Interim Remedial Measures

Soil Vapor Extraction System – Startup Report

June 27, 2005

04-455

Conducted at:

Melody Cleaners Site
2050 Hempstead Turnpike
East Meadow, New York
Voluntary Cleanup Program Site Code #347-1

Prepared for:

The New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233

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Lowden Family Trust	1
NYSDEC	1
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1.0 Purpose

This Interim Remedial Measures Startup Report presents the subsurface as-built specifications, start-up procedures, and operational data collected during the implementation of the Soil Vapor Extraction (SVE) Interim Remedial Measures (IRM) Work Plan (dated 7/24/04) as approved by the New York State Department of Environmental Conservation (NYSDEC).

The property, herein identified as the Site, is located at 2050 Hempstead Turnpike, East Meadow, New York, and is situated on the real property tax map designation Section 50; Block C; Lot 22. This report is required under the provisions of the Order on Consent between the NYSDEC and the Volunteer, Lowden Family Trust d/b/a Lowden Properties. (see **Plate 1:** Project Location Map, East Meadow, New York).

The remedial protocols used for the IRM were based upon the following documents: 1) NYSDEC DER-10, Technical Guidance for Site Investigation an Remediation, dated December 2002; 2) the New York State Department of Environmental Conservation, Sampling Guidelines and Protocols, Technical Background and Quality Control Assurance for the New York State Department of Environmental Conservation Spill Response Program, dated September 1992.

The activities performed under the scope of this IRM have been summarized in this report in the following sections.

- **As-Built Remedial System Specifications**
- **Start-up Procedures**

2.0 As-Built Remedial System Specifications

In order to maintain the remediation schedule as approved by the NYSDEC, Impact Environmental installed a temporary trailer mounted Soil Vapor Extraction (SVE) System on the site. The trailer system was activated January 3, 2005 after being connected to the full-scale SVE piping, wells, and carbon treatment systems.

2.1 Soil Vapor Extraction System

A Gast model R6P355R-50 6-horsepower blower, capable of inducing an airflow velocity of approximately 220 CFM at approximately 30 inches of H_2O, was installed to provide soil vapor extraction (SVE) at the site. (See **Exhibit 1**: SVES Blower Specifications) Piping from the vapor extraction lines was connected to the blower through a manifold and a moisture separator unit. The SVES blower effluent is routed to two (2) carbon units before discharging to the atmosphere via an eight (8) inch diameter PVC vent stack that extends to a height 20 feet above grade.

2.1.1 SVE Wells

Four (4) dual level soil SVE wells were installed on the site in August of 2004 (See Plate **2:** SVE System Layout). Each SVE well consists of two (2) two-inch diameter wells installed in the same 8.25" borehole, to facilitate better flow control and enhance vacuum efficacy within the contaminated vadose zone. One shallow well is screened from two to twenty feet below grade, the second deeper well is screened from twenty-two to approximately forty two feet below grade, to serve as a groundwater monitoring well in addition to being a vapor extraction well. Number two well gravel serves as a filter pack surrounding each screen. The balance of each well, from the top of the screen to just below land surface, consists of two-inch diameter riser. All well materials are SCH-40 PVC, and screen slot size is 0.020. A one (1) foot thick bentonite seal was installed between the screened sections of each well to segregate the zones. Each dual level well was finished at grade in a two (2) foot square manhole set in a concrete pad. A manifold in each manhole connects both well levels to horizontal piping that extends to the system housing. The wellhead manifold has valves to control, and ports to monitor individual flows, vacuums, and vapor concentrations from each well depth. (See Exhibit 3: SVE Well Logs)

2.1.2 SVE System Piping

Each of the dual level wellhead manifolds is connected to a main system manifold via three (3) inch diameter Schedule-40 PVC piping. Said piping was installed within a trench to minimum depth of two (2) feet below grade from the SVE wells extending to the system housing. Soil excavated during trenching activities was continuously screened with a Photovac model 2020 Photo Ionization Detector (PID) with a 10 eV lamp. None of the soil tested contained vapor levels above ambient levels. Therefore, the excavated native soil was used to backfill the trenches. Pavement removed for trenching was disposed of off site and replaced with new asphalt to match existing grade. SVE well and piping locations are depicted in **Plate 2:** SVE System Layout.

2.1.3 SVE Pollution Control

The SVE blower discharge is piped from the system trailer to two (2) Envirotrol model VPM-2000 vapor phase granular activated carbon (GAC) vessels. Each GAC vessel is rated for a maximum flow rate of 800 CFM and is filled with approximately 2,000 lbs of 4 X 10 mesh, reactivated carbon. (See **Exhibit 2:** Granular Activated Carbon) The GAC vessels are connected in series utilizing six (6) inch heat rated flexible hose fitted with cam and groove hose couplings. Said couplings facilitate the change of lead-lag positions of the GAC vessels, if necessary. After treatment, the SVES effluent is discharged through a six (6) inch diameter schedule 40 PVC stack extending to an elevation of 20 feet above grade. Sampling ports were installed before carbon, between vessels, and after carbon treatment.

Carbon change frequency is based on operational SVES data and monthly laboratory air discharge sampling data. The SVE system is shut down and secured during the carbon change procedure. Each GAC vessel has an 18-inch diameter steel access cover on top through which spent carbon is removed & reactivated carbon is placed. The spent carbon is placed in DOT-17H rated steel drums and removed from site the day of the carbon change for return to Envirotrol's Darlington Pennsylvania facility for reactivation. Oversight and air monitoring is performed by Impact Environmental personnel. The first carbon change was performed on April 27, 2005. A copy of the disposal manifest can be found in **Exhibit 4**: Carbon Disposal Manifests.

3.0 Start-Up & Monitoring

3.1 Start-up Procedures

Startup procedures were initiated January 3, 2005. The SVE system was initially started with full ambient dilution air. All process and electrical equipment was tested for proper operating parameters including; rotation, amps, volts, process flow, and line integrity. No equipment problems were encountered during the testing. Flow was then initiated from of all of the SVE wells. Influent parameters including total and individual vacuums, flows, and vapor concentrations were monitored hourly. SVE system effluent concentrations were monitored hourly with a Photovac model 2020 Photo Ionization Detector (PID) before treatment, between carbon units, and after second carbon unit (stack effluent).

Once all parameters had stabilized, the system flows were adjusted to maximize recovery with emphasis on reduction of vapor concentrations in area basements by maximizing contaminant capture. Vacuum influence readings were then taken at MW-1 and MW-2 to verify design vacuum influence. (See **Table 2a:** Monitoring Well Vacuum Influence) In addition, flow to SVE-3 was stopped by closing ball valves at the wellhead and at the system manifold, thus isolating SVE-3 from the remedial system. Dilution air was introduced to match the vacuum readings prior to closing flow from SVE-3; vacuum influence readings were then taken at both well depths of SVE-3. (See **Table 2b:** SVE Well Vacuum Influence)

At the end of the first day of the startup, stack effluent, carbon midpoint, and pre-treatment samples were collected utilizing summa canisters and submitted to an ELAP certified laboratory for analysis. The analysis consisted of USEPA test method TO-14 for tetrachloroethene, trichloroethene (TCE), cis-1,2-dichloroethene (1,2-DCE) and vinyl chloride (VC) by GC/MS. (See **Table 3:** SVES Air Sampling Analytical)

3.2 SVES Monitoring

After the first carbon change had been completed, the frequency of system O&M/Monitoring events was reduced to bi-weekly. The SVES influent and effluent parameters including total and individual: vacuums, flows, and vapor concentrations were monitored. Vapor concentrations were monitored with a Photovac model 2020 Photo Ionization Detector (PID) before treatment, between carbon units, and after second carbon unit. (See **Table 1:** Remedial System Data)

Stack effluent samples have been collected monthly utilizing a summa canister and submitted to an ELAP certified laboratory for analysis. The analysis consisted of USEPA test method TO-14 for tetrachloroethene, trichloroethene (TCE), cis-1,2-dichloroethene (1,2-DCE) and vinyl chloride (VC) by GC/MS. (See **Table 3:** SVES Air Sampling Analytical)

4.0 Evaluation of Data

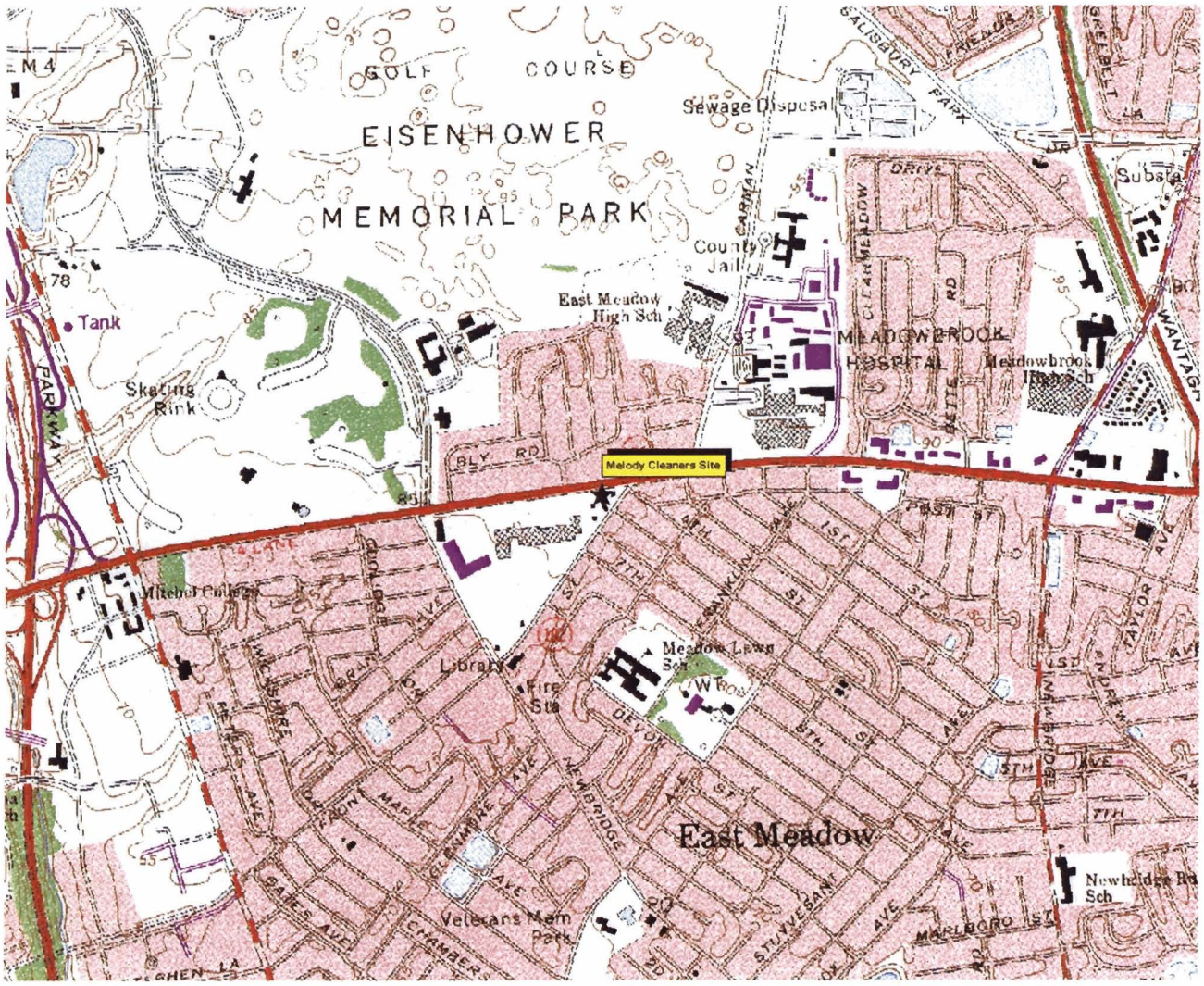
Startup and bi-weekly PID screening, indicates that the SVE system has reduced contaminant concentrations significantly since startup. SVE system optimization is currently being performed by the rotation of vacuum influence by applying higher vacuum to two of the SVE wells in order to extend the radius of influence of the wells. After one week, the focus is switched to the opposite two SVE wells. Impact Environmental recommends continued operation of the SVE system in this manner until the full remedial system can be installed.

Monthly SVE system effluent analytical reports indicate that the system is operating within discharge limits.

Plates

East Meadow, New York

Plate 1: Project Location Map
East Meadow, New York



Scale 1:24000
CONTOUR INTERVAL 10 FEET
DASHED LINES REPRESENT 5 – FOOT CONTOURS
DATUM IS MEAN SEA LEVEL
DEPTH CURVES AND SOUNDINGS IN FEET – DATUM IS MEAN LOW WATER

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Plate 2: SVE SYSTEM LAYOUT

Melody Cleaners Site
2050 Hempstead Turnpike, East Meadow, New York
VCP Site Code # 347-1

Legend

scale: 1" = 40'

- SVE Well
- soil probe
- soil-gas probe

Tables

East Meadow, New York

Table 1: Remedial System Data
East Meadow, New York

Date	Time	Soil Vapor Extraction System Readings				Vapor Concentrations			SVE-1		SVE-2		SVE-3		SVE-4	
		Vacuum at Blower Inlet ("H2O)	Blower Discharge Pressure	Blower Discharge Temp	Total Flow Blower Effluent (CFM)	Carbon #1 Influent (PPM)	Carbon #2 Influent (PPM)	Stack Effluent (PPM)	Vacuum (Inches of Water)	Flow (CFM)	Vacuum (Inches of Water)	Flow (CFM)	Vacuum (Inches of Water)	Flow (CFM)	Vacuum (Inches of Water)	Flow (CFM)
1/3/2005	900	44	8	124	200	0	0.2	0.2	-	-	-	-	-	-	-	-
	1000	16	12	106	250	292	0.1	0	1	76	0	70	2	78	2	77
	1100	16	12	108	250	264	0	0	1	-	0	-	2	-	2	-
	1200	22	11	109	220	422	0	0	5	84	5	103	2	29	2	33
	1305	21	11	110	220	500	0	0	5	-	5	-	2	-	2	-
	1405	21	11	110	220	525	0	0	5	-	5	-	2	-	2	-
	1505	21	11	109	220	516	0	0	5	78	5	88	2	29	2	35
1/4/2005	1300	21	11	109	220	318	0	0	8	84	8	74	4	29	4	33
1/5/2005	900	21	11	108	220	270	0	0	10	84	10	74	4	29	4	33
1/6/2005	900	21	11	105	220	221	0	0	10	84	10	74	4	29	4	33
1/7/2005	900	21	11	106	220	210	0	0	10	84	10	72	4	31	4	33
1/10/2005	900	20	11	106	220	176	0	0	10	84	10	74	4	31	4	33
1/13/2005	1000	20	11	107	220	107	0	0	10	84	10	74	4	33	4	33
1/17/2005	1130	20	11	99	220	76	0	0	10	84	10	74	4	33	4	33
1/26/2005	1300	20	11	98	220	65	0	0	13	84	10	74	12	33	8	33
2/2/2005	930	20	11	99	220	25	2	0	13	84	13	74	13	33	12	33
2/7/2005	1445	22	11	108	220	29	2	0	12	67	12	67	15	50	15	47
2/16/2005	1000	22	11	104	220	13	0	0	12	67	12	67	15	50	15	47
2/25/2005	900	23	10	94	220	11	0	0	16	67	12	66	16	50	18	47
3/3/2005	1400	24	10	104	220	11	0	0	16	67	13	67	16	50	17	45
3/10/2005	1000	28	8	108	220	7.6	2	0	17	66	15	66	16	50	16	45
3/17/2005	1000	30	10	116	220	6.7	5.9	0	16	66	16	66	16	50	16	45
3/22/2005	1000	28	8	116	220	3.6	1.8	0	16	66	12	67	15	50	16	45
4/1/2005	1000	28	8	116	220	4.2	1.5	0	15	66	12	67	14	50	15	45
4/11/2005	1000	26	10	122	220	1.8	18.3	0	14	66	11	67	12	50	14	45
4/21/2005	1000	26	10	160	220	1.8	0.9	0	12	66	10	67	12	50	12	45
4/27/2005	1000	26	10	120	220	1.8	0	0	12	66	10	67	12	50	12	45
5/2/2005	1000	27	10	105	220	0.8	0	0	14	66	11	67	12	50	13	45
5/17/2005	1000	26	10	128	220	0	0	0	14	66	11	67	12	50	14	45
5/26/2005	1000	26	10	122	220	0.8	0	0	14	66	10	67	12	50	14	45
6/8/2005	1000	26	10	140	220	0.3	0	0	14	66	11	67	13	50	14	45

Table 2a: Monitoring Well Vacuum Influence Data
East Meadow, New York

Date	Time	SVES Vac @ Blower (in. H2O)	SVES FLOW (FPM)	MW-1 Vacuum ("H2O)	Distance SVE-1 to MW-1	MW-2 Vacuum ("H2O)	Distance SVE-1 to MW-2
1/3/2005	1255	22	220	0.16	53	0.06	140
1/5/2005	1035	21	220	0.17	53	0.06	140
1/17/2005	1215	20	220	0.16	53	0.07	140

Table 2b: SVE Well Vacuum Influence Data
East Meadow, New York

Date	Time	SVES Vac @ Blower (in. H2O)	SVES FLOW (FPM)	SVE-3 Shallow Well Vacuum ("H2O)	SVE-3 Deep Well Vacuum ("H2O)	Distance SVE-3 to SVE-1	Distance SVE-3 to SVE-2	Distance SVE-3 to SVE-4
1/4/2005	1255	22	220	0.1	0.16	95	130	130
1/5/2005	1035	21	220	0.1	0.17	95	130	130
1/17/2005	1215	20	220	0.11	0.17	95	130	130

Table 3: SVES Air Sampling Analytical
East Meadow, New York

Carbon Effluent Concentrations				*Carbon Mid Point*					*Carbon Influent*			
Sample Collection Date	**cis-1,2-Dichloroethylene**	**Tetrachloroethylene**	**Trichloroethylene**	**Vinyl Chloride**	**cis-1,2-Dichloroethylene**	**Tetrachloroethylene**	**Trichloroethylene**	**Vinyl Chloride**	**cis-1,2-Dichloroethylene**	**Tetrachloroethylene**	**Trichloroethylene**	**Vinyl Chloride**
	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3
01/ /05	ND	8.28	ND	ND	ND	8.28	ND	ND	19356	211150	19129	11.4
02/ /05	ND	ND	ND	ND								
03/ /05	ND	ND	ND	ND								
04/ /05	ND	ND	ND	ND								
05/ /05	ND	ND	ND	ND								

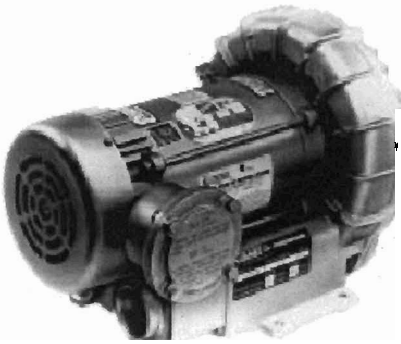
Exhibits

Brooklyn, New York

Exhibit 1

SVES Blower Specifications

R3105N-50



R4 - R7 Series

R3-R7 Series - Explosion Proof Motors

MODELS	Maximum Pressure ("H_2O) 60 Hz	50 Hz	Maximum Vacuum ("H_2O) 60 Hz	50 Hz	Maximum Air Flow (CFM) 60 Hz	50 Hz
R3105N-50	43	31	40	28	53	44
R4110N-50 **R4310P-50**	51	38	48	35	92	74
R4P115N-50	65	45	60	40	133	112
R5125Q-50 **R5325R-50**	55 65	- 50	60 65	- 47	160 160	- 133
R6130Q-50 **R6340R-50**	60 100	75 75	70 80	65 65	215 215	180 180
R6P155Q-50 **R6P355R-50**	95 100	80 80	85 85	65 65	280 280	235 232
R7100R-50	100	90	110	85	425	350

PRODUCT FEATURES

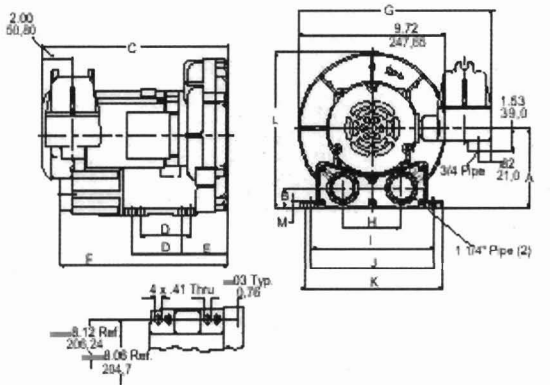
- Rugged design, maintenance free
- Quiet operation within OSHA standards
- Blowers and motors rated for continuous duty
- UL and CSA approved multi-voltage motors, incorporating approved thermal protection
- Motors classified as Explosion Proof Division 1 and 2, for Group D explosive atmospheres
- Motors carry full rated load at temperatures below Class B motor insulation limits
- Class F motor insulation used in motors larger than 1 HP
- Motors conform to NEMA frame sizes; motor enclosures conform to IP54 (suitable for outdoor use)
  Pilot duty thermal overload protection is standard on all 1 HP and larger motors
- Double sealed motor ball bearings with a B10 life exceeding 30,000 hours of continuous operation at the maximum rated continuous blower load
- Sealed air streams
- Aluminum impeller, housing and cover; viton shaft seal.
- Pressurized and leak-tested to less than 5cc/minute

Recommended Accessories	R3 Series	R4 Series	R4P Series	R5 Series	R6 Series	R6P Series	R7 Series
Pressure Gauge	AJ496	AJ496	AE133	AE133	AE133	AE133	AE133
Vacuum Gauge	AJ497	AJ497	AE134	AE134	AE134	AE134	AE134
Pressure Filter	AJ126C	AJ126D	AJ126D	AJ126D	AJ126F	AJ126F	AJ126G
Vacuum Filter (Inline)	AJ151C	AJ151D	AJ151D	AJ151E	AJ151G	AJ151G	AJ151H

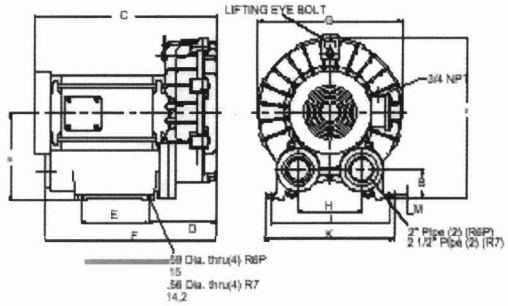
Gast Manufacturing Inc., A Unit of IDEX Corporation, Benton Harbor, MI USA • ph 616-926-6171 • fx 616-925-8288 • www.gastmfg.com

Product Dimensions (in. mm)

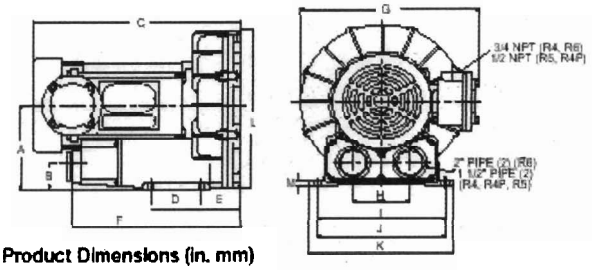
Model R3



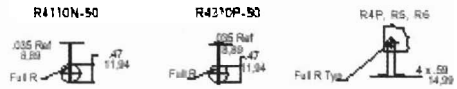
Models R6P, R7



Models R4, R4P, R5, R6



Mounting Hole Detail



Product Dimensions (in. mm)

Model	A	B	C	D	E	F	G	H	I	J	K	L	M
R3105N-50	5.21 132	1.37 35	12.3 312	3.25 83	3.06 78	11.06 281	12.75 324	3.88 99	8.06 205	8.12 206	9.38 238	10.15 258	.53 13
R4110N-50	6.18 157	1.68 43	15.34 390	3.75 95	2.85 72	12.44 316	12.34 313	3.96 101	8.86 225	8.93 227	10.00 254	11.80 300	.44 11
R4310P-50	6.18 157	1.68 43	14.09 358	3.75 95	2.84 74	12.44 316	12.34 313	3.96 101	8.86 225	8.93 227	10.00 254	11.80 300	.44 11
R4P115N-50	6.98 177	1.84 47	17.41 442	4.50 114	3.25 83	13.93 354	13.75 349	4.75 121	10.25 260	10.31 262	11.75 298	13.61 346	.60 15
R5125Q-50	7.02 178	1.82 46	17.59 447	4.50 114	3.55 90	14.22 361	13.72 348	4.75 121	10.25 260	10.31 262	11.75 298	13.80 351	.59 15
R5325R-50	7.02 178	1.82 46	16.75 1425	4.50 114	3.55 90	14.22 361	13.56 344	4.75 121	10.25 260	10.31 262	11.75 298	13.80 351	.59 15
R6130Q-50	7.75 197	1.94 49	18.97 482	5.50 140	3.85 98	16.02 407	15.17 385	4.92 125	11.38 289	11.42 290	12.96 329	15.34 390	.52 13
R6340R-50	7.75 197	1.94 49	18.82 478	5.50 140	3.85 98	15.89 404	15.17 385	4.92 125	11.38 298	11.42 290	12.96 329	15.34 390	.52 13
R6P155Q-50	9.77 248	3.15 80	22.81 579	5.12 130	5.51 140	16.85 428	16.75 425	5.00 127	- -	11.42 290	12.80 325	18.14 461	.50 13
R6P355R-50	9.77 248	3.15 80	19.92 506	5.12 130	5.51 140	16.85 428	16.75 425	5.00 127	- -	11.42 290	12.80 325	18.14 461	.50 13
R7100R-50	10.79 274	3.64 92	22.77 578	8.36 212	8.50 216	21.50 546	18.00 457	7.90 201	- -	14.76 375	16.14 410	20.03 509	.56 14

Notice: Specifications subject to change without notice

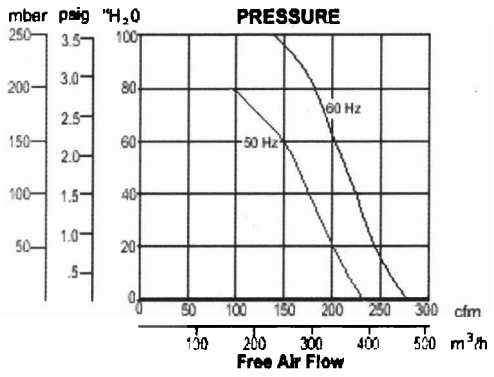
Product Specifications

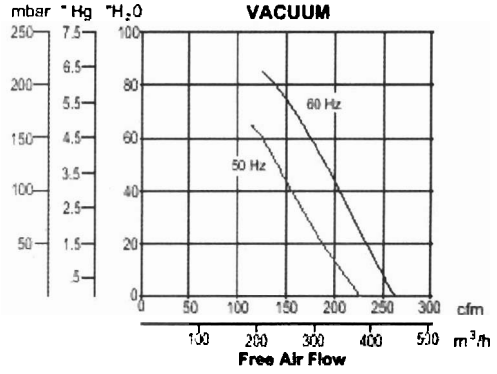
MODEL NUMBER		R3105N-50	R4110N-50	R4310P-50	R4P115N-50
Motor Enclosure		XPFC	XPFC	XPFC	XPFC
HP/kW	60 Hz	.50/0,37	1.0/0,75	.0/0,75	1.5/1,1
	50 Hz	.33/0,25	.60/0,45	60/0,45	1.0/0,75
Voltage	60 Hz	115/208-230-1	115/208-230-1	208 230/460-3	115/208-230-1
	50 Hz	110/220-240-1	110/220-240-1	220/380-3	110/220-240-1
Amps	60 Hz	5.2/2.9-2.6	11.4/6.2-5.6	3.4-1.5/.5	20.3/11.2-10.6
	50 Hz	4.8/2.5-2.2	9.2/5.2 4.6	3.2/1.6	15.2/7.6-8
Starting Amps	60 Hz	12.2 @ 230V	26.5 @ 230V	19.7 @ 230V	60.6 @ 230V
	50 Hz	13 @ 220V	40.6 @ 240V	23.3 @ 220V	Consult Factory
Insulation Class		B	B	B	
Recommended NEMA Starter Size		00/00	0/00	0/0	1/0
Net Weight (lbs/kg)		52/24	60/28	58/27	79/36

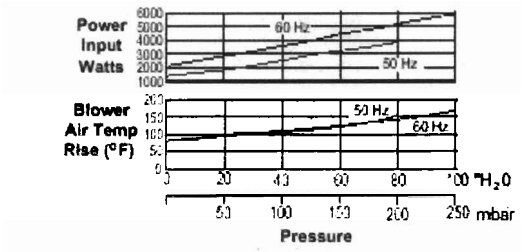
MODEL NUMBER		R5125Q-50	R5325R-50	R6130Q-50	R6340R-50
Motor Enclosure		XPFC	XPFC	XPFC	XPFC
HP/kW	60 Hz	2.0/1,5	2.0/1,5	3.0/2,2	4.0/3,0
	50 Hz	-	1.5/1,1	2.5/1,9	3.0/2,2
Voltage	60 Hz	115/230-1	208-230/460-3	230-1	208-230/460-3
	50 Hz	-	190-220/380-415-3	220-240-1	190-220/380-415-3
Amps	60 Hz	25/12.5	6.6-6.1/3.05	16.3	13-12/6
	50 Hz	-	5.0-4.4/2.5-2.6	14.7-13.5	14.4-13.4/7.2-6.8
Starting Amps	60 Hz	78 @ 230V	48 @ 230V	64 @ 230V	125 @ 230V
	50 Hz	-	Consult Factory	Consult Factory	Consult Factory
Insulation Class		F	F	F	F
Recommended NEMA Starter Size		1/0	0/0	1	1/0
Net Weight (lbs/kg)		77/35	75/34	129/59	112/51

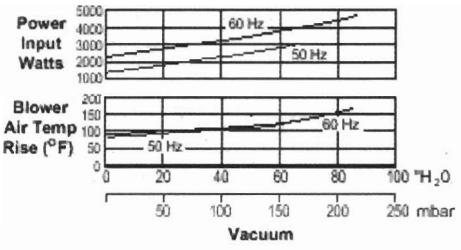
MODEL NUMBER		R6P155Q-50	R6P355R-50	R7100R-50
Motor Enclosure		XPFC	XPFC	XPFC
HP/kW	60 Hz	5.5/4,1	6.0/4,5	10/7,5
	50 Hz	4.0/3,0	4.5/3,4	8.0/6,0
Voltage	60 Hz	230-1	208-230/460-3	208-230/460-3
	50 Hz	220-240-1	190-220/380-415-3	190-220/380-415-3
Amps	60 Hz	29.9	20-18/9	26.5-24/12
	50 Hz	20.8-19.1	14.9-11/7.45-5.8	23.2-21.0/11.6-10.9
Starting Amps	60 Hz	198.4 @ 230V	59 @ 460V	105 @ 460V
	50 Hz	189 @ 240V	Consult Factory	Consult Factory
Insulation Class		F	F	F
Recommended NEMA Starter Size		0/2	1/0	2/1
Net Weight (lbs/kg)		243/110	233/105	297/134

R6P355R-50

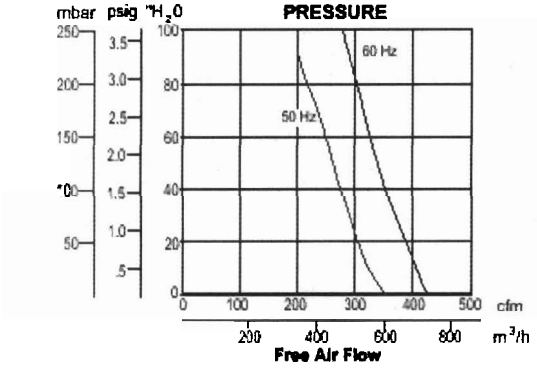


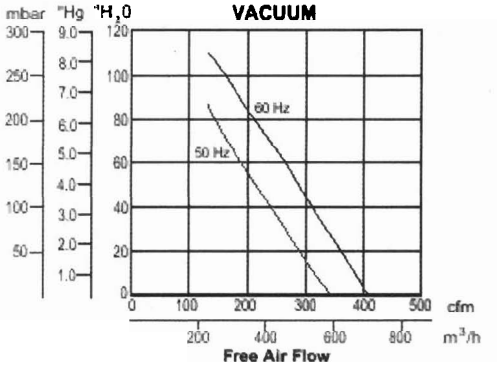


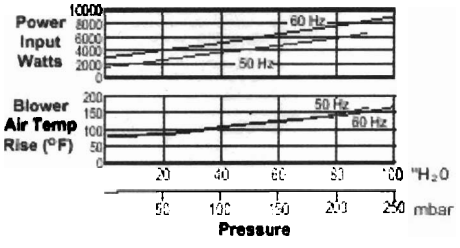


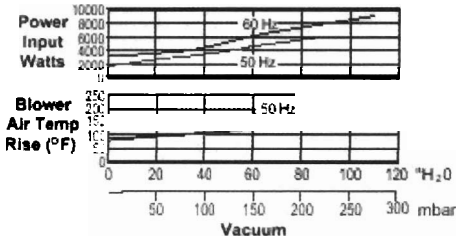


R7100R-50









Q. What happens to the noise when I locate two blowers close together?

A. If the blowers are of the same design they produce sound frequencies that are close together. These may cause a "beating" change in volume of the blower noise. This is because the units are not synchronized. If two small blowers are needed this change in volume can be reduced by moving them further apart. With larger blowers a dual blower with two blowers on one motor will solve this problem.

Q. What causes the noise relief valves make?

A. Air rush through the valve.

Q. How do I control relief valve or bleed off valve noise?

A. Attach AJ121 series silencer on the port of the relief valve that is open to atmosphere.

Contact Gast at 616-926-6171 or www.gastmfg.com with any further questions you may have on reducing blower noise in your application.

Noise Reduction and Absorption Coefficients for Common and Specialty Noise Reduction Materials

	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
Brick, unglazed	.03	.03	.03	.04	.05	.07	.04
Carpet							
1/4 in pile height	.05	.10	.15	.30	.50	.55	.26
Fabric							
Heavy Velour							
18 oz per sq. yd							
draped to 1/2 area	.14	.35	.55	.72	.70	.65	.62
Hardwood							
Plywood Paneling							
1/4 in thick							
wood frame	.58	.22	.07	.04	.03	.07	.09
Tecnifoam*							
TFP4							
Pyramind shape	.39	.60	1.21	1.14	1.16	1.13	1.05
Tecnifoam*							
TFW4000							
Anaechoic							
Wedge shape	.64	1.10	1.34	1.23	1.24	1.21	1.25

Source: Mechancial Engineering Reference Manual

*TFP4 and TFW4000 are products of Tecnifoam, Inc., 7145 Boone Avenue North, Minneapolis, MN., 55429

Blower Sound Levels of Gast Blowers

Data is highest sound level out of 4 places around the blower at 1 meter.

Data represents average of several units run at nominal voltage.

Lowest to highest maximum dba level throughout performance range is shown.

Readings at other than the maximum around the blower at 1 meter may be from 2 to 10 dba less than data shown.

Readings taken in a laboratory sound room that does not reflect much noise.

Note: For comparison purposes, some blower manufacturers show sound data from 1–1/2 meters instead of from 1 meter; also, some blower manufacturers show an "average" sound level across performance instead of the full range between minimum and maximum sound levels; either of these methods will provide different and usually lower sound levels compared to Gast's sound level method.

60Hz	dBa at Pressure	50Hz	dBa at Pressure
R1	59-67	R1	59-64
R2	66	R2	61-63
R3	67-70	R3	63-68
R4	69-73	R4	64-69
R4P	69-75	R4P	64-71
R5	73-77	R5	71-77
R6	73-79	R6	70-79
R6P	82-83	R6P	77-80
R6PP	77-79	R6PP	73-76
R6PS	76-77	R6PS	72-75
[illegible]	[illegible]	[illegible]	[illegible]
R7P	77-80	R7P	74-79
R7S	75-77	R7S	72-76
R9	82-85	R9	78-85
R9P	81-88	R9P	79-86
R9S	79-81	R9S	77-81
R4H	80-82	R4H	75-81
R4M	82-83	R4M	78-79
R7H	83	R7H	79-81

60Hz	dBa at Vacuum	50Hz	dBa at Vacuum
R1	58-63	R1	54-60
R2	67	R2	63-64
R3	67-71	R3	64-69
R4	70-72	R4	66-70
R4P	73-74	R4P	68-71
R5	75-76	R5	71-73
R6	7[illegible] 80	R6	72-77
R6P	8[illegible] 85	R6P	79-81
R6PP	81-83	R6PP	78-79
R6PS	79-81	R6PS	76-77
R7	85-87	R7	79-84
R7P	84-86	R7P	80-83
R7S	82-83	R7S	78-80
R9	85-90	R9	83-84
R9P	88-90	R9P	84-87
R9S	87-88	R9S	83-86
R4H	82-89	R4H	79-88
R4M	85-89	R4M	80-85
R7H	82-91	R7H	80-90

Exhibit 2

Granular Activated Carbon

Product Sheet

VPM-1000 VPM-2000 VPM-2500 VPM-3000

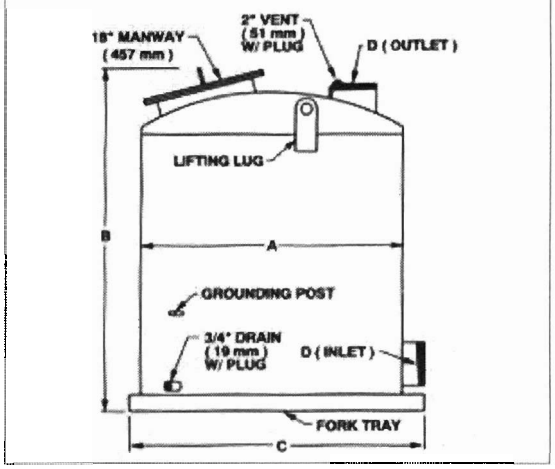
Vapor Phase Adsorbers

General Description

Envirotrol's vapor phase adsorbers are prefabricated steel vessels engineered to remove contaminants and/or odors from air at moderate flow rates with low pressure drop. The steel adsorbers are provided with lifting lugs and are mounted on a fork truck mobile base for easy placement and carbon exchange service. Envirotrol provides a complete turnkey service to handle carbon reactivation and exchange of these adsorbers. They are available in four sizes to best suit your application and they can be provided on a lease or purchase basis. These adsorbers can be utilized by industrial, municipal or commercial users in a variety of air purification applications including but not limited to the following:

* Emergency Air Quality Control
* Tank or Sump Air Vents
* Soil Vapor Extraction
* Air Stripper Off-Gas
* Work Environments

STANDARD CONFIGURATION



Features and Benefits

Adaptable
Adsorbers are charged with the media best suited for your application.

Dependable
Operates continuously with minimal maintenance.

Durable
Adsorber is heavy steel construction lined with a high performance epoxy resin for superior corrosion resistance and long life.

Efficient
Recycle of adsorber vessels and carbon optimizes treatment economics.

Identifiable
Individual serial numbers are assigned to each adsorber to facilitate tracking and documentation

Portable
Easily transported and installed at almost any location.

Versatile
Easily configured as single or multiple unit systems to handle higher flows.

Operating Parameters

Conditions	Limits
Maximum Working Pressure	15 PSI
Temperature Limit	140° F

Contact Us Today
412.741.2030

Envirotrol, Inc. 432 Green Street P.O. 61 Sewickley, PA 15143

Product Sheet

VPM-1000 VPM-2000 VPM-2500 VPM-3000

Vapor Phase Adsorbers

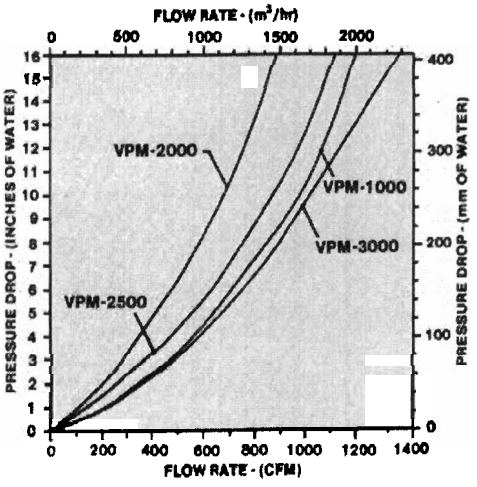
Dimensions and Capacities

Adsorbers	A Inches	B Inches	C Inches	D Inches	Max Flow CFM	Carbo Fill (lbs.)	Ship Weight (lbs.)
VPM-1000	48	66	54	8	1000	1000	2100
VPM-2000	48	90	54	8	800	2000	3550
VPM-2500	54	90	60	8	1000	2500	4150
VPM-3000	60	91	66	8	1200	3000	5100

The standard vessel is furnished with MNPT inlet and outlet fittings. The vent and drain are FNPT fittings furnished with a plug. The man way is furnished with a bolted-on cover and neoprene gasket. Other optional fittings can be provided as required. All dimensions and capacities are approximate.

Pressure Drop Information

PRESSURE DROP CHART



The pressure drop across a vapor phase adsorber unit is a function of the vapor flow rate as shown on the above pressure drop chart. Additionally, sufficient retention time must be provided within the carbon bed. For this reason, the recommended maximum vapor flow rate through each type of adsorber is as follows:

Type	Limits
VPM-1000	1000 CFM (1699 m^3/hr)
VPM-2000	800 CFM (1359 m^3/hr)
VPM-2500	1000 CFM (1699 m^3/hr)
VPM-3000	1200 CFM (2039 m^3/hr)

If higher flows or lower pressure drops are required, multiple vapor phase adsorbers may be installed in parallel operation.

Carbon Change-Out Service

Envirotrol offers a complete turnkey service to change-out activated carbon at your site. This service includes vacuum of the spent carbon, delivery and installation of the fresh carbon and return of the spent carbon to our reactivation facilities. Additionally, Envirotrol offers complete turnkey service to handle carbon reactivation and recycle of the vapor phase adsorbers via our facilities. This is done by disconnecting and draining the adsorber and shipping the adsorber with carbon to Envirotrol.

Safety Information

Whenever workers enter a vessel containing carbon, all precautions must be taken since dangerously low levels of oxygen may be encountered. Atmosphere sampling and work procedures for potentially low oxygen areas should be followed.

Envirotrol, Inc. 432 Green Street P.O. 61 Sewickley, PA 15143

Exhibit 3

SVE Well Logs

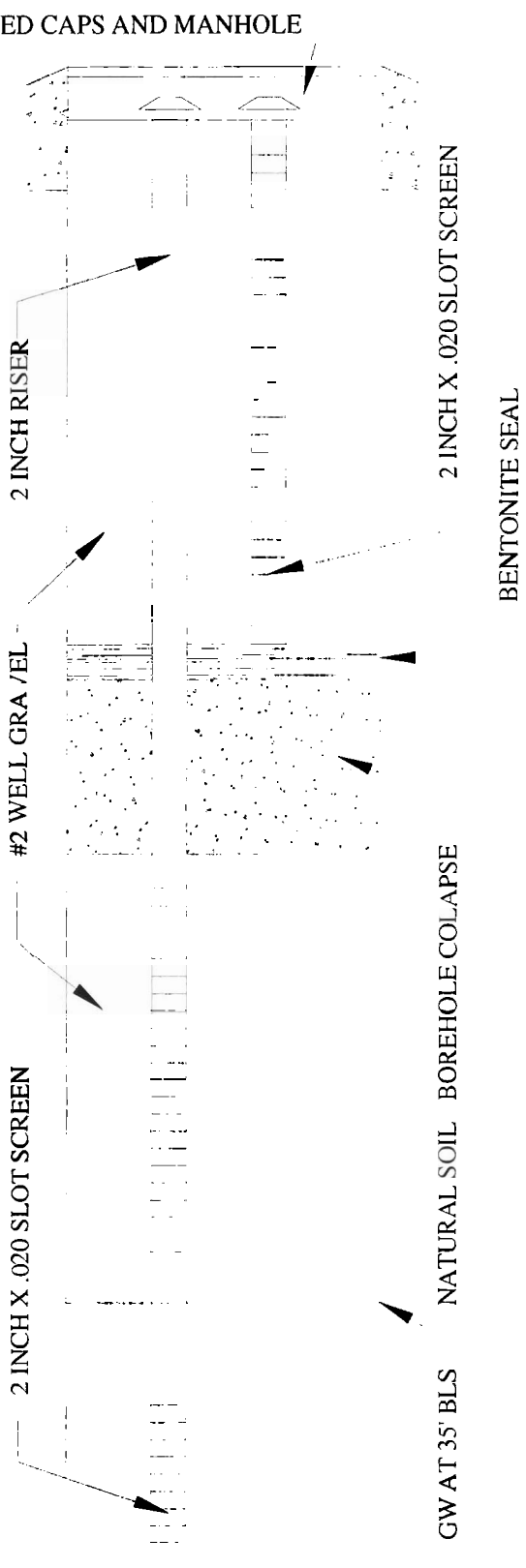
SITE: MELODY CLEANERS **WELL LOG: SVE-1** **DRILL METHOD: HSA**

LOCATION: EAST MEADOW **COMPLETION DATE: 8/9/04** **HOLE DIAMETER: 8.25"**

SUBSURFACE PROFILE

DEPTH FEET	SYMBOL	DESCRIPTION
0		GROUND SURFACE
		ASPHALT & BASE
2		REDDISH BROWN SLIGHTLY SILTY SAND
6		TAN SLIGHTLY SILTY MEDIUM GRAIN SAND WITH SMALL WEATHERED QUARTZ STONES
8		
10		
12		TAN SLIGHTLY SILTY MEDIUM GRAIN SAND WITH WEATHERED QUARTZ STONES TO 2" DIAMETER
14		
16		
18		
20		
22		
24		
26		
28		TAN SLIGHTLY SILTY MEDIUM TO LARGE GRAIN SAND WITH QUARTZ STONES TO 1/4"
30		
32		
34		
36		
38		
40		
42		
44		

WELL COMPLETION DETAILS



SITE: MELODY CLEANERS **WELL LOG: SVE-2** **DRILL METHOD: HSA**

LOCATION: EAST MEADOW **COMPLETION DATE: 8/9/04** **HOLE DIAMETER: 8.25"**

SUBSURFACE PROFILE

SYMBOL DESCRIPTION

0 GROUND SURFACE

ASPHALT & BASE

2 REDDISH BROWN SLIGHTLY SILTY SAND

4

6 TAN SLIGHTLY SILTY MEDIUM GRAIN SAND WITH SMALL WEATHERED QUARTZ STONES

10

12 TAN SLIGHTLY SILTY MEDIUM GRAIN SAND WITH WEATHERED QUARTZ STONES TO 2" DIAMETER

14

16

18

20

22

24

26

28

30 TAN SLIGHTLY SILTY MEDIUM TO LARGE GRAIN SAND WITH QUARTZ STONES TO 1/4"

32

34

36

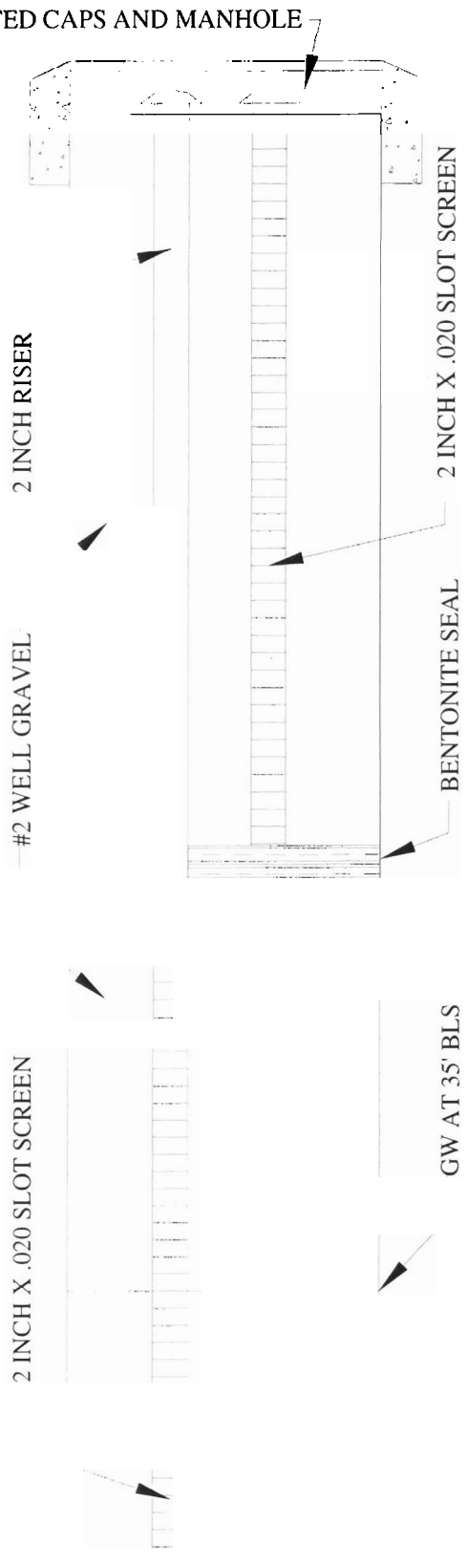
38

40

42

44

WELL COMPLETION DETAILS



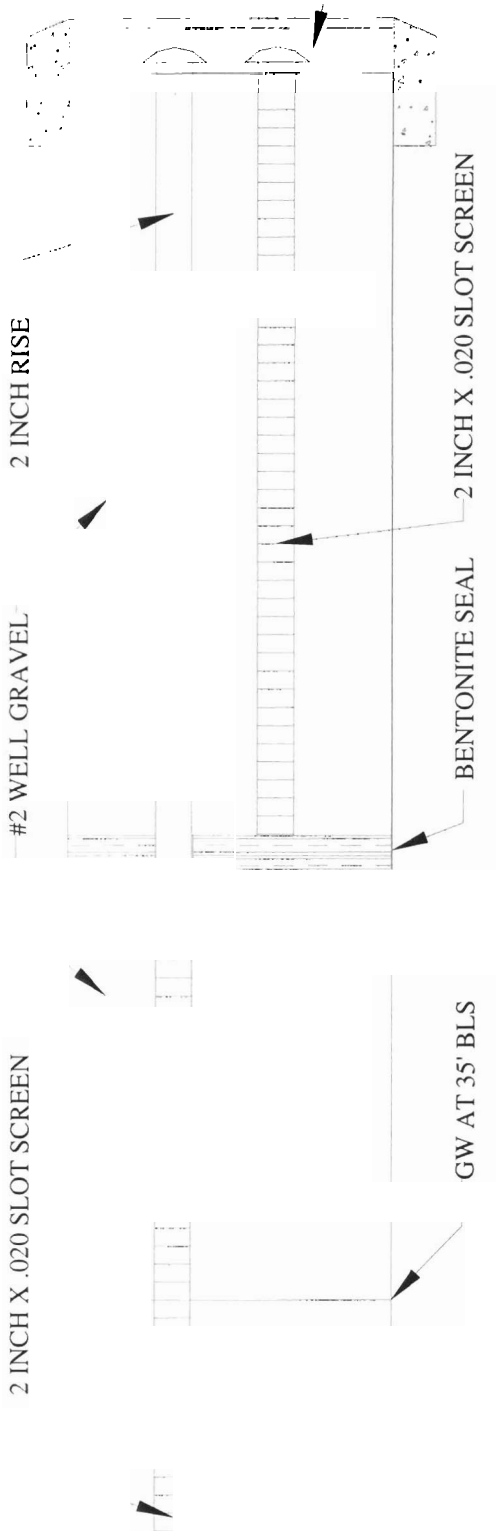
SITE: MELODY CLEANERS **WELL LOG: SVE-3** **DRILL METHOD: HSA**

LOCATION: EAST MEADOW **COMPLETION DATE: 8/9/04** **HOLE DIAMETER: 8.25"**

SUBSURFACE PROFILE

WELL COMPLETION DETAILS

DEPTH FEET	SYMBOL	DESCRIPTION
0		GROUND SURFACE
		ASPHALT & BASE
2		REDDISH BROWN SLIGHTLY SILTY SAND
4		
6		TAN SLIGHTLY SILTY MEDIUM GRAIN SAND WITH SMALL WEATHERED QUARTZ STONES
8		
10		
12		TAN SLIGHTLY SILTY MEDIUM GRAIN SAND WITH WEATHERED QUARTZ STONES TO 2" DIAMETER
14		
16		
18		
20		
22		
24		
26		
28		TAN SLIGHTLY SILTY MEDIUM TO LARGE GRAIN SAND WITH QUARTZ STONES TO 1/4"
30		
32		
34		
36		
38		
40		
44		



SITE: MELODY CLEANERS **WELL LOG: SVE-4** **DRILL METHOD: HSA**

LOCATION: EAST MEADOW **COMPLETION DATE: 8/9/04** **HOLE DIAMETER: 8.25"**

SUBSURFACE PROFILE

DEPTH FEET	SYMBOL	DESCRIPTION
0		GROUND SURFACE
		ASPHALT & BASE
2		REDDISH BROWN SLIGHTLY SILTY SAND
4		
6		TAN SLIGHTLY SILTY MEDIUM GRAIN SAND WITH SMALL WEATHERED QUARTZ STONES
8		
10		TAN SLIGHTLY SILTY MEDIUM GRAIN SAND WITH WEATHERED QUARTZ STONES TO 2" DIAMETER
12		
14		
16		
18		
20		
22		
24		
26		TAN SLIGHTLY SILTY MEDIUM TO LARGE GRAIN SAND WITH QUARTZ STONES TO 1/4"
28		
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WELL COMPLETION DETAILS

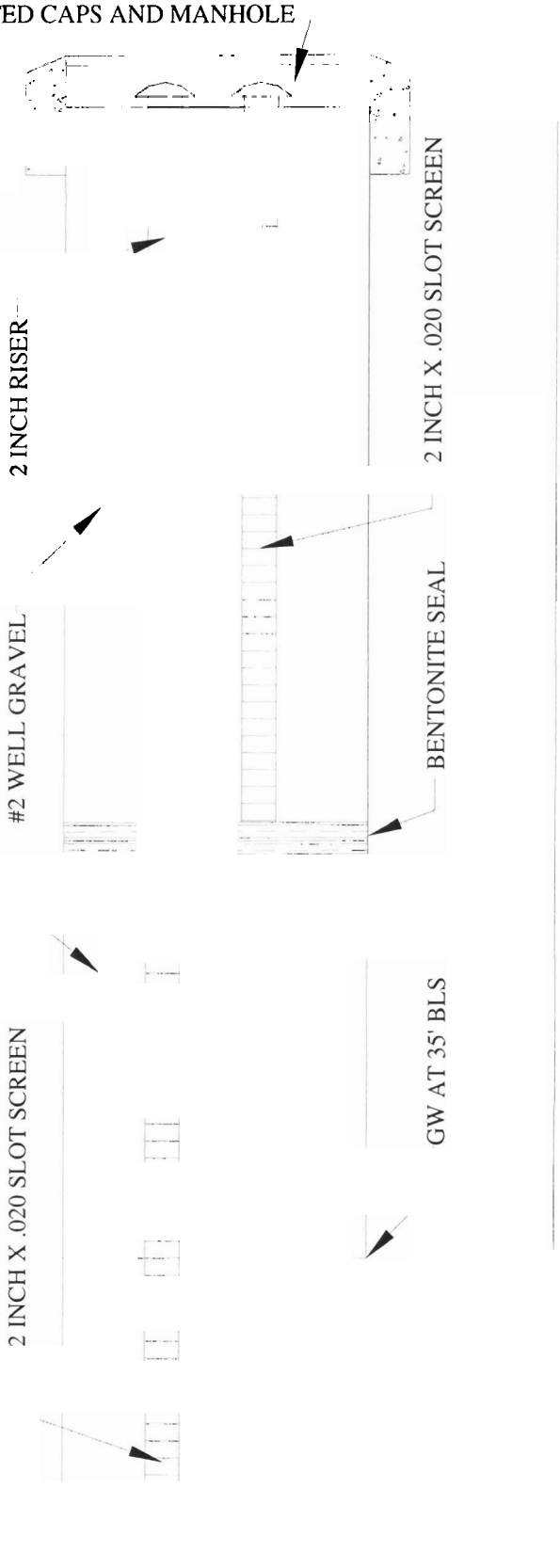


Exhibit 4

Carbon Disposal Manifests

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Land Recycling and Waste Management
P.O. Box 8550
Harrisburg, PA 17105-8550

2500-FM-LRWM0051 REV. 7/99

Form approved
OMB No. 2050-0039

OFFICIAL PENNSYLVANIA MANIFEST FORM

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information within the bold red border is not required by Federal law but may be required by State law.
NYR000218826			

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number: PAH 095458

B. State Gen. ID:

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Trans. ID: PA-AH

7. Transporter 2 Company Name | 8. US EPA ID Number

D. Transporter's Phone ( )

E. State Trans. ID: PA-AH

9. Designated Facility Name and Site Address | 10. US EPA ID Number

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone ( )

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X		BA	19	P	D001, D018, D040
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

a. | c.

b. | d.

15. Special Handling Instructions and Additional Information

EI Item#: IE CLENNY-AP

Emergency Response Telephone Number: (631) 847-7189

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	MONTH	DAY	YEAR
		4	27	05

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	MONTH	DAY	YEAR

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	MONTH	DAY	YEAR

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name	Signature	MONTH	DAY	YEAR

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the National Response Center (800) 424-8802 and the PA DEP (717) 787-4343

PA 1 095458

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete

6

COPY 6 - GENERATOR: RETAIN THIS COPY

Appendix A

Laboratory Analytical Reports

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for

Impact Environmental
170 Keyland Court
Bohemia, NY 11716
Attention: Hal Benjamin

Report Date: 1/6/2005
Re: Client Project ID: 04-455
York Project No.: 05010027 Revision

CT License No. PH-0723 New York License No. 10854 Mass. License No. M-CT106 Rhode Island License No. 93 NJ License No. CT401

120 RESEARCH DRIVE STRATFORD, CT 06615 (203) 325-1371 FAX (203) 357-0166

Report Date: 1/6/2005
Client Project ID: 04-455
York Project No.: 05010027 R

Impact Environmental
170 Keyland Court
Bohemia, NY 11716
Attention: Hal Benjamin

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 01/04/05. The project was identifed as your project "04-455 ".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables .

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			Carbon-Eff		Carbon-Mid	
York Sample ID			05010027-01		05010027-02	
Matrix			AIR		AIR	
Parameter	Method	Units	Results	MDL	Results	MDL
Volatiles(TO-14 list)	EPA TO-14A	ppbv	---	---	---	---
cis-1,2-Dichloroethylene			Not detected	0.34	Not detected	0.34
Tetrachloroethylene			1.2	0.34	1.2	0.34
Trichloroethylene			Not detected	0.34	Not detected	0.34
Vinyl Chloride			Not detected	0.34	Not detected	0.34
Volatile Organics, TO14 List	EPA TO14A	ug/cu.m.	---	---	---	---
cis-1,2-Dichloroethylene			Not detected	1.36	Not detected	1.36
Tetrachloroethylene			8.28	2.33	8.28	2.32
Trichloroethylene			Not detected	1.84	Not detected	1.83
Vinyl Chloride			Not detected	0.876	Not detected	0.874

YORK

Client Sample ID			Carbon-Inf	
York Sample ID			05010027-03	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
Volatiles(TO-14 list)	EPA TO-14A	ppbv	---	---
cis-1,2-Dichloroethylene			4800	340
Tetrachloroethylene			30610	340
Trichloroethylene			3500	340
Vinyl Chloride			4.4	0.34
Volatile Organics, TO14 List	EPA TO14A	ug/cu.m.	---	---
cis-1,2-Dichloroethylene			19356	810
Tetrachloroethylene			211150	1380
Trichloroethylene			19129	1090
Vinyl Chloride			11.4	0.52

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes for York Project No. 05010027 R

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By: Robert Q. Bradley
Managing Director

Date: 1/6/2005

YORK

YORK
ANALYTICAL LABORATORIES, INC.
120 RESEARCH DRIVE STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

05010007.

Company Name	Report To:	Invoice To:	Project ID/No.	Samples Collected By (Signature)
Impact	Hal Benjamin	Hal Benjamin	04-455	Hal Benjamin (Name Printed)

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
	Carbon - Eff	1/3/05			X		TO-14	Summa-523
	Carbon - Mid	1/3/05			X		TO-14	Summa-502
	Carbon - Inf	1/3/05			X		TO-14	Summa-011

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Sample Relinquished by	1/3/05/1530 Date/Time	Sample Received by	1/4 1030 Date/Time
Bottles Received in Field by	Date/Time	Sample Relinquished by	Date/Time	Sample Received in LAB by	1/4 1pm. Date/Time

Comments/Special Instructions

Turn-Around Time

___Standard ___RUSH(define)_____

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for

Impact Environmental
170 Keyland Court
Bohemia, NY 11716
Attention: Hal Benjamin

Report Date: 3/1/2005
Re: Client Project ID: 04-455
York Project No.: 05020462 Revised

CT License No. PH-0723 New York License No. 10854

120 Research Drive Stratford, CT 06615 (203) 325-1371 Fax (203) 357-0166

Report Date: 3/1/2005
Client Project ID: 04-455
York Project No.: 05020462 Revised

Impact Environmental
170 Keyland Court
Bohemia, NY 11716
Attention: Hal Benjamin

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 02/18/05. The project was identifed as your project "04-455 ".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables .

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			Stack	
York Sample ID			05020462-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
Target Volatiles	EPA TO14A	ppbv	---	---
1,2-Dichloroethylene			Not detected	0.2
Tetrachloroethylene			Not detected	0.2
Trichloroethylene			Not detected	0.2
Vinyl chloride			Not detected	0.2
Target Volatiles	EPA TO14A	ug/cu.m.	---	---
1,2-Dichloroethylene			Not detected	1.0
Tetrachloroethylene			Not detected	1.0
Trichloroethylene			Not detected	1.0
Vinyl chloride			Not detected	1.0

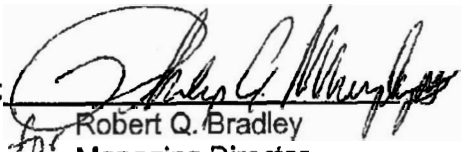
Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

YORK

Report Date: 3/1/2005
Client Project ID: 04-455
York Project No.: 05020462 Revised

Notes for York Project No. 05020462 R

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By:  **Date:** 3/1/2005

for Robert Q. Bradley
Managing Director

YORK

YORK
ANALYTICAL LABORATORIES, INC.
120 RESEARCH DRIVE STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

0502040 62.

Company Name	Report To:	Invoice To:	Project ID/No.	Samples Collected By (Signature)
Impact	Hal Benjamin	Pere Torres	04-455	Hal Benjamin (Name Printed)

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
	Stack	2/16/05			X		TO-14m For: PCE, TCE, 1,2-DCE, VC	York Summa S-BC

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Sample Relinquished by	2/16/05 Date/Time	Sample Received by Wayne	2/17 1030 Date/Time
Bottles Received in Field by	Date/Time	Sample Relinquished by	Date/Time	Sample Received in LAB by 2/17 3PM	Date/Time

Comments/Special Instructions

Turn-Around Time

✓ Standard ___ RUSH(define)_____

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for

Impact Environmental
170 Keyland Court
Bohemia, NY 11716
Attention: Hal Benjamin

Report Date: 3/30/2005
Re: Client Project ID: 04-455.1 / Melody
York Project No.: 05030568 Revised

CT License No. PH-0723 New York License No. 10854

120 RESEARCH DRIVE STRATFORD, CT 06615 (203) 325-1371 FAX (203) 357-0166

Report Date: 3/30/2005
Client Project ID: 04-455.1 / Melody
York Project No.: 05030568 Revised

Impact Environmental
170 Keyland Court
Bohemia, NY 11716
Attention: Hal Benjamin

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 03/18/05. The project was identifed as your project "04-455.1/ Melody ".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables .

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			Stack Eff	
York Sample ID			05030568-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
Target Volatiles	EPA TO14A	ppbv	---	---
1,2-Dichloroethylene			Not detected	0.2
Tetrachloroethylene			Not detected	0.2
Trichloroethylene			Not detected	0.2
Vinyl chloride			Not detected	0.2
Target Volatiles	EPA TO14A	ug/cu.m.	---	---
1,2-Dichloroethylene			Not detected	1.0
Tetrachloroethylene			Not detected	1.0
Trichloroethylene			Not detected	1.0
Vinyl chloride			Not detected	1.0

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

YORK

Report Date: 3/30/2005
Client Project ID: 04-455.1 / Melody
York Project No.: 05030568 Revised

Notes for York Project No. 05030568 R

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By:  **Date:** 3/30/2005

Robert Q. Bradley
Managing Director

YORK

YORK
ANALYTICAL LABORATORIES, INC.
120 RESEARCH DRIVE STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

0503058.

Company Name	Report To:	Invoice To:	Project ID/No.	Samples Collected By (Signature) / Name (Printed)
IMPACT	Hal Benjamin	IMPACT	04-455.1 Melody	Ted Ueno

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
04-455-1	Stack Eff	3/17/05			X		TO 14M FOR: PCE, TCE, 1,2-DCE, VC	SUMMA YORK S30

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	T. Ueno	3/17/05	Sample Received by	3/18/05 4PM Date/Time
Bottles Received in Field by	Date/Time	Sample Relinquished by	Date/Time	Sample Received in LAB by	Date/Time

Comments/Special Instructions

Turn-Around Time

___Standard ___RUSH(define)_____

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for

Impact Environmental
170 Keyland Court
Bohemia, NY 11716
Attention: Hal Benjamin

Report Date: 5/4/2005
Re: Client Project ID: 04-455-1 / Melody
York Project No.: 05040812 Revised

CT License No. PH-0723 New York License No. 10854

120 RESEARCH DRIVE STRATFORD, CT 06615 (203) 325-1371 FAX (203) 357-0166

Report Date: 5/4/2005
Client Project ID: 04-455-1 / Melody
York Project No.: 05040812 Revised

Impact Environmental
170 Keyland Court
Bohemia, NY 11716
Attention: Hal Benjamin

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 04/28/05. The project was identifed as your project "04-455-1 / Melody ".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables .

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			Stack Eff	
York Sample ID			05040812-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
Target Volatiles	EPA TO14A	ppbv	---	---
1,2-Dichloroethylene			Not detected	0.2
Tetrachloroethylene			Not detected	0.2
Trichloroethylene			Not detected	0.2
Vinyl chloride			Not detected	0.2
Target Volatiles	EPA TO14A	ug/cu.m.	---	---
1,2-Dichloroethylene			Not detected	1.0
Tetrachloroethylene			Not detected	1.0
Trichloroethylene			Not detected	1.0
Vinyl chloride			Not detected	1.0

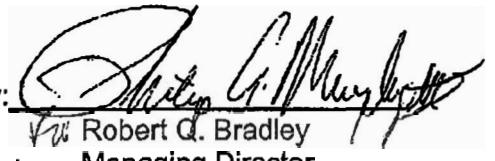
Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

YORK

Report Date: 5/4/2005
Client Project ID: 04-455-1 / Melody
York Project No.: 05040812 Revised

Notes for York Project No. 05040812 R

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference.
2. **Samples are retained for a period** of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By:  **Date:** 5/4/2005

Robert Q. Bradley
Managing Director

YORK

YORK
ANALYTICAL LABORATORIES, INC.
120 RESEARCH DRIVE STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

C9204812.

Company Name	Report To:	Invoice To:	Project ID/No.	Samples Collected By (Signature)
Impact	Hal Benjamin	Impact	04-455.1 Melody	Ted Cieno (Name Printed)

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
04-455.1	Stack Eff	4-27-05			X		TO 14M for: PCE, TCE 1,2 DCE VC	SUMMA GCI

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	[signature]	4-27-05	Wayne	4/28 12
		Sample Relinquished by	Date/Time	Sample Received by	Date/Time
Bottles Received in Field by	Date/Time	Sample Relinquished by	Date/Time	4/28 5PM Sample Received in LAB by	Date/Time

Comments/Special Instructions

Turn-Around Time

X Standard ___ RUSH(define)_____

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for

Impact Environmental
170 Keyland Court
Bohemia, NY 11716
Attention: Hal Benjamin

Report Date: 6/7/2005
Re: Client Project ID: 04-455-1 / Melody
York Project No.: 05050993 Revised

CT License No. PH-0723 New York License No. 10854

120 RESEARCH DRIVE STRATFORD, CT 06615 (203) 325-1371 FAX (203) 357-0166

Report Date: 6/7/2005
Client Project ID: 04-455-1 / Melody
York Project No.: 05050993 Revised

Impact Environmental
170 Keyland Court
Bohemia, NY 11716
Attention: Hal Benjamin

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 05/27/05. The project was identifed as your project "04-455-1/ Melody ".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables .

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			Stack Eff	
York Sample ID			05050993-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
Target Volatiles	EPA TO14A	ppbv	---	---
1,2-Dichloroethylene			Not detected	0.2
Tetrachloroethylene			Not detected	0.2
Trichloroethylene			Not detected	0.2
Vinyl chloride			Not detected	0.2
Target Volatiles	EPA TO14A	ug/cu.m.	---	---
1,2-Dichloroethylene			Not detected	1.0
Tetrachloroethylene			Not detected	1.0
Trichloroethylene			Not detected	1.0
Vinyl chloride			Not detected	1.0

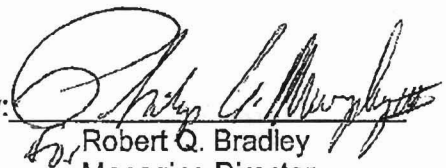
Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

YORK

Report Date: 6/7/2005
Client Project ID: 04-455-1 / Melody
York Project No.: 05050993 Revised

Notes for York Project No. 05050993

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By:  **Date:** 6/7/2005

for Robert Q. Bradley
Managing Director

YORK

YORK
ANALYTICAL LABORATORIES, INC.

120 RESEARCH DRIVE STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

0505c993

Page 1 of 1

Field Chain-of-Custody Record

Company Name	Report To:	Invoice To:	Project ID/No.	Samples Collected By (Signature) / Name (Printed)
Impact	Hal Benjamin	Impact	04.455-1 Melody.	Ted Uemo

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
04-455-1	Stack Eff	5-26-05			X		TO14M for: PCE-TCE-1,2 DCE VC	SUMMA YORK 530

Chain-of-Custody Record

	Date/Time		Date/Time		Date/Time
Bottles Relinquished from Lab by		Sample Relinquished by	5-27-05	Sample Received by	5/27/05
Bottles Received in Field by		Sample Relinquished by		Sample Received in LAB by	5-27-05 1720

Comments/Special Instructions

Turn-Around Time

X Standard ___ RUSH(define)_____

Appendix B

Quality Assurance / Quality Control (QA/QC) Procedures

The sampling QA/QC protocol will be in accordance with the United States Environmental Protection Agency's accepted sampling procedures for hazardous waste streams [Municipal Research Laboratory, 1980, Sampling and Analysis Procedures for Hazardous Material Waste Streams, Environmental Protection Agency, Cincinnati, Ohio. USEPA-600/280-018] and ASTM Material Sampling Procedures.

A.1 Sample Personnel

All samples will be taken by or under the auspices of a United States Environmental Protection Agency Office of Emergency and Remedial Response Certified Sampler for Hazardous Materials. Sample staff (samplers) possessed a minimum of a B.A. Degree in the Earth and Space Sciences or a B.S. Degree in Engineering. Samplers will have a minimum of one (1) year experience in environmental/geological/biological/engineering fieldwork. Additionally, all samplers will have received mandatory forty-hour Occupational Safety and Health Administration training on working with potentially hazardous materials and appropriate Hazard Communication Program, "Right-To-Know" training.

A.2 Sample Equipment

A.2.1 Sediment/Soil Sampling Equipment

All sample handling (transferring) will be conducted using decontaminated stainless steel spoons and/or ponar grab (prepared as indicated below). When not in use, spoons and/or ponar grab will be wrapped in aluminum foil that has been rinsed with distilled/deionized water.

Wash with detergent (Alconox/Liquinox) and tap water
Rinse with distilled water
Rinse with acetone and/or acidic rinse and air dry
Rinse with distilled water
Air dry

A.2.2 Groundwater Sampling Equipment

All groundwater samples will be secured utilizing dedicated disposable sampling apparatus.

A.2.3 Organic Vapor Analyzer

Calibration of the PID was conducted prior to sampling using a span gas of known concentration. The PID was a Photovac Micro-Tip, photo ionization detection meter.

A.2.4 Sample Vessels

All sample vessels will be "level A" certified decontaminated containers. Containers will be of appropriate volume and type according to the analysis to be performed. Those samples to be analyzed for volatile and semi-volatile organic analytes will be placed in containers with Teflon lined caps.

A.3 Sample Acquisition

A.3.1 Sample Preservation

Those samples requiring preservation (i.e. acid) to maintain their integrity will be placed in containers preserved, prior to collection, by the laboratory. After acquisition, samples will be cooled to four degrees Celsius.

A.3.2 Laboratory Analysis

Soil and groundwater samples were analyzed by a New York State Certified Commercial Laboratory.

A.4 Sample Documentation

A sample represents physical evidence. An essential part of liability reduction is the proper control of gathered evidence. To establish proper control, the following sample identification and chain-of custody procedures will be followed.

A.4.1 Sample Identification

Sample identification will be executed by use of a sample tag, log book and manifest. Said documentation will provide the following information:

Project Code
Sample Laboratory Number
Sample Preservation
Instrument Used For Source Soil Grabs
Composite Medium Used For Source Soil Grabs
Date Sample Was Secured From Source Soil
Time Sample Was Secured From Source Soil
Person Who Secured Sample From Source Soil

A.4.2 Chain-of-Custody Procedures

Due to the evidential nature of samples, possession will be traceable from the time the samples will be collected until they are received by the testing laboratory. A sample will be considered under custody if:

It is in a person's possession, or
It is in a person's view, after being in possession, or
It is in a person's possession and they are to lock it up, or
It is in a designated secure area.

When transferring custody, the individuals relinquishing and receiving the samples will sign, date and note the time on transference on the Chain-of-Custody Form.

A.4.3 Laboratory Custody Procedures

A designated sample custodian accepted custody of the shipped samples and verified that the information on the sample tags matched that on the Chain-of-Custody Records. Pertinent information as to shipment, pick-up, courier, etc., were entered in the "remarks" section. The custodian entered the sample tag data into a bound logbook.

The laboratory custodian used the sample tag number, or assigned a unique laboratory number to each sample tag, and assured that all samples were transferred to the proper analyst or stored in the appropriate source area. The laboratory custodian distributed samples to the appropriate analysts. Laboratory personnel were responsible for the care and custody of samples, from the time they were received, until the sample was exhausted or returned to the sample custodian. All identifying data sheets and laboratory records were retained as part of the permanent documentation. Samples received by the laboratory were retained until after analysis and quality assurance checks were completed.