3/25/2008	0803240_02	3096	ND	ND	ND	ND	ND	ND	ND	ND	ND
3/19/2008	3/25/2008	0803240_04	3098	ND	ND	ND	ND	ND	ND	ND	ND	0.33* J
3/25/2008	4/1/2008	0803270_01	3108	ND	ND	ND	ND	ND	ND	ND	ND	ND
3/26/2008	4/1/2008	0803270_03	3110	ND	ND	ND	ND	ND	ND	ND	ND	ND
4/1/2008	4/4/2008	0804030_01	3126	ND	ND	ND	ND	ND	ND	ND	ND	ND
4/2/2008	4/4/2008	0804030_03	3128	ND	ND	ND	ND	ND	ND	ND	ND	ND
4/8/2008	4/11/2008	0804100_01	3134	ND	ND	ND	ND	ND	ND	ND	ND	ND
4/9/2008	4/11/2008	0804100_03	3136	ND	ND	ND	ND	ND	ND	ND	ND	ND
4/15/2008	4/18/2008	0804170_01	3144	ND	ND	ND	ND	ND	ND	ND	ND	ND
4/16/2008	4/18/2008	0804170_03	3146	ND	ND	ND	ND	ND	ND	ND	ND	ND
4/22/2008	4/29/2008	0804250_01	3152	ND	ND	ND	ND	ND	ND	ND	ND	ND
4/23/2008	4/29/2008	0804250_03	3154	ND	ND	ND	ND	ND	ND	ND	ND	0.27* J
4/29/2008	5/2/2008	0805010_01	3180	ND	ND	ND	ND	ND	ND	ND	ND	ND
4/30/2008	5/2/2008	0805010_03	3182	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/7/2008	5/12/2008	0805090_01	3188	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/8/2008	5/12/2008	0805090_03	3190	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/13/2008	5/19/2008	0805150_02	3200	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/14/2008	5/19/2008	0805150_04	3202	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/21/2008	5/23/2008	0805220_02	3226	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/22/2008	5/23/2008	0805220_04	3228	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/28/2008	6/4/2008	0806020_01	3236	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/29/2008	6/4/2008	0806020_03	3238	ND	ND	ND	ND	ND	ND	ND	ND	ND
6/3/2008	6/9/2008	0806060_02	3246	ND	ND	ND	ND	ND	ND	ND	ND	ND
6/4/2008	6/9/2008	0806060_04	3248	ND	ND	ND	ND	ND	ND	ND	ND	ND
6/10/2008	6/18/2008	0806160_01	3256	ND	ND	ND	ND	ND	ND	ND	ND	ND
6/11/2008	6/18/2008	0806160_03	3258	ND	ND	ND	ND	ND	ND	ND	ND	ND
6/17/2008	6/24/2008	0806200_02	3266	ND	ND	ND	ND	ND	ND	ND	ND	ND
6/18/2008	6/24/2008	0806200_04	3268	ND	ND	ND	ND	ND	ND	ND	ND	ND
6/24/2008	7/1/2008	0806260_01	3294	ND	ND	ND	ND	ND	ND	ND	ND	ND
6/25/2008	7/1/2008	0806260_03	3296	ND	ND	ND	ND	ND	ND	ND	ND	ND

Number of Samples: 51

Detection Summary

Compound	Detection Average	Detection Count
1,1,1-Trichloroethane	0	0
1,1,2,2-Tetrachloroethane	0	0
1,1-Dichloroethene	0	0
1,2-Dichloroethane	0	0
Carbon Tetrachloride	0	0
Chlorobenzene	0	0
Chloroform	0	0
Methylene Chloride	0	0
Toluene	0.18	7

Legend

111TA = 1,1,1-Trichloroethane

1122T = 1,1,2,2-Tetrachloroethane

11DCE = 1,1-Dichloroethene

12DCA = 1,2-Dichloroethane

CCL4 = Carbon tetrachloride

CHBNZ = Chlorobenzene

CHFRM = Chloroform

DCM = Methylene chloride

C7H8 = Toluene

Flags

B = Compound present in the laboratory blank, background subtraction not performed.

J = Estimated value: Below Method Reporting Limits (MRL), but above Practical Quantitation Limits (PQL).

* = Normalized concentration

ND/U = Compound not detected above Method Detection Limit (MDL)

!!! = Compound exceeds concentration of concern