

March 1, 2006

Mr. Jeff Dyber, P.E. **Environmental Engineer 2** New York State Department of Environmental Conservation Division of Environmental Remediation Bureau of Eastern Remedial Action 625 Broadway Albany, New York 12233

> Re: National Heatset Printing **Operation & Maintenance Report-January 2006** 1 Adams Boulevard Farmingdale, New York NYSDEC Site 1-52-140

File: 10653/35518 #5

Dear Mr. Dyber:

This letter provides an overview of the ongoing operation of the soil vapor extraction (SVE) system at the National Heatset Printing Site in Farmingdale, New York (Figure 1). A site visit was performed by YEC, Inc. (YEC) personnel on January 6, 2005 on behalf of O'Brien & Gere Engineers, Inc (OBG) in accordance with our approved Work Plan.

System Operation

The SVE system operated for 100% of the reporting period (December 8, 2005 through January 6, 2006). The system operational data is summarized in Table 1 and on the site visit data collection form provided in Appendix A. Based on the run time meter, the system was operational for a total of 696 hours.

A flow of 120.0 cfm and a vacuum of 42 inches of water column were observed at the extraction well. The SVE blower operated at a flow of 245 cubic feet per minute (cfm) as measured at the SVE influent. Field personnel recorded a tetrachloroethene (PCE) concentration of 2.0 ppm (by Draeger tube) and a concentration of volatile organic compounds (VOCs) of 2.7 ppm (by PID) from the extraction well (pre-dilution).

VOC concentrations of 32.5 ppm (by PID) and a PCE concentration of 4.0 ppm (by Draeger Tube) were observed at the SVE influent port during the site visit. VOC concentrations of 19.0 ppm (by PID) and a PCE concentration of 2.0 ppm (by Draeger Tube) were observed from the Vapor-phase Granular Activated Carbon (VGAC) mid sampling port, and a VOC concentration of 5.8 ppm (by PID) and a PCE concentration of 0.0 ppm (by Draeger Tube) were observed from the effluent sampling port. Refer to Table 1.

Monitoring Probes

A vacuum of 1.95, 0.60, 0.09, 0.04, 0.05 and 0.05 inches of water column were observed during the site visit at vapor monitoring points VP-1, VP-2, VP-3, VP-7, VP-10 and VP-11 respectively. The vapor points will continue to be monitored during future site visits.

PCE Removal

PCE removal was calculated for this reporting period using SVE influent PCE concentrations and flow rate measured at the SVE influent sampling point. The SVE system removed approximately 8 pounds of PCE from

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the extraction well during this reporting period and has removed approximately 2,373 pounds of PCE to date. A summary of the estimated PCE mass removal over time is presented in Table 2.

Air Discharge Monitoring

YEC personnel collected an air sample from the system effluent and submitted the sample to Mitkem Corporation for analysis. The sample was analyzed for volatile organic compounds (VOCs) using USEPA method TO-14. Concentrations of PCE, TCE and cis-1, 2-DCE were not detected in the effluent sample above a detection limit of 1 mg/m³. Analytical results are summarized in Table 3 and the laboratory data report is presented in Appendix B. A summary of the field monitoring and laboratory air discharge monitoring results is presented as Table 4.

Based on the effluent sampling results, no PCE, TCE or cis-1, 2-DCE was discharged during the current monitoring period. A total of 4.09 lb of cis-1, 2-DCE has been discharged during the year 2005 toward the permitted annual discharge limit of 5,510 lbs. A total of 117.08 lb of PCE has been discharged during the year 2005 toward the permitted annual discharge limit of 270 lb. A total of 3.77 lb of TCE has been discharged during the year 2005 toward the permitted annual discharge limit of 120 lb.

Conclusions and Recommendations

Based on the data collected from the SVE system during this reporting period, OBG recommends continued operation of the SVE system. It is recommended that the dilution valve remain at the 50% open position, and the extraction well (MW-F) valve remain at the 75% open position.

Please do not hesitate to contact me at 315-437-6100 with any questions you might have regarding this report.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Marc J. Dent P.E. Managing Engineer

cc. Trevor Staniec – O'Brien & Gere Dan Simpson - YEC

TABLES

TABLE 1 SUMMARY OF SOIL VAPOR EXTRACTION SYSTEM READINGS NATIONAL HEATSET PRINTING 1 ADAMS BLVD., FARMINGDALE, NY

and the second		Run Time S Visit (he				Extraction Well						Influ	ent SVE				Mic	GAC			Efflu	Jent GAC	
	Run Time Meter	T KOIT (III	caroj	Operation Time Since	Dilution Valve	MW-F Valve	Air Flow	Vacuum at Well	Pre- Dilution	Pre- Dilution	Blower	Vacuum	and the second			and the	Stall Stall	grass		Sec. 1		a karan	
	Reading		- AL	Last Visit	Position	Position (%	the second s	(inches	PID	PCE	Flow	(inches	Temp.	PID	PCE	Flow	Temp.	PID	PCE	Flow	Temp.	PID	PCE
Date	(hours)	Available	Actual	(%)	(% Open)	Open)	(scfm)	H2O)	(ppm)	(ppm)	(cfm)	H2O)	(°F)	(mqq)	(ppm)	(cfm)	(°F)	(ppm)	(ppm)	(cfm)	(°F)	(ppm)	(ppm)
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11/19/2002	1508	882	866	98%	100	50	49	12	0	0	120	28	106	0	0	209	92	0		290	80.3	0	
12/4/2002		368				-	-		77	200				14.3	10			15.5	10			0	0
12/16/2002	2153	294	645	98%	100	50	36.5	10	560	200	253	28	92	46.4	50	302	60	3.4		340	53.9	0	
1/21/2003	3016	882	863	98%	100	50	-			-	70	52	98	0	0	220		0		220		0	
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7/10/2003	6851	245	1	0%	50	50	99.5	25	406	400	151	68	156	221	215	260	76	0	0	222	81.9	0	0
7/22/2003	7144	294	294	100	50	50			127				168	65			107	0		-	106	0	
8/26/2003	7957	858	813	95	50	50	79	13.5	137	10	186	65	170	51.4	5	291		55.4	10	232		35.6	10
9/23/2003	8274	686	317	46	50	50	218	33	141	15	194	64	160	55	30	254	124	0	0	210	110	0	0
10/21/2003	8945	686	671	98	50	50	166	45		20	158	68	166	37.5	25	214	130	30.7	15	225	112	0	0
11/24/2003 1/6/2004	9749 9750	833 1054	805	97 0	50 50	50 50	130 98.5	46 74	141	125	178 164	72	138 140	261 247	200 250	225	52 48.6	0	0	205	51.4	0	0
2/9/2004	10336	833	586	70	50	50	98.5	44	118 23.1	100	172	70	155.8	29.8	250	233	48.6	41.4	25	200 235	48.4	0	0
3/30/2004	11289	1225	953	70	50	50	103	>50	34	<10	198	70	160	29.0	<10	240	128	22	<10	160	115	24	<5
4/8/2004	11441	221	152	69	50	75	103		23.7	<10						180	83	30		206	83	0.9	<5
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6/22/2004	12817	711	553	78	50	75	127	74	57	10	140	76	180	52	30	181	123	25.8	15	210	113	0	0
7/28/2004	13630	882	813	92	50	75	142	76.5	53.2	7	161	76.5	159	41.1	25	216	137	35.3	20	181	109	3.1	0
8/31/2004	13989	833	359	43	25	90	157	58	48	0	104	74	137	202	200	180	98	2.2	0	187	91	0.1	0
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10/20/2004	14729	515	473	92	50	75	155	58			120	76	160	19.1	10	202	122	0	0	230	101	0	0
11/17/2004	15229	686	499	73	75	50	160	80	17.9	<5	148	77	160	13.5	<10	152	112	7.2	<5	173	94	0	0
12/22/2004	15565	858	337	39	75	50	143	80	15.8	<5	125	85	160	18.3	10	127	116	16	5	131	93.4	0	0
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4/28/2005		720	720 ⁽²⁾	100	75	50	86	39			227		126	8.9	5	244	109	8	4	222	84.2	0	<2
5/31/2005		792	792(2)	100	50	50	98	39	7.4	9.5	208		124.2	10.4	10	227	118.6	17.6	10	223	112.3	0	<2
6/24/2005		576	576 ⁽²⁾	100	50	50	125	25	28.5	16	266		152	8.3	7	283	133	13.9	16	242	116	10,1	15
8/4/2005	17972	984	984 ⁽²⁾	100	75	65	216	26	38.1	19	353		153.4	8.8	12	423	135.7	10.5	12	381	120.7	7.5	12
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9/13/2005	859	960	960 ⁽²⁾	100	75	50	89.5	25	59.6	14	226		164.5	18.3	12	265	143	0.5	0	248	124.6	0	0
10/10/2005	1502	643	643	100	75	35	86	25	59.0	14	220		104.5	21.7	10	205	110	15.1	0	240	99.3	0	0
11/11/2005	2271	769	769	100	50	50	79	31	39.2	5	209		110.9	12.2	9	242	99.4	2.6	2	239	83.1	0	0
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Notes:

 $^{(1)}\mbox{Calculated flows based on the average of flows measured on 3-29-05 and 4-28-05$

⁽²⁾ Run time meter reading not indictitive of SVE system run time; actual hours run is assumed 100% of available.

PID = Total VOC concentration measured with photoionization detector

ppm = parts per million (volume/volume basis)

PCE = Tetrachloroethene (PCE) concentration measured with Drager tube of 10-500 ppm range

scfm = standard cubic feet per minute

cfm = cubic feet per minute

O'Brien & Gere Engineers, Inc. I\71\10653\35518\5\SVE monthly report-OBG\SVE Tables (OBG).xls -- = measurement not recorded or not applicable.

Influent SVE = Readings collected between the SVE Blower and the Carbon Units

Mid GAC = Readings collected between the lead and lag carbon units

Effluent GAC = Readings collected after the lag carbon unit

GAC = granular activated carbon unit

As of 4/28/05, the calculation of "Available" run time hours is based on 24 hours, rather than 24.5 hours as prevously calculated.

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GAC = granular activated carbon unit Effluent GAC = Readings collected after the lag carbon unit

As of 4/28/05, the calculation of "Evailable" run time hours is based on 24 hours, rather than 24.5 hours as prevously calculated.

3/1/2006

Influent SVE = Readings collected between the SVE Blower and the Carbon Units

Mid GAC = Readings collected between the lead and lag carbon units

Page 2 of 2

cfm = cubic feet per minute

scfm = standard cubic feet per minute

O'Brien & Gere Engineers, Inc.

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PCE = Tetrachloroethene (PCE) concentration measured with Drager tube of 10-500 ppm range

ppm = parts per million (volume/volume basis)

PID = Total VOC concentration measured with photoionization detector

^{kel} Run time meter reading not indicitive of SVE system run time; actual hours run is assumed 100% of available.

TABLE 2 PCE REMOVAL ESTIMATE NATIONAL HEATSET PRINTING 1 ADAMS BLVD., FARMINGDALE, NY

			and the second second	BLVD., PARMING	and the second		
States and the	VOC Influent	PCE Influent	% PCE	Extraction Well	Elapsed Time	PCE Removal	Cumulative
	Concentration	Concentration	of Total	Flow Rate (cfm)	Since Last Visit	Since Last Visit	PCE Removal
Date	(ppmv)	(ppmv)	VOCs	(2)	(day)	(lb)	(lb)
9/18/2002	<u>8</u>			SVE PILOT TEST	T STARTUP		
9/30/2002	2000 (1)	500 ⁽¹⁾	25.0	34.5	12	126	126
10/14/2002	1,011	400	39.6	38	14	127	253
11/19/2002	0	0		49	36	113	367
12/16/2002	560	200	35.7	36.5	27	69	436
1/13/2003	485	400	82.5	28.5	28	154	589
1/21/2003	0	0		0	8	63	652
2/10/2003	639	400	62.6	38	20	64	715
3/5/2003	263	200	76.0	24.4	23	129	844
3/18/2003	125	100	80.0	92	13	76	920
4/29/2003	152	50	32.9	75	42	105	1,025
5/13/2003	127	50	39.4	78	14	65	1,090
6/30/2003	82.4	50	60.7	115	48	89	1,179
7/22/2003	406	400	98.5	99.5	12	187	1,367
8/26/2003	137	10	7.3	79	35	276	1,643
9/23/2003	141	15	10.6	218	14	14	1,657
10/21/2003	37.5	20	53.3	166	28	41	1,698
11/24/2003	141	125	88.7	130	34	179	1,877
1/6/2004	118	100	84.7	98.5	43		1,877
2/9/2004	23.1	10	43.3	121	34	91	1,968
3/30/2004	22	10	45.5	103	50	22	1,990
4/29/2004	2.4	0	0.0	131	30	8	1,999
5/24/2004	43.8	50	114.2	144	25	49	2,047
6/22/2004	57	10	17.5	127	29	54	2,102
7/28/2004	53.2	7	13.2	142	36	21	2,122
8/12/2004	48	0	0	157	15	8	2,130
9/29/2004	27.7	0		139	48	0	2,130
10/20/2004	19.1	10		140	21	14	2,144
11/17/2004	17.9	10	55.9	160	28	16	2,160
12/22/2004	15.8	5	31.6	143	35	9	2,169
1/20/2005							
2/23/2005	174	50	28.7	87.5	34		
	VOC Influent	PCE Influent	% PCE	SVE Influent	Elapsed Time	PCE Removal	Cumulative
	Concentration	Concentration	of Total	Flow Rate (cfm)	Since Last Visit	Since Last Visit	PCE Removal
Date	(ppmv)	(ppmv)	VOCs	(2)	(day)	(lb)	(lb)
3/29/2005	6.4	4.5	70.3	158	34	11	2,180
4/28/2005	8.9	5	56.2	227	30	. 10	2,190
5/31/2005	10.4	10	96.2	208	33	. 18	2,208
6/24/2005	8.3	7	84.3	266	24	16	2,224
8/4/2005	8.8	12	136.4	353	41	39	2,263

Notes:

(1) = VOC concentrations of 2,000 ppm and PCE concentrations of 500 ppm are greater than the limit of

their respective monitoring device and are to be taken as estimations.

MW = molecular weight

⁽²⁾ SVE Influent (post-dilution) monitoring point data used for calculation of PCE Removal for dates including

and subsequent to March 29, 2005; Removal updated on 1-3-06 to represent SVE Influent flow rate.

Removal Rate = [(flow(cfm)*influent conc.(ppmv)*MW*12.187)/(273.15+C)]*1 cu. m./35.31 cu. ft*1g/1000 mg*1 lb/453.6 g

*60 min/1 hr*24 hr/1 day*days of operation

⁽³⁾ Run time meter reading not indictitive of SVE system run time; actual hours run is assumed equal to elapsed time.

Where:

lb = pounds ppmv = parts per million (volume/volume basis)

Molecular weight (MW) of PCE is 165.85 C = degrees centigrade, as measured

- = information not available

flow = average of the present and the previous months measured SVE influent rate in cubic feet per minute (cfm)

TABLE 2 PCE REMOVAL ESTIMATE NATIONAL HEATSET PRINTING 1 ADAMS BLVD., FARMINGDALE, NY

Date	VOC Influent Concentration (ppmv)	PCE Influent Concentration (ppmv)	% PCE of Total VOCs	Flow Rate (cfm)	Elapsed Time Since Last Visit (day)	PCE Removal Since Last Visit (lb)	Cumulative PCE Removal (lb)
				Carbon Replaced	8/10/05		
9/13/2005	18.3	12	65.6	226	40	43	2,306
10/10/2005	21.7	10	46.1	222	27	22	2,328
11/11/2005	12.2	9	73.8	209	32	25	2,353
12/8/2005	7.2	2	27.8	235	27	12	2,365
1/6/2006	32.5	4	12.3	245	29	8	2,373
A second of	States and service	Sugar State	Spent (Carbon Replaced	1/25/06		
							A REAL PROPERTY AND A REAL PROPERTY AND A
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Notes:

⁽¹⁾ = VOC concentrations of 2,000 ppm and PCE concentrations of 500 ppm are greater than the limit of

their respective monitoring device and are to be taken as estimations.

⁽²⁾ SVE Influent (post-dilution) monitoring point data used for calculation of PCE Removal for dates including

and subsequent to March 29, 2005; Removal updated on 1-3-06 to represent SVE Influent flow rate.

Removal Rate = [(flow(cfm)*influen	t conc.(ppmv)*MW*12.187)/	(273.15+C)]*1 cu. m./35.31	cu. ft*1g/1000 mg*1 lb/453.6 g
------------------------------------	---------------------------	----------------------------	--------------------------------

*60 min/1 hr*24 hr/1 day*days of operation

⁽³⁾ Run time meter reading not indictitive of SVE system run time; actual hours run is assumed equal to elapsed time.

Where: MW = molecular weight

lb = pounds ppmv = parts per million (volume/volume basis)

Molecular weight (MW) of PCE is 165.85 C = degrees centigrade, as measured

-- = information not available

flow = average of the present and the previous months measured SVE influent rate in cubic feet per minute (cfm)

TABLE 3 AIR SAMPLE ANALYTICAL RESULTS NATIONAL HEATSET PRINTING 1 ADAMS BLVD., FARMINGDALE, NY

SVE Influent Concentration (mg/m3)												
Date	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	Trichloroethene									
9/18/2002	5	600E	31									
9/30/2002	ND (5)	360E	23									
10/14/2002												
11/19/2002												

Dete	VGAC Effluent Cond		
Date	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	Trichloroethe
9/18/2002			
9/30/2002			
10/14/2002			
11/19/2002			
12/16/2002	ND (5)	ND (5)	ND (5)
1/21/2003			
2/10/2003	ND (5)	8	6
3/18/2003			
4/29/2003			
5/13/2003	ND (1)	5	ND (1)
6/30/2003			
7/22/2003	ND (1)	ND (1)	ND (1)
8/26/2003	ND (5)	29	3.6
9/23/2003	ND (5)	ND (5)	ND (5)
10/21/2003	ND (5)	ND (5)	ND (5)
11/24/2003			
1/6/2004			
2/9/2004	10	ND (5)	ND (5)
3/30/2004	2J	77	1J
4/29/2004	ND (5)	10	ND (5)
5/24/2004	ND (1)	ND (1)	ND (1)
6/22/2004	ND (1)	ND (1)	ND (1)
7/28/2004	ND (5)	ND (5)	ND (5)
8/12/2004			
9/29/2004	ND (1)	ND (1)	ND (1)
10/20/2004	ND (1)	ND (1)	ND (1)
11/17/2004	ND (1)	ND (1)	ND (1)
12/22/2004	ND (1)	ND (1)	ND (1)
1/20/2005			
3/29/2005	2	ND (1)	ND (1)
4/28/2005	1	0.5J	ND (1)
5/31/2005	1	5	2
6/24/2005	0.8J	64	2
8/4/2005	0.8J	57	1J
0/4/2005	Spent Carbon R		
9/13/2005	ND (1)	ND (1)	ND (1)
10/10/2005	ND (1)	ND (1)	ND (1)
11/11/2005	ND (1)	ND (1)	ND (1)
	ND (1)	ND (1)	ND (1)
12/8/2005 1/6/2006			ND (1)
1/0/2000	ND (1)	ND (1) eplaced 1/25/06	

Notes:

Only compounds that were detected above the method reporting limit were presented above

ND (5) = Not detected above method reporting limit in parenthesis

E = Concentation exceeded calibration range --

-- = sample not collected

J = Estimated Value arbon mg/m3 = milligrams per cubic meter

VGAC = vapor-phase granular activated carbon O'Brien & Gere Engineers, Inc.

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TABLE 4 AIR DISCHARGE MONITORING NATIONAL HEATSET PRINTING 1 ADAMS BLVD., FARMINGDALE, NY

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Son Training		Field Mo	onitoring	With Carl	Labo	pratory R	esults	and the second se	toring		Disch	narge based or	Laboratory	Laboratory Results		
	Same and				The State		CARE TO A		X-1- 1- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		And the		Contraction of the	a shere a	The second second	
	System	PCE System	System	A REAL	ANT ANT	miles it	cis-1,2-	PCE	PCE	PCE	PCE	TCE	TCE	cis-1 2-DCE	cis-1,2-DCE	
	Effluent	Effluent	Effluent VOC	Elapsed	PCE	TCE	DCE	Discharge	Discharge			Discharge	Discharge	Discharge	Discharge	
State State	Flow Rate		Concentration	Time	(mg/cu	A CONTRACTOR OF A CONTRACT OF	(mg/cu	Since Last	Since Last		Since Last	CONTRACTOR OF A CONTRACT OF A CONTRACT OF	Since Last	Since Last		
Date	(cfm)	(ppmv)	(ppmv)	(day)	m.)	m.)	m.)	Visit (lb/hr)	Visit (lb)	Visit: Ib/hr	Charles which are sub-law to the first of	Visit (lb/hr)	Visit (lb)	Visit (lb/hr)		
9/18/2002	(cint)	(ppini)	(ppint)	(00)/		1 / 111./		VE PILOT TE		The second second						
9/30/2002	290		0	12												
10/14/2002			0	14												
11/19/2002	290		0	36												
12/16/2002	340		0	27	ND (5)	ND (5)	ND (5)		-	0.00	0.00	0.00	0.00	0.00	0.00	
1/13/2003	45	0	-	28				0.0000	0.00			1		· · ·		
1/21/2003	220	1	0	8											1 C	
2/10/2003	258	10	3.2	20	8.0	6.0	ND (5)	0.0654	31.40	0.008	3.71	0.006	2.78	0.00	0.00	
3/5/2003	305	-	0	23		3				-		_				
3/18/2003	282	0	0	13				0.0000	0.00							
4/29/2003	287	0	0.6	42				0.0000	0.00							
5/13/2003	245	0	0.6	14	5.0	ND (1)	ND (1)	0.0000	0.00	0.005	1.54	0.00	0.00	0.00	0.00	
6/30/2003	240	100	29.8	48			-	0.3043	350.56							
7/22/2003	222		0	12	ND (1)	ND (1)	ND (1)			0.00	0.00	0.00	0.00	0.00	0.00	
8/26/2003	232	10	35.6	35	29.0	3.6	ND (5)	0.0588	49.42	0.025	21.17	0.003	2.63	0.00	0.00	
9/23/2003	210	0	0	28	ND (5)	ND (5)	ND (5)	0.0000	0.00	0.000	0.00	0.000	0.00	0.00	0.00	
10/21/2003	225	0	0	28	ND (5)	ND (5)	ND (5)	0.0000	0.00	0.000	0.00	0.000	0.00	0.00	0.00	
11/24/2003	205	0	0	34			-	0.0000	0.00	-						
2003 Totals:									431.38		26.42		5.41		0.00	
1/6/2004	200	0	0	43		-	1	0.0000	0.00				-			
2/9/2004	235	0	0	34	ND (5)	ND (5)	10	0.0000	0.00	0.000	0.00	0.000	0.00	0.009	7.18	
3/30/2004	160	5	24	50	77	1J	2J	0.0203	24.34	0.046	55.38	0.001	0.72	0.001	1.44	
4/29/2004	255	0	0	30		ND (5)	ND (5)	0.0000	0.00	0.010	6.88	0.001	0.69	0.002	1.38	
5/24/2004	198	0	0	25			ND (1)	0.0000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	
6/22/2004	210	0	0	29	ND (1)		ND (1)	0.0000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	
7/28/2004	181	0	3.1	36	ND (5)	ND (5)	ND (5)	0.0000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	
8/12/2004	187	0	0.1	15				0.0000	0.00							
9/29/2004	205		0	48		ND (1)				0.000	0.00	0.000	0.00	0.000	0.00	
10/20/2004	230	0	0	21	ND (1)		ND (1)	0.0000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	
11/17/2004	173	0	0	28		ND (1)	ND (1)	0.0000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	
12/22/2004	131	0	0	35	ND (1)	ND (1)	ND (1)	0.0000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	
2004 Totals:									24.34		62.26		1.41		10.00	
Notos:		ament not record	d a d	(1) O al a dat	10 1			ne of flows mea		E and 4 00 01	-					

Notes: -- = Measurement not recorded

hr = hours

J = Estimated Value

⁽¹⁾Calculated flows based on the average of flows measured on 3-29-05 and 4-28-05

Discharge Rate (Field Mon., Ib/hr) = [(flow(cfm)*influent conc.(ppmv)*MW*12.187)/(273.15+C)]*1 cu. m./35.31 cu. ft*1g/1000 mg*1 lb/453.6 g*60 min/1 hr

Discharge (Field Mon., Ib) = Discharge Rate (lb/hr) * # of days*24hours/day*60 minutes/hr

Discharge Rate (Lab Res., lb/hr) = flow (cfm)*effluent conc. (mg/cu. m.)*1g/1000mg*1lb/453.6g*1cu. m./35.31cu. ft*60min/1 hr

Discharge (Lab Res., Ib) = Discharge Rate (lb/hr) * # of days*24hours/day C = degrees centigrade, assumed to be 25

Where:

Molecular weight (MW) of PCE=165.85; TCE=131.4; cis-1,2-DCE=96.94 cfm = cubic feet per minute mg/cu. m = milligrams per cubic meter

ppmv = parts per million (vol./vol.) lb = pounds

Permit Limit											
	lb/hr	lb/yr									
PCE	0.031	270									
TCE	0.014	120									
cis-1,2-DCE	0.63	5,510									

TABLE 4 AIR DISCHARGE MONITORING NATIONAL HEATSET PRINTING 1 ADAMS BLVD., FARMINGDALE, NY

Field M stem PCE System uent Effluent (Rate Concentration (m) (ppmv) 45 0 4(1) 0 22 0 23 0 42 10.1 81 12 48 0 11 0	(ppmv) 0 0 0 0 15 7.5	A CALL COMPANY OF A SALE OF A CALL	PCE (mg/cu m.) ND (1) 0.5 5	ND (1)	cis-1,2- DCE (mg/cu m.) 2	Discharge ba Moni PCE Discharge Since Last Visit (lb/hr) 		PCE Discharge Since Last Visit: Ib/hr	PCE Discharge Since Last Visit (lb)	arge based on TCE Discharge Since Last Visit (Ib/hr)		Results cis-1,2-DCE Discharge Since Last Visit (Ib/hr)	Discharge
PCE System uent Effluent (Rate Concentration fm) (ppmv) 45 0 4 ⁽¹⁾ 0 22 0 23 0 42 10.1 81 12	System Effluent VOC Concentration (ppmv) 0 0 0 0 0 0 15 7.5	Time (day) 34 34 30 33 24	PCE (mg/cu m.) ND (1) 0.5 5	TCE (mg/cu m.) ND (1) ND (1)	cis-1,2- DCE (mg/cu m.) 	PCE Discharge Since Last Visit (Ib/hr) 0.0000	PCE Discharge Since Last Visit (Ib)	Discharge Since Last Visit: Ib/hr	PCE Discharge Since Last Visit (lb)	TCE Discharge Since Last Visit (Ib/hr)	TCE Discharge Since Last	cis-1,2-DCE Discharge Since Last	Discharge Since Last
uent (Rate Effluent Concentration (ppmv) 45 0 4 ⁽¹⁾ 0 22 0 23 0 42 10.1 81 12	Effluent VOC Concentration (ppmv) 0 0 0 0 0 15 7.5	Time (day) 34 34 30 33 24	(mg/cu m.) ND (1) 0.5 5	(mg/cu m.) ND (1) ND (1)	DCE (mg/cu m.) 	Discharge Since Last Visit (lb/hr) 0.0000	Discharge Since Last Visit (lb)	Discharge Since Last Visit: Ib/hr	Discharge Since Last Visit (lb)	Discharge Since Last Visit (lb/hr)	Discharge Since Last	Discharge Since Last	Discharge Since Last
uent (Rate Effluent Concentration (ppmv) 45 0 4 ⁽¹⁾ 0 22 0 23 0 42 10.1 81 12	Effluent VOC Concentration (ppmv) 0 0 0 0 0 15 7.5	Time (day) 34 34 30 33 24	(mg/cu m.) ND (1) 0.5 5	(mg/cu m.) ND (1) ND (1)	DCE (mg/cu m.) 	Discharge Since Last Visit (lb/hr) 0.0000	Discharge Since Last Visit (lb)	Discharge Since Last Visit: Ib/hr	Discharge Since Last Visit (lb)	Discharge Since Last Visit (lb/hr)	Discharge Since Last	Discharge Since Last	Discharge Since Last
(ppmv) 45 0 4 ⁽¹⁾ 0 22 0 23 0 42 10.1 81 12 48 0	(ppmv) 0 0 0 0 15 7.5	Time (day) 34 34 30 33 24	m.) ND (1) 0.5 5	m.) ND (1) ND (1)	m.) 	Since Last Visit (lb/hr) 0.0000	Since Last Visit (lb)	Since Last Visit: Ib/hr	Since Last Visit (lb)	Since Last Visit (lb/hr)	Since Last	Since Last	Since Last
 45 0 4 ⁽¹⁾ 0 22 0 23 0 42 10.1 81 12 48 0	 0 0 0 0 15 7.5	 34 34 30 33 24	m.) ND (1) 0.5 5	m.) ND (1) ND (1)	m.) 	 0.0000	-		-	-	Visit (lb)	Visit (lb/hr) 	
45 0 4 ⁽¹⁾ 0 22 0 23 0 42 10.1 81 12	0 0 15 7.5	34 30 33 24	 ND (1) 0.5 5	 ND (1) ND (1)			0.00			-	-	<u></u>	
4 ⁽¹⁾ 0 22 0 23 0 42 10.1 81 12	0 0 15 7.5	34 30 33 24	ND (1) 0.5 5	ND (1) ND (1)			0.00						
22 0 23 0 42 10.1 81 12 48 0	0 0 15 7.5	30 33 24	0.5 5	ND (1)	2								
23 0 42 10.1 81 12 48 0	0 15 7.5	33 24	5			0.0000	0.00	0.000	0.00	0.000	0.00	0.002	1.43
42 10.1 81 12 48 0	15 7.5	24	-		1	0.0000	0.00	0.0004	0.30	0.000	0.00	0.001	0.60
81 12 48 0	7.5		04	2	1	0.0000	0.00	0.0042	3.31	0.0017	1.32	0.001	0.66
48 0		41	64	2	0.8J	0.0620	35.70	0.0580	33.42	0.0018	1.04	0.001	0.42
	1200 100 100 20		57	1J	0.7J	0.1159	114.09	0.0814	80.05	0.0014	1.40	0.001	0.98
				5		bon Replaced			and the second		1987 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		and the second
11 0	0	40		ND (1)	ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.000	0.00
	0	27			ND (1)	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.000	0.00
													0.00
12 0	0.1	27	ND (1)	ND (1)	ND (1)	0.0000		0.0000		0.0000		0.000	0.00
0	50	20				0.0000		0.0000		0.0000		0.000	4.09 0.00
	5.8	29	ND (1)					0.0000]	0.00 [0.0000	0.00	0.000 [0.00
				and the second s	pen Can	oon Replaced	1725700						and the second
												-	
							0.00		0.000		0.000		0.000
											-		
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Discharge Rate (Field Mon., Ib/hr) = [(flow(cfm)*influent conc.(ppmv)*MW*12.187)/(273.15+C)]*1 cu. m./35.31 cu. ft*1g/1000 mg*1 lb/453.6 g*60 min/1 hr

Discharge (Field Mon., Ib) = Discharge Rate (Ib/hr) * # of days*24hours/day*60 minutes/hr

Discharge Rate (Lab Res., Ib/hr) = flow (cfm)*effluent conc. (mg/cu. m.)*1g/1000mg*1lb/453.6g*1cu. m./35.31cu. ft*60min/1 hr

Discharge (Lab Res., Ib) = Discharge Rate (Ib/hr) * # of days*24hours/day

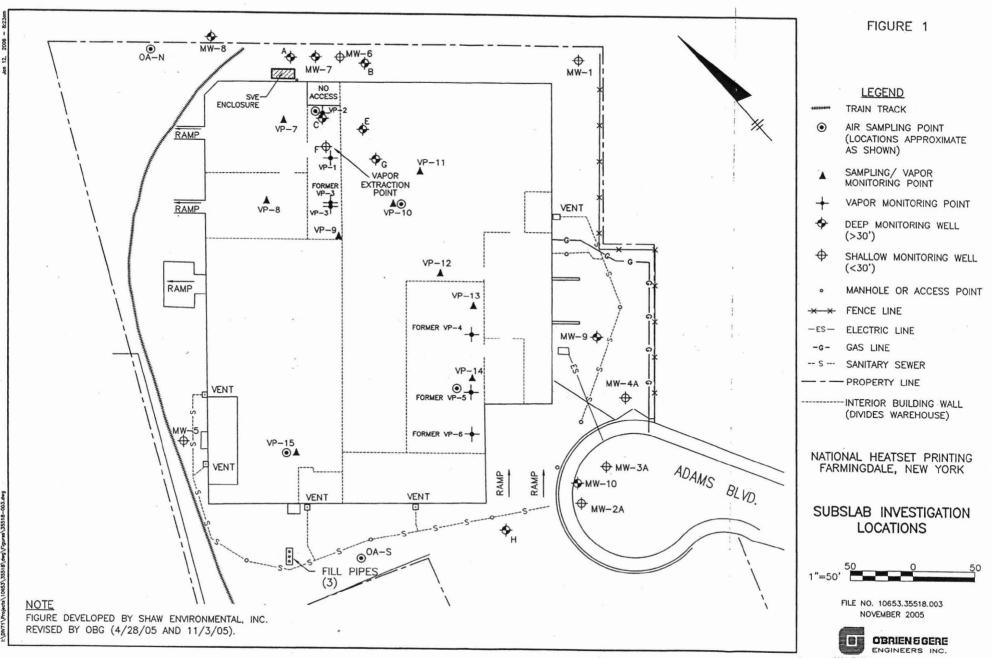
Where:

C = degrees centigrade, assumed to be 25 J = Estimated Value

hr = hours

Molecular weight (MW) of PCE=165.85; TCE=131.4; cis-1,2-DCE=96.94cfm = cubic feet per minuteppmv = parts per million (vol./vol.)mg/cu. m = milligrams per cubic meterlb = pounds

Permit Limit											
	lb/hr	lb/yr									
PCE	0.031	270									
TCE	0.014	120									
cis-1,2-DCE	0.63	5,510									



2004 © O'Brien and Gere Engineers, Inc.

FIGURES

APPENDIX A SITE VISIT DOCUMENTATION

O'Brien & Gere Eng.	
ersonnel: <u>PAN Simpson</u> , <u>Chrus</u> Burke leather: <u>25F</u> , <u>Durchst</u>	; Time: 930 Date: $1/6/05$
ystem Status: rrival:	
un Timer Reading: $36 384 $ ectric Meter Reading: $033 03 / .43 4$	J(1411)Ebrok room
ystem Data:	
xtraction Well F Gate Valve: 75 % Open ilution Valve: 50 % Open	
re-Bleed Air (Extraction Well):	Post-Bleed Air (SVE Influent):
low: <u>۱۲۵</u> CFM acuum: ۲۲۲ "H2O	Flow: <u>7범</u> 도 CEM Vacuum: "H2O
ID Reading: 2.7 .2.7 PPM	PID Reading: 32.5 PPM
raeger Tube: PPM	Draeger Tube: 4 PPM
emperature: 53.0 °F	Temperature: 57,0 °F
arbon Monitoring:	
14: 19,0 PPM 250 CFM	<u>83,9</u> Temp. (°F) <u>2</u> PPM (Drager)
ffluent: 5.8 PPM LIS CFM	77.5 Temp. (°F) (Drager)
arbon effluent sample collected & shipped to lab?	Ye5
nockout Tank Drained? N/O	
Gallons:N/A	
urge water drums on-site: None	
Ionitoring Well Gauging / Vapor Point Monitoring:	VP-7 V-10 V-11
/ell/V.P. ID: MW-C MW-E MW-F MW-G	VP-1 VP-2 VP-3
TW (ft): 13,63 - 13,81	195 0.60 0.09 04 05 05 0.04
ac. ("H2O):	1.95 0.60 0.09 .04 .05 .05 0.00
comments:	
	will be installed upon next visit. They
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IV71\Projects\10653\35518\4_n&d\SVE inspection forms\,SVE Insp. Form 1 -6-06.pdf

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APPENDIX B LABORATORY REPORT OF ANALYSES

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"Environmental Testing For The New Millennium"

January 18, 2006

O'Brien & Gere 5000 Brittonfield Parkway P. O. Box 4873 Syracuse, NY 13221-4873 Attn: Mr. Marc Dent

RE: Client Project: National Heatset Lab Project #: E0017

Dear Mr. Dent:

Enclosed please find the data report of the required analysis for the sample associated with the above referenced project. If you have any questions regarding this report, please call me.

We appreciate your business.

Sincerely,

USMISK

Agnes R. Ng CLP Project Manager



Report of Laboratory Analyses for O'Brien & Gere

Client Project: National Heatset

SDG# ME0017

Mitkem Work Order ID: E0017

January 18, 2006

Prepared For: O'Brien & Gere 5000 Brittonfield Parkway P. O. Box 4873 Syracuse, NY 13221-4873 Attn: Mr. Marc Dent

Prepared By: Mitkem Corporation 175 Metro Center Boulevard Warwick, RI 02886 (401) 732-3400



Client: O'Brien & Gere Client Project: National Heatset Lab Project: E0017 Date samples received: 01/11/06

Project Narrative

This data report includes the analysis results for one (1) air sample in a Tedlar bag that was received from O'Brien & Gere on January 11, 2006. Analyses were performed per specification in the Chain of Custody form. For reference, a copy of the Mitkem Work Order form is included for cross-referencing the client sample ID and laboratory sample ID.

All of the analyses were performed according to method specifications, as modified by Mitkem. No unusual occurrences were noted during sample analysis.

All pages in this report have been numbered consecutively, starting with the title page and ending with a page saying only "Last Page of Data Report".

This data report has been reviewed and is authorized for release as evidenced by the signature below.

Agnes Ng CLP Project Manager

1A

EPA SAMPLE NO.

	VOLATIL	E ORGANICS ANALYS	SIS DATA SHEET			
Lab Na	me: MITKEM CO	RPORATION	Contract:	SV	E EFFLUENT	
			SAS No.:	SDG NO	• ME0017	1
Matrix	: (soil/water) AIR	Lab Sa	ample ID: E0	017-01A	
Sample	e wt/vol:	25 (g/mL) MI	L Lab Fi	ile ID: V2	H2203	
Level:	(low/med)	LOW	Date F	Received: 01	/11/06	
% Mois	sture: not dec	•	Date A	Analyzed: 01	/13/06	
GC Col	umn: DB-624	ID: 0.25 (mm)	Diluti	ion Factor:	1.0	
Soil E	Extract Volume	:(uL)	Soil A	Aliquot Volu	me:	_(uL)
			CONCENTRATIO	ON UNTTS.		
	CAS NO.	COMPOUND	(ug/L or ug/		Q	
	74-87-3 75-01-4 74-83-9 75-00-3 75-35-4 67-64-1 74-88-4 75-15-0 156-60-5 1634-04-4 75-34-3 108-05-4 78-93-3 156-59-2 590-20-7 74-97-5 590-20-7 74-97-5 563-58-6 56-23-5 107-06-2 71-43-2	Iodomethane Carbon Disul Methylene Ch Trans-1,2-Di Methyl tert- 1,1-Dichloro Vinyl acetat 2-Butanone Cis-1,2-Dichloro Bromochlorom Chloroform 1,1,1-Trichl 1,1-Dichloro Carbon Tetra 1,2-Dichloro Benzene	e oromethane ethene fide loride chloroethene ethane propane ethane oroethane propene chloride ethane		1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U	
	78-87-5 74-95-3 75-27-4 10061-01-5 108-10-1 108-88-3 10061-02-6	Trichloroeth 1,2-Dichloro Dibromometha Bromodichlor cis-1,3-Dich 4-Methyl-2-p Toluene trans-1,3-Di 1,1,2-Trichl	propane ne omethane loropropene entanone chloropropene		1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U	

FORM I VOA

OLM03.0

VOLATILE ORGANICS	A ANALYSIS DATA SHEET	EPA SAMPLE NO.
Lab Name: MITKEM CORPORATION	Contract:	SVE EFFLUENT
Lab Code: MITKEM Case No.:	SAS No.:	SDG No.: ME0017
Matrix: (soil/water) AIR	Lab Sam	ple ID: E0017-01A
Sample wt/vol: 25 (g/	mL) ML Lab Fil	e ID: V2H2203
Level: (low/med) LOW	Date Re	ceived: 01/11/06
% Moisture: not dec.	Date An	alyzed: 01/13/06
GC Column: DB-624 ID: 0.25	(mm) Dilutio	n Factor: 1.0
Soil Extract Volume:(u	L) Soil Al	iquot Volume:(uL)
CAS NO. COMPOUN	CONCENTRATION D (ug/L or ug/K	
$\begin{array}{c} 142-28-91, 3-\text{Dic}\\ 127-18-4Tetrach\\ 591-78-62-Hexan\\ 124-48-1Dibromo\\ 106-93-41, 2-Dib\\ 108-90-7Chlorob\\ 630-20-61, 1, 1, 2\\ 100-41-4Ethylbe\\$	loroethene one chloromethane enzene -Tetrachloroethane nzene ene ene (Total) orm ortotal) orm ortotal) orm ortotal) orm ortotal) orm ortotal) orm ortotal) orm ortotal) ortotal) ortotaloropropane richloropropane copyltoluene chlorobenzene chlorobenzene chlorobenzene corobutadiene alene	

FORM I VOA

OLM03.0

Mitkem Corporation	11/Jan/06 14:43	WorkOrder: E0017
Client ID: OBRIEN_GERE	Case:	Report Level: ASP-B
Project: National Heatset	SDG:	EDD: CLF
Location:	PO: HEATSET	HC Due: 02/01/06
Comments: Level 2 for air samples		Fax Due: 01/25/06

Sample ID	Client Sample ID	Collection Date Date Received Matrix	Test Code	Lab Test Comments	Iold MS SEL Storage
E0017-01A	SVE EFFLUENT	01/06/06 10:30 01/11/06 Air	TO14		

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Client Rep: Agnes R Ng

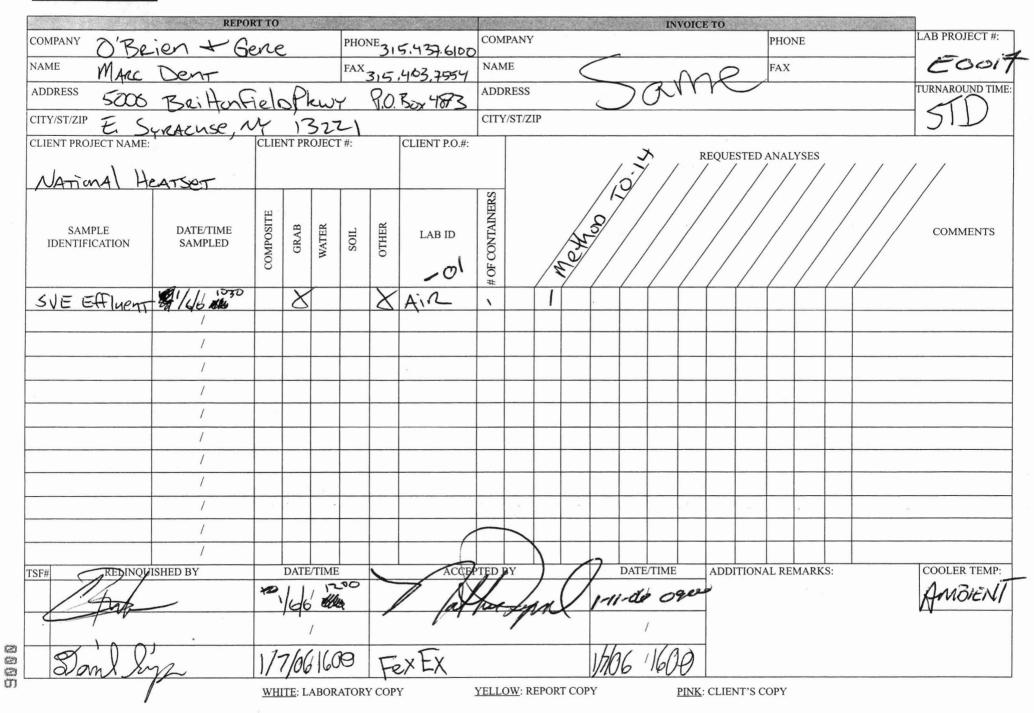
Page 1 of 1

0005

MITKEM Corporation 175 Metro Center Boulevard Warwick, Rhode Island 02886-1755 (401) 732-3400 • Fax (401) 732-3499 email: mitkem@mitkem.com

CHAIN-OF-CUSTODY RECORD

Page of



MITKEM CORPORATION Sample Condition Form Page of									
	Sa	mple Con	dition I	Form		Pa	age	of	
	A	<u> </u>		1					
Received By:	/	NA /		Date:			M Project	:#: C	0017
Client Project:	NATIONAL	HEATSET		Client:		132			Soil Headspace
		Lab Sam	ple ID	HNO ₃	Preserva H ₂ SO ₄	HCI	NaOH	VOA Matrix	or Air Bubbles ≥ 1/4"
Cooler Sealed Yesy No		E0017	-01					A	
								· ·	
1) Custody Seal(s)	Present / Absent								
	Coolers / Bottles)
	Intact / Broken								
	inder / broken								
2) Custody Seal Number(s)	NA					1		/	
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~							/	
							/	ŕ	
							/		
							1		
3) Chain-of-Custody	Present / Absent						/		
	$\bigcirc$						/		
4) Cooler Temperature	AMBIENT					/			
Coolant Condition	AMBIENT AIR SAMAPLE					/			
						$\mathbf{V}$			
5) Airbill(s)	Present Absent		1						
Airbill Number(s)	FED.C.Y								
	855393767183	\$							
					$\vee$				
	$\mathcal{O}_{\mathcal{O}}$								
6) Sample Bottles	Intact/Broken/Leakin								
			ļ,	4					
7) Date Received	1-11-00		$\downarrow$						
	63-04								
8) Time Received	0900		$\bigvee$			VOA	Aatrix Key	<i>r</i> :	
		/	1		-	US = l	Jnpreserv	ved Soil	A = Air
Preservative Name/Lot No:		$\vdash$			-			•	H = HCI
		-/		_	-	1			E = Encore
			F		-	$\mathbf{N} = \mathbf{N}$	aHSO₄	M =MeC	Л
See Sample Cond	ition Notification/Corre	ective Action	Form	yes / no	5)		$\cap$		
				C		Rad C	K yes/r	10	

Form	ID.	SampleCond.Form-11/04
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# Last Page of Data Report