NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
Site Classification Report

10/26/2010

Site Code: 314047 **Site Name:** Dutchess Sanitation (FICA)
City: Poughkeepsie **Town:** Poughkeepsie
Region: 3 **County:** Dutchess
Current Classification: 04 **Proposed Classification:** 04
Estimated Size (acres): 17.00 **Extra Details:** Landfill
Significant Threat: Previously **Site Type:**
Priority ranking Score: 405 **Project Manager:** Carl Hoffman

Summary of Approvals

Originator/Supervisor: Jerry Rider	**07/13/2010**
RHWRE: :	**08/04/2010**
BEEI of NYSDOH:	**06/29/2010**
CO Bureau Director: Robert Knizek, Director, BURE:	**08/13/2010**
Assistant Division Director: Sal Ervolina:	**10/01/2010**

Site Description

The Dutchess Sanitation Landfill is a 17 acre inactive municipal waste landfill located 1000 feet from the Schatz Federal Bearing landfill. The site received municipal waste from 1971 to 1983. The landfilling ceased after a large fire occurred in 1984. Leachate generated from fighting this fire contained volatile organic compounds. Subsequently seeps were observed along the east slope of the landfill during a site inspection and leachate ran toward an adjacent wetland. A Phase I Investigation was completed where analysis of leachate showed that additional investigation was necessary. An AG Consent Order was signed for a Remedial Investigation and Feasibility Study (RI/FS) that was completed in 1992. A second AG Consent Order was signed for a cap and IRM to stabilize the steep southern slope of the landfill. A Part 360 cap was constructed over the entire landfill in 1994. The Blandings Turtle Pond in the wetland was remediated under the 1993 ROD. A totally enclosed flare was originally installed to combust landfill gas and eliminate odors, however gas levels have diminished and no longer support the flare. The no longer needed gas piping has been removed to facilitate mowing. The landfill cap is mowed and in good condition. Site management activities continue.

Contaminants of Concern (Including Materials Disposed)	**Quantity Disposed**
OU 01	
VOLATILE ORGANIC COMPOUNDS (VOCS)	0.00
WASTE OIL/INK (D001)	0.00

Analytical Data Available for : Air, Groundwater, Surface Water, Soil, Sediment

Applicable Standards Exceeded for: Groundwater, Surface Water

Site Code: 314047 **Site Name:** Dutchess Sanitation (FICA)

Site Environmental Assessment

Typical metals associated with municipal waste such as iron, sodium, and magnesium are present in groundwater at levels that are within one to two orders of magnitude above groundwater standards. Other metals have been detected at concentrations within the same order of magnitude as their corresponding standards. Groundwater and surface water monitoring has detected individual VOCs at trace levels in groundwater and at a pond at the site perimeter. Passive landfill gas venting using wind turbine ventilators were added to vent and disperse accumulations of methane and hydrogen sulfide at the landfill's summit. Formerly used above ground PVC piping has been removed to aid the mowing of the landfill cap. The cap is mowed by Region 3 operations and is in good condition.

Site Health Assessment

Drinking contaminated groundwater is not expected because the area is served by public water. Contact with contaminated soil is unlikely because the site is fenced and capped with clean soil.

Remedy Description and Cost

Remedy Description for Operable Unit 01

The Remedy specifically addressed several elements of the site. First, the removal of a pond of orange/yellow surface water and its corresponding sediments in the northeast corner of the site. This pond had been impacted by leachate seeps which have existed along the northeast face of the landfill. Secondly, further examination of the existing odor problem was conducted, and landfill gas control technologies (flaring) was implemented for a period of time. A third element was that leachate which was collected in the liner system of the new C&D cells of the landfill was treated at a POTW facility. Lastly, groundwater samples will be collected on a regular basis and analyzed for the site specific contaminants.

Total Cost $2,500,000

Remedy Description for Operable Unit 01A

The IRM unit of this project consisted of three elements that could not wait until a final remedy was selected. First site security including a chain link fence and locked gate was installed. The second element was slope stabilization to reduce the extreme slope of the southern face, and included construction of two lined c & d cells and a leachate collection system. The third element was the installation of a landfill cover consistent with a Part 360 cap that provides a barrier to water infiltration but allowing landfill gas to vent.

Total Cost $5,000,000

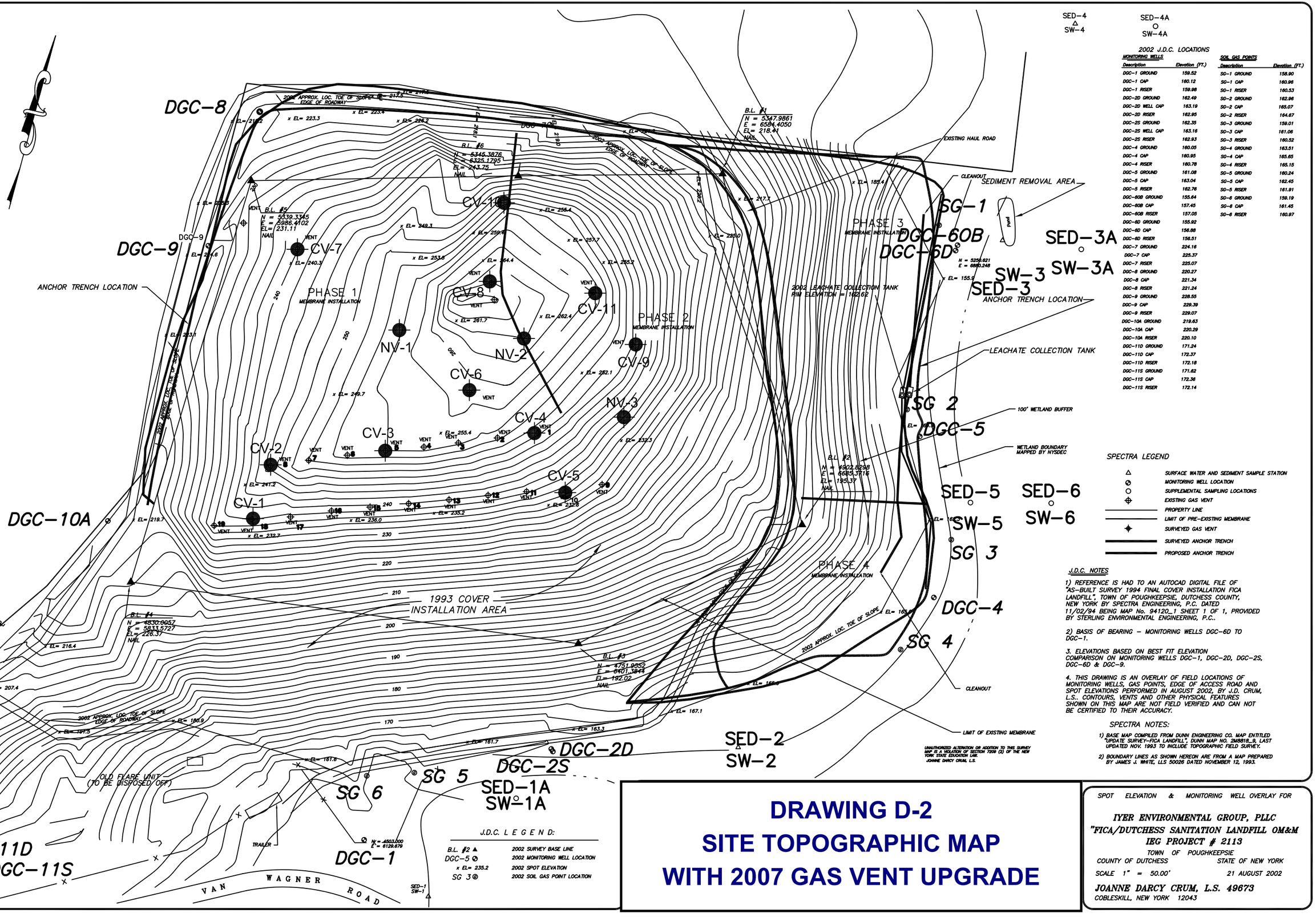
OU 00 **Site Management Plan Approval: 01/01/1994** **Status: ACT**

10/26/2010

Site Code: 314047 **Site Name:** Dutchess Sanitation (FICA)

Basis for Classification Change

Remediation was completed at the Dutchess Sanitation landfill in 1995. The main elements of remedy included capping of the landfill in accordance with NYCRR Part 360 regulations, and the installation of leachate and gas collection systems. Active gas collection and flaring was initially implemented, but has been discontinued due to diminished gas production that no longer supports active landfill gas collection and flaring. Capping has significantly reduced infiltration and off-site leachate disposal is no longer performed. Currently, site management activities include periodic inspection, sampling, and passive landfill gas venting using wind turbine ventilators on individual gas vents at the landfill summit. Cap maintenance such as mowing is performed by Region 3 operations. These site activities are customary with a remediated landfill requiring continued site management. All of the remedial actions performed have further mitigated the significant threat formerly posed at the site, and post remedial sampling has shown the proposed action to classify this site to class 4 is appropriate.



2002 J.D.C. LOCATIONS

MONITORING WELLS		SOIL GAS POINTS	
Description	Elevation (FT.)	Description	Elevation (FT.)
DGC-1 GROUND	159.52	SG-1 GROUND	158.90
DGC-1 CAP	160.12	SG-1 CAP	160.96
DGC-1 RISER	159.98	SG-1 RISER	160.53
DGC-2D GROUND	162.49	SG-2 GROUND	162.96
DGC-2D WELL CAP	163.19	SG-2 CAP	165.07
DGC-2D RISER	162.95	SG-2 RISER	164.67
DGC-2S GROUND	162.35	SG-3 GROUND	159.01
DGC-2S WELL CAP	163.16	SG-3 CAP	161.06
DGC-2S RISER	162.93	SG-3 RISER	160.52
DGC-4 GROUND	160.05	SG-4 GROUND	163.51
DGC-4 CAP	160.95	SG-4 CAP	165.65
DGC-4 RISER	160.78	SG-4 RISER	165.15
DGC-5 GROUND	161.08	SG-5 GROUND	160.24
DGC-5 CAP	163.04	SG-5 CAP	162.45
DGC-5 RISER	162.76	SG-5 RISER	161.91
DGC-6OB GROUND	155.64	SG-6 GROUND	159.19
DGC-6OB CAP	157.45	SG-6 CAP	161.45
DGC-6OB RISER	157.05	SG-6 RISER	160.97
DGC-6D GROUND	155.92		
DGC-6D CAP	156.88		
DGC-6D RISER	156.51		
DGC-7 GROUND	224.16		
DGC-7 CAP	225.37		
DGC-7 RISER	225.07		
DGC-8 GROUND	220.27		
DGC-8 CAP	221.34		
DGC-8 RISER	221.24		
DGC-9 GROUND	228.55		
DGC-9 CAP	229.39		
DGC-9 RISER	229.07		
DGC-10A GROUND	219.63		
DGC-10A CAP	220.29		
DGC-10A RISER	220.10		
DGC-11D GROUND	171.24		
DGC-11D CAP	172.37		
DGC-11D RISER	172.18		
DGC-11S GROUND	171.62		
DGC-11S CAP	172.36		
DGC-11S RISER	172.14		

SPECTRA LEGEND

- SURFACE WATER AND SEDIMENT SAMPLE STATION
- MONITORING WELL LOCATION
- SUPPLEMENTAL SAMPLING LOCATIONS
- EXISTING GAS VENT
- PROPERTY LINE
- LIMIT OF PRE-EXISTING MEMBRANE
- SURVEYED GAS VENT
- SURVEYED ANCHOR TRENCH
- PROPOSED ANCHOR TRENCH

J.D.C. NOTES

1) REFERENCE IS HAD TO AN AUTOCAD DIGITAL FILE OF "AS-BUILT SURVEY 1994 FINAL COVER INSTALLATION FICA LANDFILL", TOWN OF POUGHKEEPSIE, DUTCHESS COUNTY, NEW YORK BY SPECTRA ENGINEERING, P.C. DATED 11/02/94 BEING MAP No. 94120_1 SHEET 1 OF 1, PROVIDED BY STERLING ENVIRONMENTAL ENGINEERING, P.C..

2) BASIS OF BEARING - MONITORING WELLS DGC-6D TO DGC-1.

3. ELEVATIONS BASED ON BEST FIT ELEVATION COMPARISON ON MONITORING WELLS DGC-1, DGC-2D, DGC-2S, DGC-6D & DGC-9.

4. THIS DRAWING IS AN OVERLAY OF FIELD LOCATIONS OF MONITORING WELLS, GAS POINTS, EDGE OF ACCESS ROAD AND SPOT ELEVATIONS PERFORMED IN AUGUST 2002, BY J.D. CRUM, L.S.. CONTOURS, VENTS AND OTHER PHYSICAL FEATURES SHOWN ON THIS MAP ARE NOT FIELD VERIFIED AND CAN NOT BE CERTIFIED TO THEIR ACCURACY.

SPECTRA NOTES:

1) BASE MAP COMPILED FROM DUNN ENGINEERING CO. MAP ENTITLED "UPDATE SURVEY-FICA LANDFILL", DUNN MAP NO. 2M8818_9, LAST UPDATED NOV. 1993 TO INCLUDE TOPOGRAPHIC FIELD SURVEY.

2) BOUNDARY LINES AS SHOWN HEREON ARE FROM A MAP PREPARED BY JAMES J. WHITE, LLS 50026 DATED NOVEMBER 12, 1993.

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.
JOANNE DARCY CRUM, L.S.

J.D.C. L E G E N D:

B.L. #2 ▲	2002 SURVEY BASE LINE
DGC-5 ⊕	2002 MONITORING WELL LOCATION
x EL= 235.2	2002 SPOT ELEVATION
SG 3 ◎	2002 SOIL GAS POINT LOCATION

DRAWING D-2
SITE TOPOGRAPHIC MAP
WITH 2007 GAS VENT UPGRADE

SPOT ELEVATION & MONITORING WELL OVERLAY FOR

IYER ENVIRONMENTAL GROUP, PLLC
"FICA/DUTCHESS SANITATION LANDFILL OM&M
IEG PROJECT # 2113

TOWN OF POUGHKEEPSIE
COUNTY OF DUTCHESS STATE OF NEW YORK
SCALE 1" = 50.00' 21 AUGUST 2002

JOANNE DARCY CRUM, L.S. 49673
COBLESKILL, NEW YORK 12043

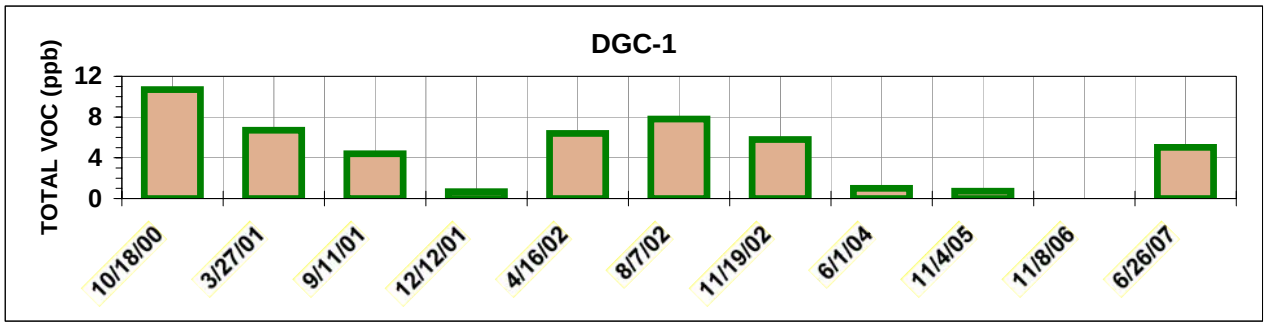
Source:
Google Earth

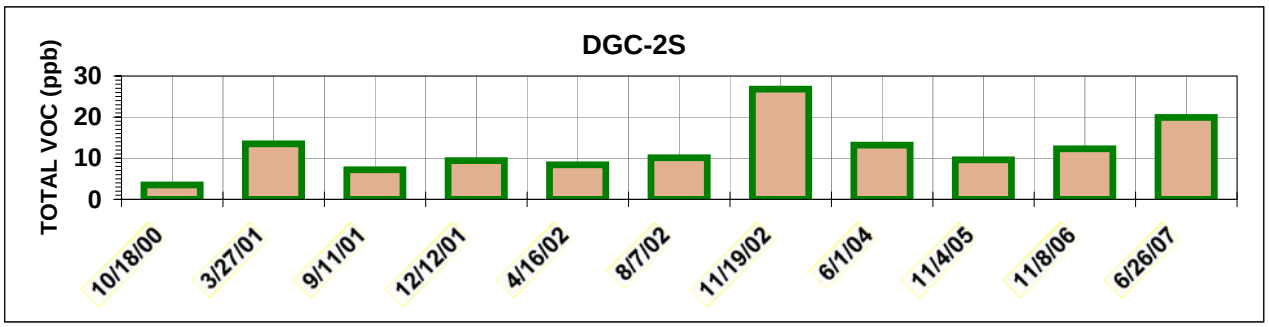
DUTCHESS SANITATION LANDFILL
AERIAL PHOTO

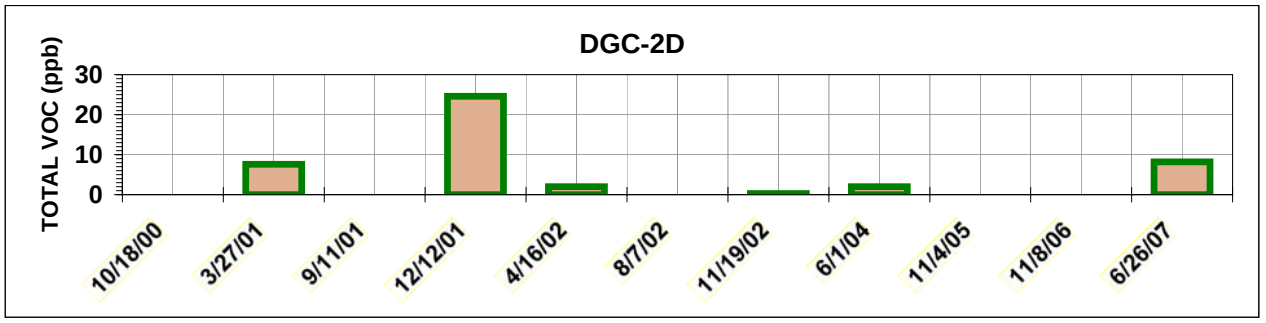
FIGURE 2

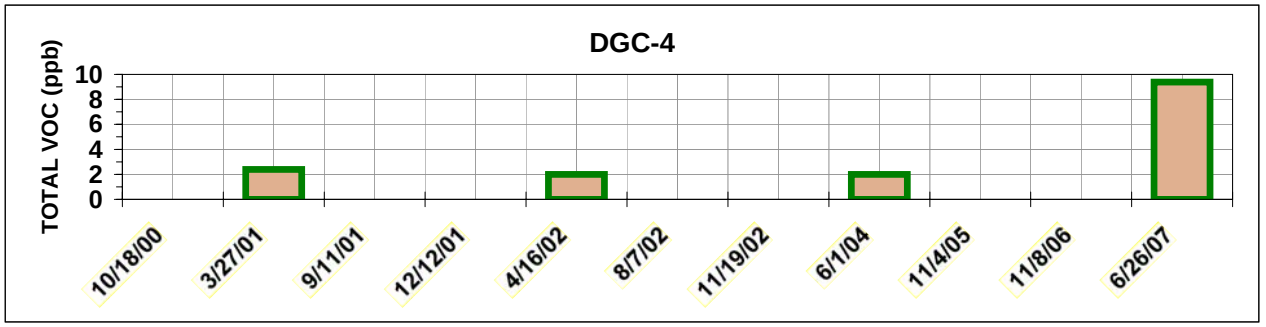
IEG

FIGURE 3
FICA/DUTCHESS SANITATION LANDFILL OM&M
GROUNDWATER VOC RESULTS









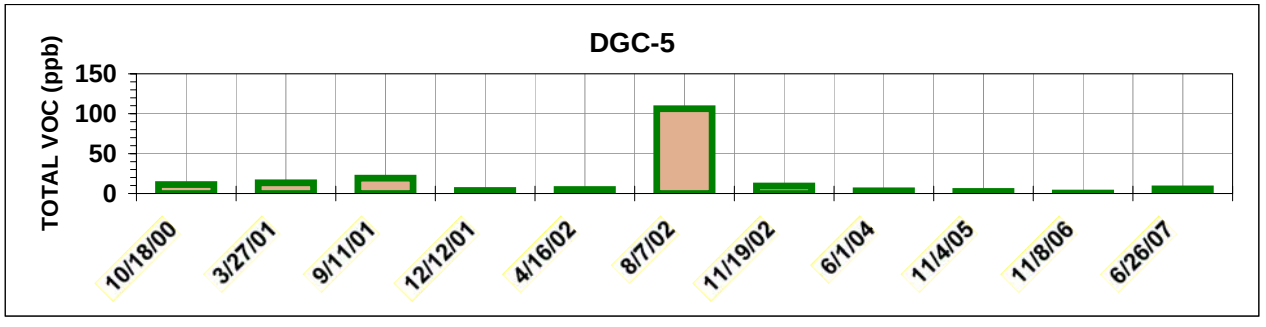
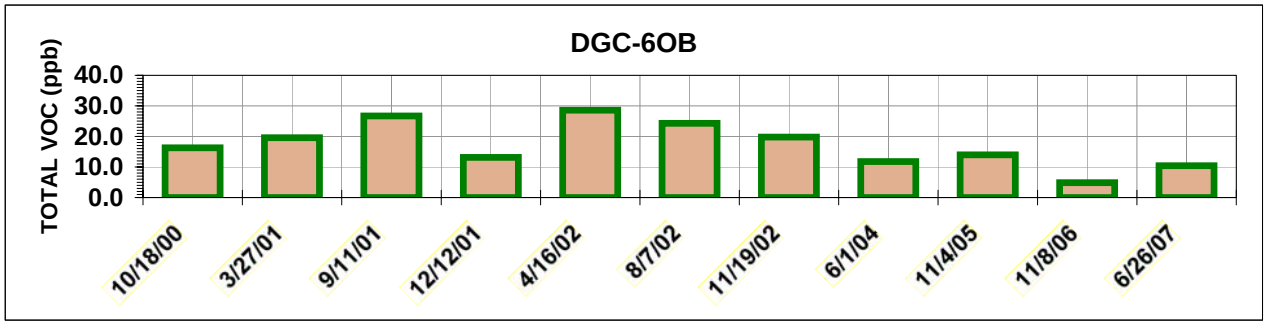
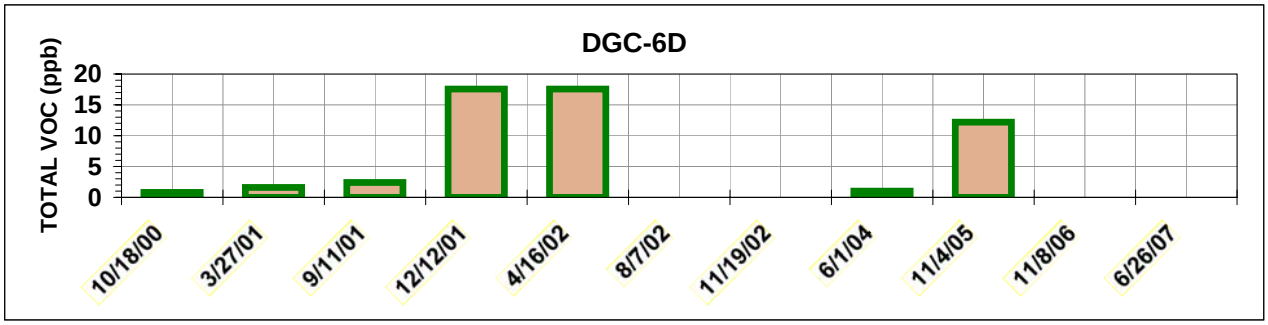
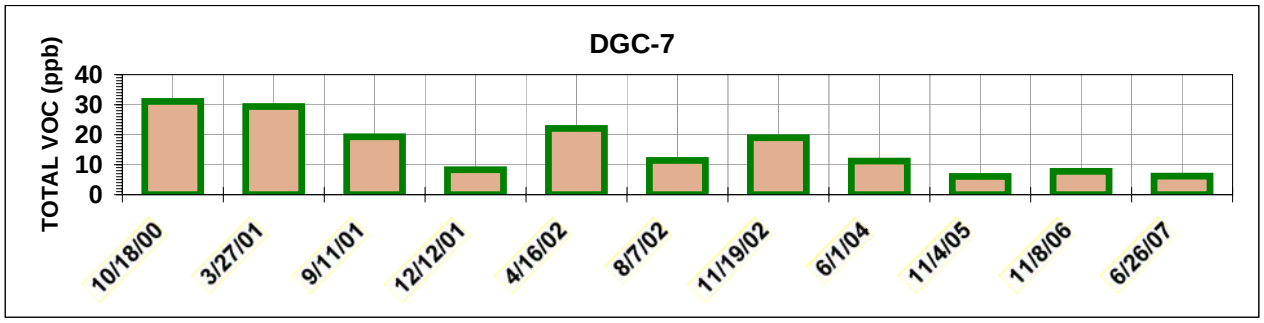
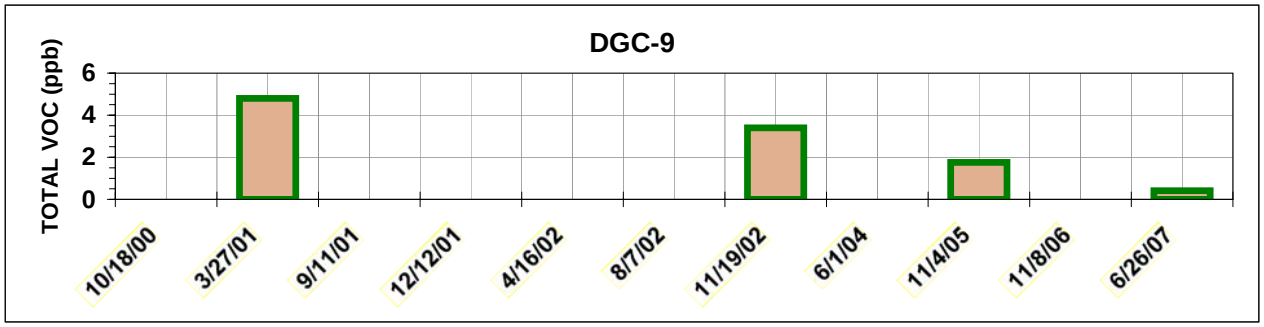


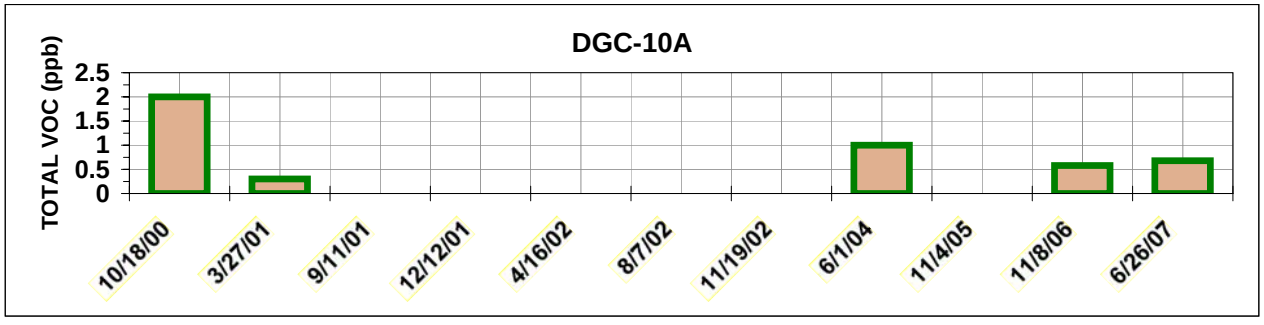
FIGURE 3
FICA/DUTCHESS SANITATION LANDFILL OM&M
GROUNDWATER VOC RESULTS

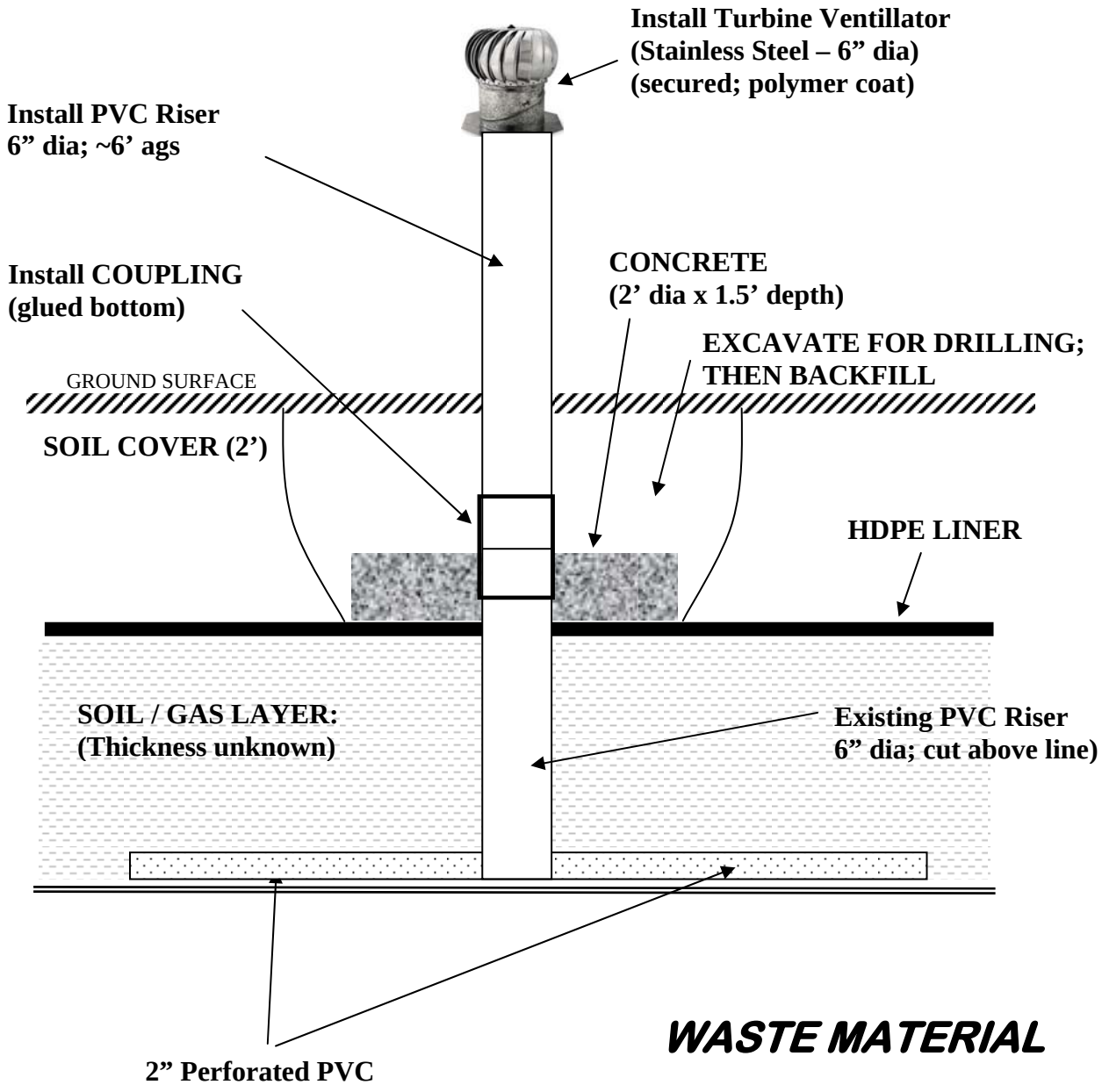




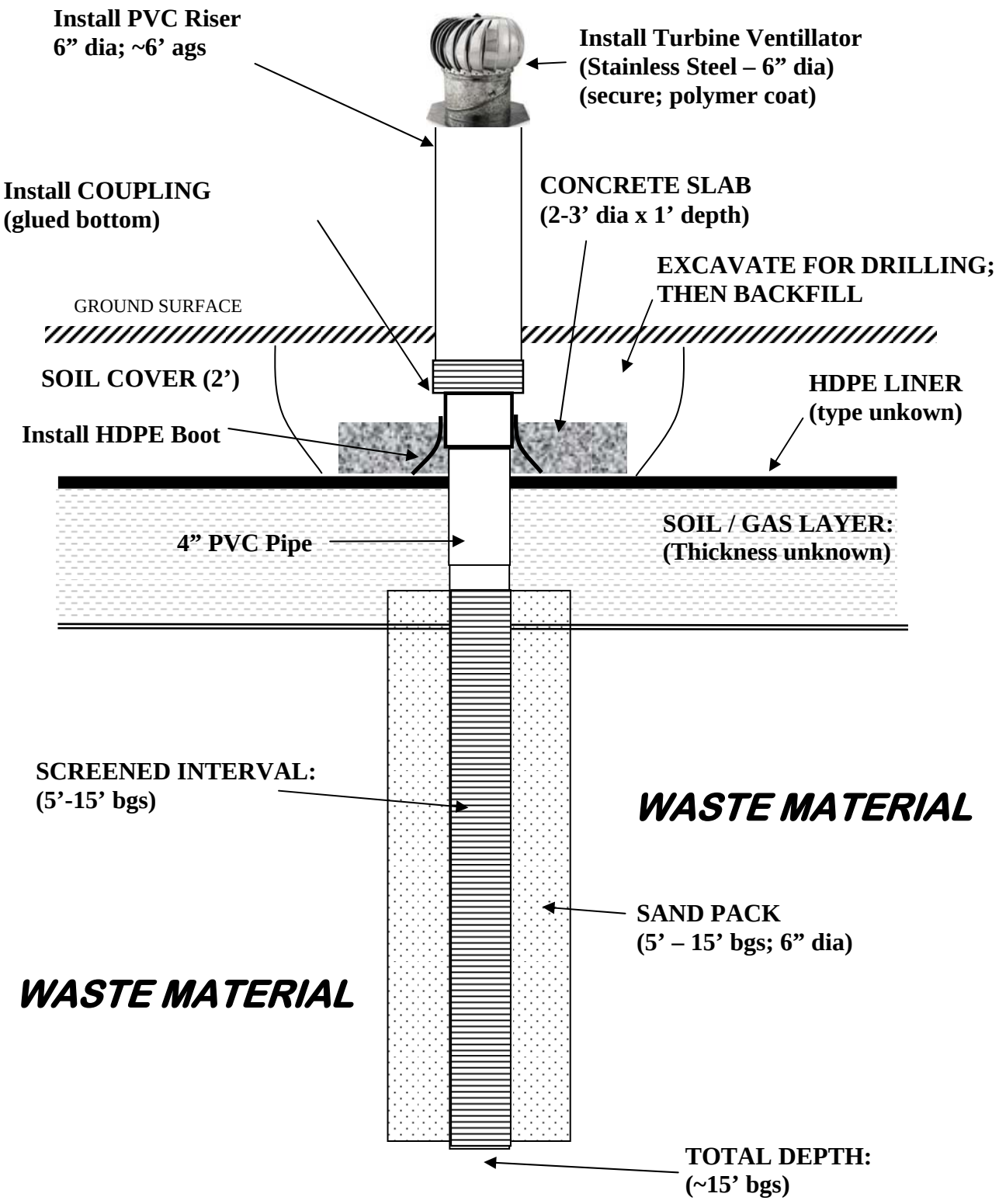








FICA LANDFILL EXISTING GAS VENT DETAILS	FIGURE 4A
	IEG



FICA LANDFILL
NEW GAS VENT DETAILS

FIGURE 4B

IEG

TABLE 2
FICA/DUTCHESS SANITATION LANDFILL OM&M
SUMMARY OF GROUNDWATER/SURFACE WATER/SEDIMENT VOC RESULTS

DATE	MONITORING WELLS											
	DGC-1	DGC-2S	DGC-2D	DGC-4	DGC-5	DGC-6OB	DGC-6D	DGC-7	DGC-9	DGC-10A	DGC-11S	DGC-11D
10/18/00	10.7	3.5	0	0	11.3	16.3	0.8	31.1	0	2	0	5.4
3/27/01	6.7	13.5	7.6	2.4	13.5	19.6	1.6	29.4	4.8	0.3	0	0
9/11/01	4.4	7.2	0	0	19.3	26.7	2.4	19.3	0	0	ns	ns
12/12/01	0.67	9.43	24.6	0	3.88	13.2	17.6	8.3	0	0	ns	ns
4/16/02	6.4	8.4	2	2	5	28.6	17.55	22.1	0	0	ns	ns
8/7/02	7.8	10.1	0	0	106.3	24.3	ns	11.4	0	0	0	ns
11/19/02	5.8	26.8	0.3	0	9.5	19.8	ns	19	3.4	0	ns	5.6
6/1/04	1	13.2	2	2	3.4	11.8	1.0	11.2	0.0	1.0	0	ns
11/4/05	0.72	9.6	0	0	2.68	14.0	12.18	6.08	1.76	0	0	nd
11/8/06	0	12.3	0	0	0.59	4.9	0	7.8	0	0.6	ns	0
6/26/07	5.02	19.94	8.21	9.39	5.80	10.4	0.0	6.18	0.41	0.68	1.1	ns

DATE	SURFACE WATER/SEDIMENT											
	SW-UP	SW-ADJ	SW-DN	SED-UP	SED-ADJ	SED-DN	SW-1	SW-2	SW-3 / POND	SED-1	SED-2	SED-3
06/12/01	1130	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
09/11/01	ns	0.7	0	ns	157	0.0	ns	ns	ns	ns	ns	ns
12/12/01	ns	7.72	ns	ns	334	ns	ns	ns	ns	ns	ns	ns
05/17/02	ns	ns	ns	ns	ns	ns	8.4	2.1	3.0	0.0	0.0	0.0
11/4/05	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
11/8/06	ns	ns	ns	ns	ns	ns	ns	ns	ND	ns	ns	ns
6/26/07	ns	ns	ns	ns	ns	ns	ns	ns	15.5	ns	ns	ns

NOTES: All concentrations are in ppb; ns = not sampled; nd - not detected

FICA / DUTCHESS SANITATION LANDFILL, POUGHKEEPSIE, NY
GAS COLLECTION SYSTEM DISASSEMBLY PHOTOS – AUGUST 2007

Existing PVC collection system which was lying on top of the ground was cut up and stacked

Several piles were made in locations convenient for loading and removal

Sections of PVC pipe with the original valves were re-attached after disassembly of the system

Original reflector markers were straightened and reused whenever possible

These decommissioned vents were painted bright orange for maximum visibility to the mowing crews

FICA / DUTCHESS SANITATION LANDFILL, POUGHKEEPSIE, NY
NEW VENT INSTALLATIONS PHOTOS – AUGUST 2007
PAGE 2

Aztech Technologies, Inc. drill rig at the first New Vent location

Drilling through the landfill debris was difficult

One of the Turbine Ventillators

Installing the Turbine Ventillator onto the PVC Riser

The drill rig at the second location

A total of three New Vents were installed

FICA / DUTCHESS SANITATION LANDFILL, POUGHKEEPSIE, NY
CONVERTED VENT INSTALLATIONS PHOTOS – AUGUST 2007
PAGE 3

First the excavator is used to start digging around the existing vent

The hand shovel is used to expose the boot to prevent damage to the liner

The existing pipe is cut and a new Riser is added. Then a Sauna Tube is put around the base.

The Sauna Tube is filled with concrete

A close up of the Turbine Ventillator at the top of the Riser

Finally the soil is backfilled and leveled around the Converted Vent

FICA / DUTCHESS SANITATION LANDFILL, POUGHKEEPSIE, NY
OVERVIEW PHOTOS – AUGUST 2007
PAGE 4

Looking south from near the center of the landfill

Looking southwest from near the middle of the landfill

Looking west from near the top of the landfill

Looking southeast from the center of the landfill

View from the southwest side of the landfill toward the top

The south slope of the landfill

March 2010 photo of FICA landfill. Turbine vents at summit of landfill and former used totally enclosed flare in foreground. No problems evident during DER staff site visit, however significant snow cover was present.

FORM 2
FICA/DUTCHESS SANITATION LANDFILL OM&M
Groundwater Monitoring Well Purging/Sampling
Date Sampled: June 27, 2007

Sample I.D.	DEPTH TO BOTTOM (ft)	DEPTH TO WATER (ft)	HEIGHT OF WC (ft)	MIN. PURGE VOLUME (gal)	Water Quality Parameters				NOTES
					pH (s.u.)	Sp. Cond. (µmhos)	Temp. (°C)	Turbidity (ntu)	
DGC-1	71.1	12.32	58.78	9.6	6.79	1.1	15.5	0.55	
DGC-2S	31.7	10.99	20.71	3.4	6.26	2.72	12.5	1.36	
DGC-2D	86.5	10.12	76.38	12.4	7.18	1.42	14.9	0.71	
DGC-4	51.1	8.64	42.46	6.9	7.13	0.9	14.8	0.47	
DGC-5	19.7	10.90	8.80	1.4	6.31	2.38	17.6	1.19	
DGC-6OB	18.5	4.01	14.49	2.4	6.5	1.89	19.5	0.93	rusty red color, cleared up w/bailing
DGC-6D	96.5	89.76	6.74	1.1	5.9	1.6	15	60	
DGC-7	56.9	38.62	18.28	3.0	6.25	1.02	16.4	0.51	
DGC-8	56.2	28.63	27.57	4.5	6.7	0.3	15.1	0.15	
DGC-9	97.5	32.86	64.64	10.5	7.74	0.36	15.1	0.18	
DGC-10A	61.5	42.30	19.20	3.1	7.71	0.3	14.3	0.15	bailed dry after 10 bails, H2O discolored brown
DGC-11S	21.8	11.34	10.46	1.7	6.86	0.55	15.5	0.27	
DGC-11D	71.7	71.70	0.00	0.0	NA	NA	NA	NA	no recharge

FORM 3
FICA/DUTCHESS SANITATION LANDFILL OM&M
GROUNDWATER ELEVATIONS

WELL ID	Easting x	Northing y	GROUNDWATER ELEVATIONS						MINIMUM ELEVATION (ft)	MAXIMUM ELEVATION (ft)	VARIATION (ft)
			10/12/91 (baseline)	12/28/04	11/17/05	04/13/06	11/08/06	06/26/07			
DGC-1	6129.75	4503.10	147.75	05/29/00	–	150.69	150.87	147.80	147.8	150.9	3.1
DGC-2S	6367.18	4618.26	152.24	06/01/00	–	152.72	153.06	152.17	152.2	153.1	0.9
DGC-2D	6369.27	4615.06	152.13	06/01/00	–	123.95	157.06	153.07	124.0	157.1	33.1
DGC-4	6852.48	4810.48	152.23	06/02/00	–	153.89	155.03	152.31	152.3	155.0	2.7
DGC-5	6834.70	5014.64	154.44	06/03/00	–	154.20	155.02	152.14	152.1	155.0	2.9
DGC-6OB	6882.73	5257.40	153.97	06/02/00	–	154.41	154.47	153.44	153.4	154.5	1.0
DGC-6D	6880.37	5250.56	63.35	03/07/00	–	65.63	71.13	67.12	65.6	71.1	5.5
DGC-7	6365.46	5410.49	184.60	07/11/00	–	193.37	193.54	186.75	186.8	193.5	6.8
DGC-8	5997.27	5426.86	188.13	07/18/00	–	199.92	199.83	192.71	192.7	199.9	7.2
DGC-9	5932.09	5256.77	189.79	07/18/00	197.45	196.03	200.97	196.53	196.0	201.0	4.9
DGC-10A	5804.51	4907.71	177.73	06/27/00	184.59	178.03	179.30	177.99	178.0	184.6	6.6
DGC-11S	5646.06	4464.54	165.12	06/15/00	–	166.38	165.20	161.02	161.0	166.4	5.4
DGC-11D	5641.07	4467.33	101.81	04/09/00	–	99.63	100.71	100.67	99.6	100.7	1.1

Note: 1. All wells were resurveyed after well repair work in July/August 2002.

FORM 4

FICA/DUTCHESS SANITATION LANDFILL O&M

DETECTED GROUNDWATER ANALYTICAL RESULTS - SAMPLING AND ANALYSIS BY OBG/IEG

DATE: November 2005

	UNITS	GW STD	DGC-1	DGC-2D	DGC-2S	DGC-4	DGC-5	DGC-6OB	DGC-6D	DGC-7	DGC-8	DCG-09	DGC-10A	DGC-11D	DGC-11S	SW-UP	SW-ADJ	SW-DN	SD-UP	SD-ADJ	SD-DN
depth to bottom (ft)	ft		71.10	86.50	31.70	51.10	19.70	18.50	96.5	56.90	56.20	97.50	61.50	71.00	21.80						
depth to GW (ft)	ft		7.50	10.85	9.39	5.55	7.81	2.56	81.43	30.34	17.67	31.76	61.12	71.26	2.45						
pH	s.u.		6.57	7.43	6.43	6.5	7.39	6.32		6.36	6.79	7.31	7.16		7.03						
Sp. Cond	umhos		1.46	1.23	2.7	1.08	2.99	2.26		0.91	0.46	0.322	0.24		0.24						
Temperature	°F		48	50.6	51.5	51.6	56	54.1		49.8	50	14.3	13		52.2						
VOLATILE ORGANICS																					
vinyl chloride		2			**5.73**					1.73											
chloroethane		5						4.82	4.13												
C-1,2-dichloroethene		5	0.12 J		3.52		0.52	0.69	0.65	1.48											
diethyl ether		ns																			
acetone		50						4.83 J	5.19 J			1.76 J									
1,1-dichloroethene		5																			
t-1,2-dichloroethene		5						0.12 J		0.43 J											
methyl-t-butyl ether		ns						0.35 J													
methylcyclohexane		na						0.37 J													
1,1-dichloroethane	µg/L	5	0.6		0.25 J			0.68	0.61	1.88				NA		NA	NA	NA	NA	NA	NA
benzene		1					**1.34**	**1.52**	**1.27**	0.56											
trichloroethene		5			0.30 J			0.19 J	0.18 J												
toluene		5																			
chlorobenzene		5					0.59														
cyclohexane		na						0.20 J													
ethylbenzene		5																			
m,p-xylene		5																			
o-xylene		5																			
isopropylbenzene		5					0.23 J	0.21 J	0.15 J												
TOTAL VOCs	µg/L		**0.72**	**0**	**9.8**	**0**	**2.68**	**13.98**	**12.18**	**6.08**	**0**	**1.76**	**0**	NA	**0**	NA	NA	NA	NA	NA	NA
TAL METALS																					
Aluminum		ns	37.4 B	39700	1130	285	43.2 B	19.9 B		124 B	131 B	21400	235	8620	207						
Antimony		3		**15.2 B**			1.5 B					**10.2 B**	2.0 B	**5.1 B**							
Arsenic		25	6.8 B	**56.3**	**43.3**		4.6 B	**27.4**	**26.9**	5.3 B		8.0 B	1.6 B	4.2 B							
Barium		1000	648	**1360**	289	993	251	433	426	136 B	43.3 B	412	37.7 B	190 B	4.8 B						
Beryllium		1100	0.15 B	1.9 B	0.13 B							0.98 B		0.36 B							
Cadmium		5		1.2 B						1.1 B		1.2 B	3.9 B	1.7 B							
Calcium		na	130000	109000	23000	80500	179000	123000	122000	124000	69200	47200	33100	22000	27100						
Chromium		50	6.1 B	**108**	12.4	4.6 B	9.7 B	6.5 B	5.7 B	10.8	3.2 B	**53.7**	2.9 B	19.6	1.4 B						
Cobalt		5		**28.1 B**	**13.0 B**			2.8 B	1.9 B	3.2 B		**14.2 B**		**5.5 B**							
Copper		200		66.4	1.9 B							31.2	0.95 B	31.5							
Iron	µg/L	300*	**6490**	**69400**	**16300**	**4690**	**6380**	**47100**	**47200**	**2530**	194	**34900**	**11200**	**14400**	207	NA	NA	NA	NA	NA	NA
Lead		25		**50.1**	1.7 B							**32.1**	1.7 B	7.9							
Magnesium		35000	31800	**39000**	**87300**	25900	**50000**	**43800**	**43200**	27600	15700	19500	8480	15100	7020						
Manganese		300*	**4840**	**1550**	**11900**	**2510**	**9810**	**5250**	**5280**	**13400**	30.3	**593**	215	**690**	28.4						
Mercury		0.7		0.070 B		0.17 B		0.19 B				0.11 B									
Nickel		100	7.2 B	97.5	29.8 B	1.9 B	31.4 B	27.4 B	26.9 B			41	5.4 B	18.9 B							
Potassium		na	25200	14700	10400	9050	47700	37800	37100	2980 B	1270	9420	1950 B	19100	912 B						
Selenium		10		3.6 B								3.2 B									
Silver		50										1.2 B	1.3 B								
Sodium		20000	**95600**	**144000**	**230000**	**110000**	**161000**	**159000**	**156000**	**23000**	5480	13700	8500	**1060000**	2720						
Thallium		8																			
Vanadium		14	0.48 B	6.7	1.5 B		0.72 B					**37.6 B**	1.5 B	10.1 B							
Zinc		66	10.8 B	**183**	11.1 B	4.7 B	3.6 B	6.5 B	7.1 B	5.2 B	9.4 B	**130**	13.3 B	**74.8**	4.8						

NOTES: number in bold italics is from POC stds; SW STDs for H(WS) human water source; ns = no std nor guidance value; NA = not sampled

File: FICA_LabData0706v2.xls

FORM 4

FICA/DUTCHESS SANITATION LANDFILL O&M

DETECTED GROUNDWATER ANALYTICAL RESULTS - SAMPLING AND ANALYSIS BY OBG/IEG

DATE: November 2006

	UNITS	GW STD	DGC-1	DGC-2D	DGC-2S	DGC-4	DGC-5	DGC-6OB	DGC-6D	DGC-7	DGC-8	DCG-09	DGC-10A	DGC-11D	DGC-11S	POND
depth to bottom (ft)	FT		71.10	86.50	31.70	51.10	19.70	18.50	96.5	56.90	56.20	97.50	61.50	71.00	21.80	
depth to GW (ft)	FT		7.50	10.85	9.39	5.55	7.81	2.56	81.43	30.34	17.67	31.76	61.12	71.26	2.45	
pH	s.u.		6.07	6.78	5.9	6.36	6	5.87	2.35*	5.9	6.25	7.1	7.05	6.47	NA	
Sp. Cond	umhos		1.08	1.02	2.51	0.948	0.913	1.41	1.6	0.96	0.573	0.338	0.12	0.001	NA	
Temperature	oC		16.6	13.6	14.3	14.7	14.9	15.3	16	14.4	16.3	13.3	13.1	14.3	NA	
Turbidity	ntu		96	0.99	170	110	157	105	190	84	124	379	118	169	NA	
VOLATILE ORGANICS																
vinyl chloride		2			**8.12**					**2.74**						
chloroethane		5						2.94								
C-1,2-dichloroethene		5			3.64			0.63		1.7						
t-1,2-dichloroethene		5								0.56						
methyl-t-butyl ether		ns			0.52											
1,1-dichloroethane		5								2.08						
benzene	µg/L	1		ND		ND	0.59	**1.32**		0.69	ND		ND	NA	ND	ND
trichloroethene		5														
toluene		5										0.58				
chlorobenzene		5														
ethylbenzene		5														
m,p-xylene		5														
o-xylene		5														
TOTAL VOCs	**µg/L**		**0.72**		**9.8**		**2.68**	**13.98**	**12.18**	**6.08**		**1.76**				
TAL METALS																
Aluminum		ns	66.3 B	30200	268	81.6 B	130	31.4 B	2740	257	555	1830	590		289	244
Antimony		3		**43.4 B**					**6.4 B**			**5.3 B**			2.7 B	
Arsenic		25	4.2 B	**75.5**	**48**		2.2 B	**26.7**	4.1 B	5.5 B		2.5 B				
Barium		1000	471	**1230**	374	**1050**	54.0 B	335	256	153 B	70.0 B	147 B	9.4 B		7.4	39.9
Beryllium		1100		1.4 B	0.12 B		0.090 B		0.14 B			0.13 B			0.070 B	
Cadmium		5		1.4 B	1.5 B				**36**	1.1 B	2.2 B	0.66 B	1.5 B		0.57	
Calcium		na	111000	100000	237000	80800	163000	105000	33600	140000	97500	44700	14600		41300	23400
Chromium		50	2.4 B	**51**	6.8 B	2.8 B	3.9 B	4.2 B	9.6 B	7.8 B	7.3 B	5.6 B	3.3 B			
Cobalt		5		**20.6 B**	**12.4 B**			3.9 B		**5.4 B**		1.8 B				
Copper		200	0.89 B	37.1	2.2 B	0.62 B	0.82 B		46.6	6.0 B	4.9 B	4.4 B	4.6 B		3.8 B	3.7 B
Iron	µg/L	300*	**4630**	**50200**	**17100**	**4670**	**3290**	**46400**	**3950**	**2780**	**940**	**2870**	**3210**	NA	**394**	**792**
Lead		25		**33.6**	1.7 B			1.4 B	15	2.3 B	2.6 B	4	2.8 B			1.9 B
Magnesium		35000	25900	30800	**89100**	25100	22400	34000	5390	28900	20700	11400	4720 B		11400	5900
Manganese		300*	**3930**	**1130**	**11800**	**2570**	**6210**	**5010**	282	**15000**	58.6	125	96.2		36.2	**406**
Mercury		0.7		0.048 B								0.016 B	0.023 B			0.017 B
Nickel		100	3.2 B	65.2	28.4 B	2.2 B	0.88 B	15.3 B	16.5 B	1.4 B	3.2 B	4.4 B	3.8 B		0.97	3.6 B
Potassium		na	20100	13400	13700	7050	6780	28900	16700	3770 B	3760 B	3110 B	4290 B		1270 B	4020 B
Selenium		10							2.3 B						2.4 B	
Silver		50							1.0 B							
Sodium		20000	**57700**	**145000**	**245000**	**106000**	11100	**96200**	**127000**	**30400**	6900	10100	3150		4250 B	11400
Thallium		8														
Vanadium		14	0.85 B	**64.7**	1.6 B		0.64 B	1.6 B	7.6 B	0.66 B	0.88 B	4.1 B	1.3 B		0.69	1.3 B
Zinc		66	7.0 B	**109**	31	8.1 B	12.2 B	9.9 B	**731**	18.0 B	40.6	16.0 B	31.4		15.7 B	10 B

NOTES: number in bold italics is from POC stds; SW STDs for H(WS) human water source; ns = no std nor guidance value; NA = not sampled

FORM 4

FICA/DUTCHESS SANITATION LANDFILL O&M

DETECTED GROUNDWATER ANALYTICAL RESULTS - SAMPLING AND ANALYSIS BY OBG/IEG

DATE: June 2007

	UNITS	GW STD	DGC-1	DGC-2D	DGC-2S	DGC-4	DGC-5	DGC-6OB	DGC-6D	DGC-7	DGC-8	DCG-09	DGC-10A	DGC-11D	DGC-11S	POND
depth to bottom (ft)	FT		71.10	86.50	31.70	51.10	19.70	18.50	96.5	56.90	56.20	97.50	61.50	71.00	21.80	--
depth to GW (ft)	FT		7.50	10.85	9.39	5.55	7.81	2.56	81.43	30.34	17.67	31.76	61.12	71.26	2.45	--
pH	s.u.		6.79	7.18	6.26	7.16	6.31	6.50	5.90	6.25	6.70	7.74	7.71		6.86	--
cond (umhos)	umhos		1.1	1.42	2.72	0.9	2.38	1.89	1.6	1.02	0.3	0.36	0.3		0.55	--
temp (oC)	^{o}C		15.5	14.9	12.5	14.8	17.6	19.5	15	16.4	15.1	15.1	14.3		15.5	--
VOLATILE ORGANICS																
vinyl chloride		2			**10.3**					**2.31**						
chloroethane		5						3.46								
C-1,2-dichloroethene		5			3.22		0.30 J	0.58		1.13						
acetone		50	3.36 J	5.01 J	4.98 J	8.77 J	2.85 J	4.28 J								7.49 J
t-1,2-dichloroethene		5								0.31 J						
Methylene chloride		5	0.52 J	0.76 J	0.76 J	0.13 J	0.55 J	0.23 J		0.36 J	0.91 J	0.41 J	0.68 J		0.76 J	0.30 J
1,1-dichloroethane		5	0.20 J		0.28 J		0.16 J	0.5		1.7				NA		
benzene	µg/L	1					0.93	0.97	ND	0.37 J						
trichloroethene		5			0.15 J											
toluene		5	0.34 J	0.77	0.14 J	0.21 J		0.15 J							0.17 J	**7.73**
chlorobenzene		5					0.39 J									
cyclohexane		na						0.12 J								
ethylbenzene		5		0.26 J												
m,p-xylene		5	0.60 J	1.41	0.11 J	0.28 J	0.17 J	0.11 J							0.17 J	
o-xylene		5														
isopropylbenzene		5					0.45 J									
TOTAL VOCs			**5.02**	**8.21**	**19.94**	**9.39**	**5.8**	**10.4**	**0**	**6.18**	**0.91**	**0.41**	**0.68**		**1.1**	**15.52**
TAL METALS																
Aluminum		ns	27.5 B		363	199 B	179 B			121 B	185 B	2190	26.2 B		2100	36500
Antimony		3										1.8 B				**4.0 B**
Arsenic		25	2.2 B	5.1 B	**39.4**		6.2 B	**39.3**		**34.9**						**68.1**
Barium		1000	422	709	366	701	629	412		165 B	35.9 B	165 B	43.1 B		24.9 B	**1050**
Beryllium		1100	0.05 B		0.06 B							0.11 B			0.14 B	2.1 B
Cadmium		5	0.46			2.3 B	3.5 B				0.78 B		0.45 B		0.37 B	0.38 B
Calcium		na	103000	103000	233000	58600	218000	121000		138000	36400	46500	34500		68100	143000
Chromium		50	4.8 B	2.5 B	9.0 B	2.9 B	9.0 B	5.9 B		8.0 B		5.6 B	8.2 B		5.9 B	**182**
Cobalt		5			**9.5 B**			3.4 B		**15.3 B**					3.2 B	**47.2 B**
Copper		200	3.0 B	3.9 B	3.0 B	2.1 B	5.9 B			0.96 B	1.8 B	2.7 B	3.5 B		9.4 B	148
Iron		300*	**805**	**437**	**16100**	**3190**	**9030**	**51100**		**2030**	**381**	**3410**	**1330**		**2700**	**208000**
Lead	µg/L	25		1.2 B	2.8 B		4.7	1.2 B		2.4 B		3.6			4.1	**121**
Magnesium		35000	24200	23000	**89300**	19000	**101000**	**41600**		29500	7840	11800	8410		18200	34800
Manganese		300*	**3450**	**318**		**1670**	**9710**	**5440**			69.1	100	250		**734**	
Mercury		0.7	0.01 B			0.26					0.052 B	0.014 B	0.012 B		0.019 B	0.3
Nickel		100	3.3 B	8.2 B	25.3 B	2.5 B	82.7	23.8 B		8.5 B	1.6 B	3.6 B	78.3		5.0 B	89.8
Potassium		na	20700	29800	13600	14500		34000		2970 B	1350 B	3070 B	1790 B		3080	23900
Selenium		10			6.6		5.9	4.3 B		7.6		2.4 B			3.0 B	**18.8**
Silver		50														
Sodium		20000	**62400**	**149000**	**242000**	**99500**	**418000**	**136000**		**24800**	4930 B	11200	7090		12600	**45800**
Thallium		8			**129**											
Vanadium		14		1.7 B			1.5 B					4.4 B			3.1 B	**71.1**
Zinc		66	50.6	42.5		19.1 B	29.1	55.5		**73.9**	19.4 B	14.8 B	16.8 B		26	415

number in bold indicateds exceedence; NA = not analyzed; ND = not detected; ns = no std nor guidance value; * = total of iron and manganese

FIGURE C-6
DUTCHESS LANDFILL O&M
GROUNDWATER LEVEL (6/26/07) - SHALLOW WELLS

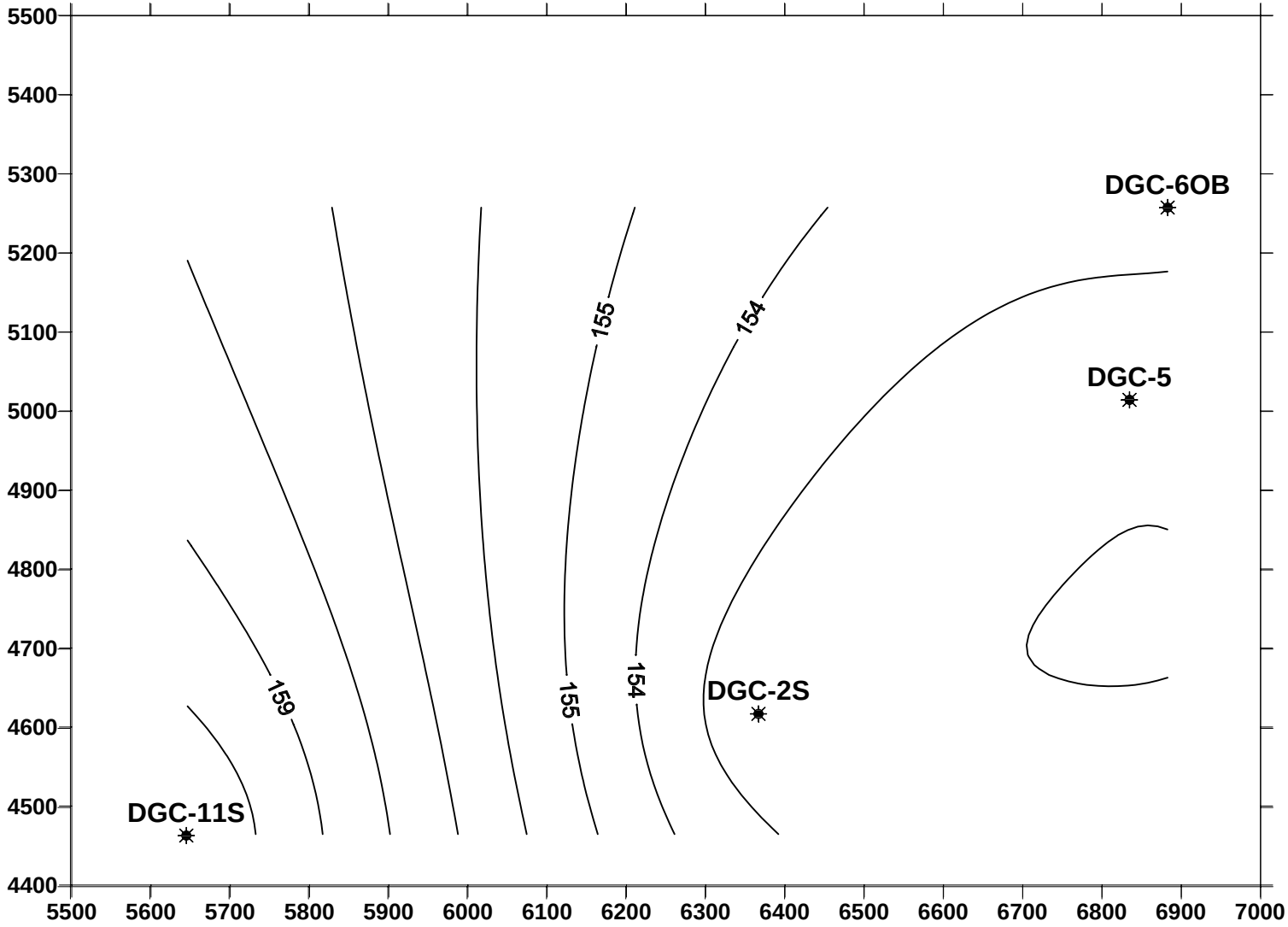
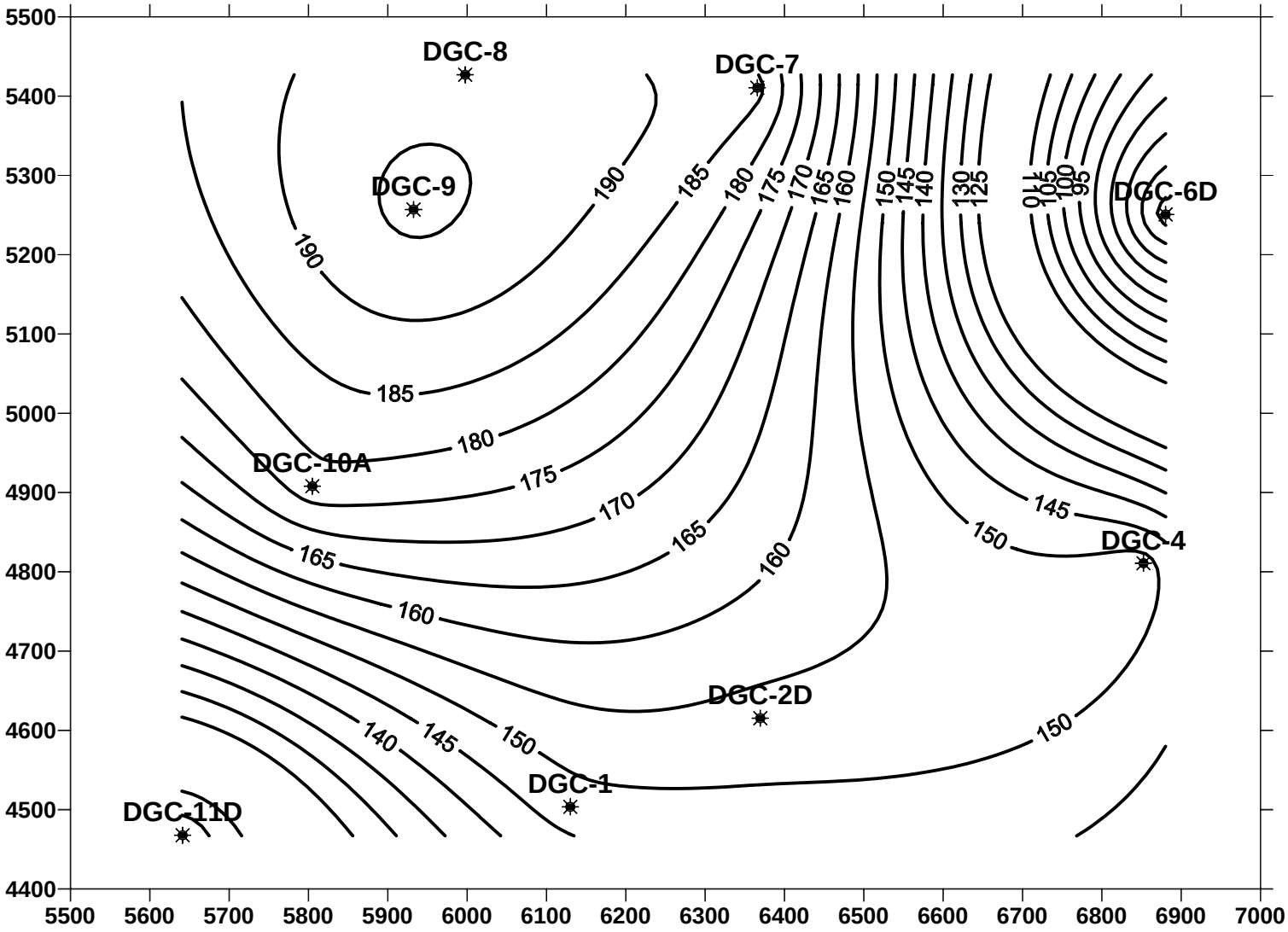


FIGURE C-6
DUTCHESS LANDFILL O&M
GROUNDWATER LEVEL (6/26/07) - DEEP WELLS



STATE OF NEW YORK
DEPARTMENT OF HEALTH
Flanigan Square 547 River Street Troy, New York 12180-2216

Richard F. Daines, M.D.
Commissioner

James W. Clyne, Jr.
Executive Deputy Commissioner

June 29, 2010

Mr. Robert Knizek, Director
Remedial Bureau E
Division of Environmental Remediation
NYS Dept. of Environmental Conservation
625 Broadway
Albany, New York 12233

Re: Classification Package
Dutchess Sanitation (FICA) Landfill
Site #314047
Poughkeepsie (T), Dutchess County

Dear Mr. Knizek:

Staff reviewed the Classification Package for the Dutchess Sanitation (FICA) Landfill site in Pouchkeepsie, Dutchess County, which recommends reclassification from a Class 2 to a Class 4. Based on that review, I understand that site remediation was completed in 1995. The main elements of the remedy included capping of the landfill and the installation of leachate and gas collection systems. The site cap has been effective in reducing the infiltration of water, therefore the collection and off-site disposal of leachate has been discontinued. The gas collection and flare system has since been removed due to diminished gas production. I understand that wind turbine ventilators have been added to vent and disperse residual landfill gas. Drinking potentially contaminated groundwater is unlikely because the area is served by public water. Site management activities include periodic inspection and maintenance of the cap, groundwater and surface water monitoring, and maintenance of the passive venting system.

Based on this information, I believe this site no longer poses a significant threat to public health and concur with the recommendation to reclassify the site to a Class 4.

If you have any questions, please contact me at (518) 402-7880.

Sincerely,

Steven M. Bates, Assistant Director
Bureau of Environmental Exposure Investigation

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