Richard W. Lenz, P.E.
Commissioner

TOWN OF OYSTER BAY
DEPARTMENT OF PUBLIC WORKS
150 Miller Place
Syosset, New York 11791-5699
(516) 677-5935
www.oysterbaytown.com

July 22, 2019

Ms. Kerry Maloney
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7017

RE: Syosset Landfill
Groundwater Emerging Contaminants Sampling
DEC Site No. 130011
Contract No. PWC29-18

Dear Ms. Maloney,

As requested, attached is the letter report prepared by Lockwood, Kessler & Bartlett, Inc., on behalf of the Town, for the groundwater sampling effort relative to emerging contaminants for monitoring wells at the Syosset Landfill site.

Sampling was performed by Lockwood, Kessler & Bartlett, Inc., samples were analyzed by Chemtech and Eurofins-Lancaster Laboratories Environmental, and data validation was performed by Environmental Data Services, Inc.

If you have any questions, please do not hesitate to contact this office.

JOHN C. TASSONE
DEPUTY COMMISSIONER
DEPARTMENT OF PUBLIC WORKS

RICHARD W. LENZ, P.E.
COMMISSIONER
DEPARTMENT OF PUBLIC WORKS/HIGHWAY

RWL/JCT/MR/lk

Attachment

c: Paul Lappano, P.E., Lockwood, Kessler & Bartlett, Inc.

TBI89-503 DEC SYOSSET LANDFILL EMERGING CONTAMINAMTS REPORT

LKB CONSULTING ENGINEERS
ENGINEERING EXCELLENCE SINCE 1889

Lockwood, Kessler & Bartlett, Inc.
One Aerial Way · Syosset, NY 11791
516.938.0600 www.lkbinc.com

June 28, 2019

Richard W. Lenz, PE, Commissioner
Town of Oyster Bay
Department of Public Works
150 Miller Place
Syosset, NY 11791

Attn: John Tassone, Deputy Commissioner
Division of Engineering

Re: Syosset Landfill 2018 Ground-Water Monitoring
Report on Emerging Contaminant Results

Commissioner Lenz,

Ground-water monitoring for the Syosset Landfill Site (Site) is currently performed every fifth calendar quarter to provide results for all four calendar quarters during each five-year regulatory review period. In 2018, the monitoring was performed during the first calendar quarter. The results of the ground water-monitoring program have historically been reported in a separate volume of the Syosset Landfill Annual Post-Closure Summary Report due to the length of the report. However, for 2018 the USEPA requested that the ground water-monitoring volume be submitted as a separate, stand-alone document in advance of the remainder of the 2018 Annual Post-Closure Summary Report. Accordingly, the Ground Water-Monitoring Program Volume of the Syosset Landfill 2018 Annual Post-Closure Summary Report was submitted separately in February 2019.

In December 2017, the New York State Department of Environmental Conservation (NYSDEC) requested that during the next ground water-monitoring round, additional samples for the emerging contaminants 1,4-dioxane and per- and polyfluoroalkyl substances (PFAS) be collected. The request was made in conjunction with the NYSDEC's State-wide evaluation of remediation sites to better understand the occurrence of these emerging contaminants in drinking water supplies. Specifically, PFAS have historically not been evaluated at remediation sites, and 1,4-dioxane has not been evaluated at the low levels now of interest to the NYSDEC. These parameters were included in the 2018 ground water-monitoring round, and the results are being submitted in this separate letter-style report to support the NYSDEC's evaluation.

The 2018 ground water-monitoring round was performed on March 14th, 26th, 27th and 28th. Samples were collected from the 11 monitoring wells in the post-closure ground water-monitoring well network. These include one on-site upgradient well (SY-6), five on-site downgradient wells in two clusters (SY-2R and SY-2D, and SY-3, SY-3D and SY-3DD), and five off-site wells in two clusters (PK-10S, PK-10I and PK-10D, and RW-12I and RW-12D). Water levels were also measured in all 20 ground water-monitoring wells installed to date to provide an accurate representation of ground water-flow patterns in the vicinity of the Site. The locations of the monitoring wells are shown in Figure 1.

Regarding the off-site ground water-monitoring wells, it should be noted that the Second Operable Unit (i.e., off-site) Remedial Investigation (OU2 RI) concluded that:

- Well Cluster RB-11 is located outside of the ground-water flow path from the Site, so potential impacts from the Site would not reach it. Consequently, water levels are measured at this well cluster, but it is not part of the post-closure ground water-quality monitoring program for the Site.

- Well Cluster RW-12 is located near the periphery of the ground-water flow path from the Site and the Site is not the probable source of the volatile organic compounds (VOCs) detected at this well cluster. This well cluster was included in the post-closure ground quality-monitoring program for the Site so that the Town can identify potential future impacts on ground-water quality downgradient of the Site that are not attributable to the Site.

The wells are screened in either the shallow, intermediate or deep zone of the uppermost (Magothy) aquifer. Specifically, Wells SY-6, SY-2R, SY-3 and PK-10S are screened in the shallow zone, Wells SY-2D, SY-3D, PK-10I and RW-12I are screened in the intermediate zone, and Wells SY-3DD, PK-10D and RW-12D are screened in the deep zone.

Based on the March 2018 water-level data, ground water-flow directions were generally from south to north in all three monitored aquifer zones, as shown in Figures 2 through 4, respectively. This is the typically-observed pattern, and is consistent with the fact that the Site is situated on the north side of the regional ground-water divide, as shown in Figure 5. Accordingly, off-site Well Cluster PK-10 is located downgradient of the Site, but off-site Well Cluster RW-12 is located sidegradient to the Site. Consequently, monitoring results for Well Cluster RW-12 are not Site-related.

Moreover, as shown in Figures 2 through 4, downgradient of the Site ground water-flow patterns converge slightly. This is due to the presence of a buried glacial valley, as shown in Figure 6, and its different hydraulic characteristics. Specifically, the glacial deposits are unconfined, whereas the Magothy aquifer is semi-confined. Therefore, head pressures in the glacial deposits are lower, so ground water flows out of the Magothy aquifer into the glacial valley, resulting in the converging flow pattern. Due to this converging flow pattern, there is the potential for contamination from other sources in the vicinity to migrate to the off-site wells downgradient of the Site.

The emerging contaminant samples were collected concurrently with the post-closure parameter samples, in accordance with NYSDEC guidance procedures and protocols. Specifically, samples were collected using a stainless steel variable-speed submersible pump and HDPE tubing, and NYSDEC PFAS sampling protocols (e.g., no sunscreen, no coated clothing, etc.) were followed.

The pump was installed approximately five feet below the water level in each well, and a minimum of 1.1 casing volumes was purged prior to sampling. The pump apparatus was decontaminated between wells. Samples were collected at a low flow rate directly from the pump discharge into new, pre-preserved sample bottles. Samples for 1,4-dioxane analysis were collected in 1-Liter amber glass bottles. Samples for PFAS analysis were collected in 500-mL HDPE bottles with HDPE lids. QA/QC samples, specifically an anonymous duplicate from Well SY-3 (Sample "SY-5")

and a field blank, were also collected. The samples were kept in coolers with bagged ice, and shipped to State-certified environmental laboratories under chain-of-custody protocol for analysis.

The 1,4-dioxane samples were analyzed by Chemtech of Mountainside, NJ using USEPA Method 8270 SIM (Selective Ion Monitoring). The PFAS samples were analyzed by Eurofins-Lancaster Laboratories Environmental of Lancaster, PA using USEPA Method 527, for the 21 PFAS analytes requested by the NYSDEC. Both laboratories are New York State-certified for these methods. The laboratory results were independently validated by Environmental Data Services, Inc. of Virginia Beach, VA. The results are summarized in Table 1, and the validated laboratory results are provided in Appendix A. The Data Usability Summary Report for the 2018 ground water-monitoring round is not included in this letter-style report due to its size, but was submitted previously as Appendix B of the 2018 Ground Water-Monitoring Program Report.

There are no New York State ground water-quality standards for 1,4-dioxane or PFAS. However, for 1,4-dioxane the NYSDEC currently utilizes an internal guidance value of 0.35-ug/L (micrograms per Liter) and the USEPA has issued a screening level for tap water of 0.46-ug/L. The 1,4-dioxane results were compared to the more stringent NYSDEC internal guidance value. For PFAS, there are no NYSDEC internal guidance values, but the USEPA has set a health advisory level of 70 ng/L (nanograms per Liter) for two of the 21 PFAS analytes (Perfluorooctanoic Acid (PFOA) and Perfluoro-octanesulfonate (PFOS)), either individually or combined. The PFAS results were therefore compared to this USEPA health advisory level. They were also evaluated based on the distribution of total PFAS concentrations in the on-site and off-site wells.

As shown in Table 1, 1,4-dioxane was not detected in the upgradient well (SY-6) or in the on-site downgradient well screened in the deep zone (SY-3DD), and was detected at concentrations below the NYSDEC internal guidance value in two of the other four on-site downgradient wells (SY-2R and SY-2D). 1,4-dioxane concentrations in the remaining two on-site downgradient wells (Wells SY-3 and SY-3D) were only slightly higher than the NYSDEC internal guidance value, and lower than the USEPA screening level. Based on the 1,4-dioxane results for the on-site wells, the Syosset Landfill is not a significant source of 1,4-dioxane releases to ground water, and 1,4-dioxane is only present at relatively low concentrations in the shallow and intermediate zones wells at one of the two on-site downgradient well clusters (SY-3).

1,4-dioxane was not detected in the shallow zone off-site well (PK-10S), but was detected at concentrations higher than the NYSDEC internal guidance value and USEPA screening level in both off-site intermediate zone wells (PK-10I and RW-12I) and both off-site deep zone wells (PK-10D and RW-12D). The concentrations detected at Well Cluster PK-10, located downgradient of the Site, were slightly higher than those detected at on-site downgradient Well Cluster SY-3, but lower than the concentrations detected at Well Cluster RW-12, located sidegradient to the Site, which are not Site-related.

Regarding the individual PFAS analyte results, as shown in Table 1, seven of the 21 analytes were not detected, and another three were only detected sporadically at low, estimated concentrations. Eight of the 11 other analytes that were detected more frequently were also detected in the

upgradient well (SY-6). Of these eight analytes, only five, including PFOA and PFOS, were detected at noticeably higher concentrations in at least one on-site downgradient well. The other three analytes (perfluorodecanoic acid, perfluorohexanoic acid, and perfluoroundecanoic acid) were only detected in certain on-site downgradient wells and off-site wells, and do not have NYSDEC internal guidance values or USEPA screening levels.

Exceedances of the 70-ng/L USEPA screening level for PFOA, PFOS, or their sum, were limited to a relatively low-magnitude exceedance in one on-site downgradient well screened in the intermediate zone (SY-3D), and a higher-magnitude exceedance in one off-site well also screened in the intermediate zone (RW-12I). Both of these exceedances were primarily due to PFOA. There were no individual exceedances for PFOS. As noted above, Well RW-12I is located sidegradient to the Site. Therefore, the higher-magnitude PFAS exceedance in Well RW-12I is not Site-related.

Regarding the distribution of total PFAS concentrations in ground water, Table 1 indicates that when compared to upgradient Well SY-6, total PFAS concentrations in three of the five on-site downgradient wells are either lower than in the upgradient well (as in shallow zone Well SY-2R and deep zone Well SY-3DD) or similar to, but only slightly higher than, the upgradient well (as in shallow zone Well SY-2D). Total PFAS concentrations in the other two on-site downgradient wells (shallow zone Well SY-3 and intermediate zone Well SY-3D) are higher than in the upgradient well. Total PFAS concentrations in the two off-site deep zone wells (PK-10D and RW-12D) are also lower than in the upgradient well. Total PFAS concentrations in the other three off-site wells (shallow zone Well PK-10S and intermediate zone Wells PK-10I and RW-12I) are higher than in the upgradient well. As previously noted, Well RW-12I is located sidegradient to the Site. Therefore, the higher-magnitude total PFAS concentration in Well RW-12I is not Site-related.

Based on the total PFAS results, background levels of PFAS are present in upgradient ground water. The Site appears to be contributing a relatively small amount of additional total PFAS to downgradient ground water, but the concentrations are similar to, or lower than, the concentration in Well RW-12I, located sidegradient to the Site. Therefore, Site-related total PFAS concentrations are lower than, or comparable to, the concentrations from other sources in the vicinity of the Site.

In summary, based on the emerging contaminant monitoring performed in 2018, the Syosset Landfill is not a significant source of emerging contaminant releases to ground water because:

- It is not a significant source of 1,4-dioxane, which is consistent with current and past VOC monitoring results. Specifically, although 1,4-dioxane was detected in four of the five on-site downgradient wells, only two results were slightly higher than the 0.35-ug/L NYSDEC internal guidance value, and were still lower than the 0.46-ug/L USEPA screening level. Moreover, although 1,4-dioxane was detected at higher concentrations in four of the five off-site wells, the highest concentrations were detected at Well Cluster RW-12 which is located sidegradient to, rather than downgradient of, the Site. Consequently, the highest 1,4-dioxane concentrations detected in the off-site wells are not Site-related.

- Ten of the 21 individual PFAS analytes were either not detected, or only detected sporadically at low, estimated concentrations. Eight of the 11 other analytes detected more frequently were also detected in the upgradient well. The other three analytes detected more frequently were only detected in certain on-site downgradient wells and off-site wells but do not have NYSDEC internal guidance values or USEPA screening levels. Exceedances of the 70-ng/L USEPA health advisory level for PFOA, PFOS, or their sum, were limited to a low-magnitude exceedance in one on-site downgradient well (SY-3D) and a higher-magnitude exceedance in one off-site well (RW-12I), both screened in the intermediate zone of the uppermost aquifer. These exceedances were primarily due to individual exceedances for PFOA. There were no individual exceedances for PFOS. The highest-magnitude exceedance, in off-site sidegradient Well RW-12I, is not Site-related.

- Total PFAS concentrations in three of the five on-site downgradient wells and two of the five off-site wells were lower than, or similar to but slightly higher than, the concentration in the upgradient well. Total PFAS concentrations in the other two on-site downgradient wells and three off-site wells are similar in magnitude to each other, and higher than the concentration in the upgradient well. Based on the distribution of total PFAS concentrations, background levels of PFAS are present in upgradient ground water. The Site appears to be contributing a relatively small amount of additional total PFAS to downgradient ground water, but the concentrations are similar to, or lower than, those detected in Well RW-12I, located sidegradient to the Site. Therefore, the Site-related total PFAS concentrations are lower than, or comparable to, total PFAS concentrations from other sources in the vicinity of the Site.

Please contact our office if you have any questions regarding the information in this report.

Sincerely,

LOCKWOOD, KESSLER & BARTLETT, INC.

Theresa Heneveld

Theresa Heneveld, PE
Director of Environmental Engineering

Cc: Matthew Russo, PE - TOBDPW

Attachments:

Figures 1 - 6 (Reference: 2018 Ground Water-Monitoring Program)
Table 1 - Summary of Ground Water-Monitoring Results for Emerging Contaminants
Appendix A - Validated Laboratory Results

Lockwood, Kessler & Bartlett, Inc.
One Aerial Way, Syosset, NY 11791
Phone: 516.938.0600 Fax: 516.931.6344

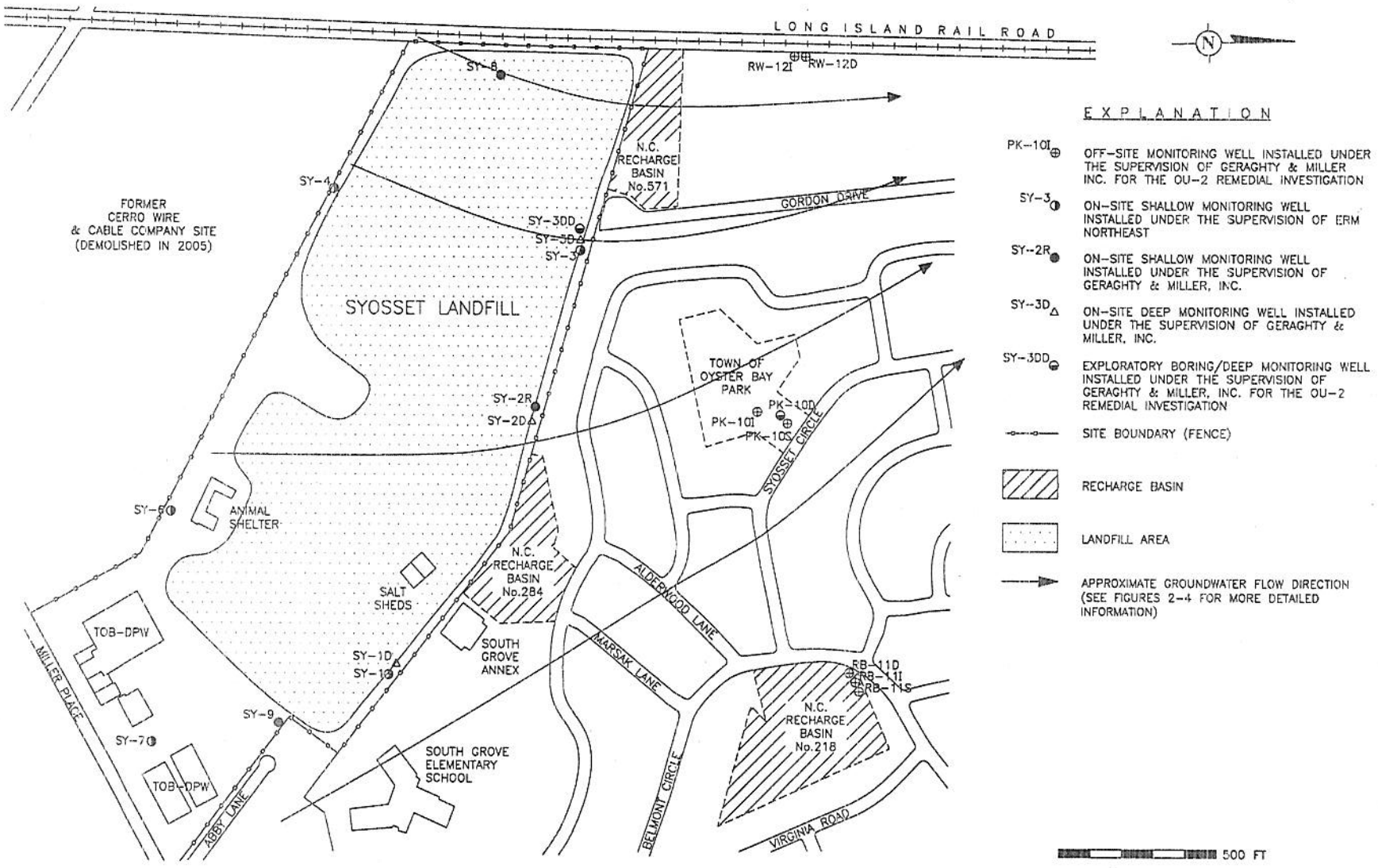


FIGURE 1

GROUNDWATER MONITORING WELL LOCATION PLAN
SYOSSET LANDFILL, SYOSSET, NY

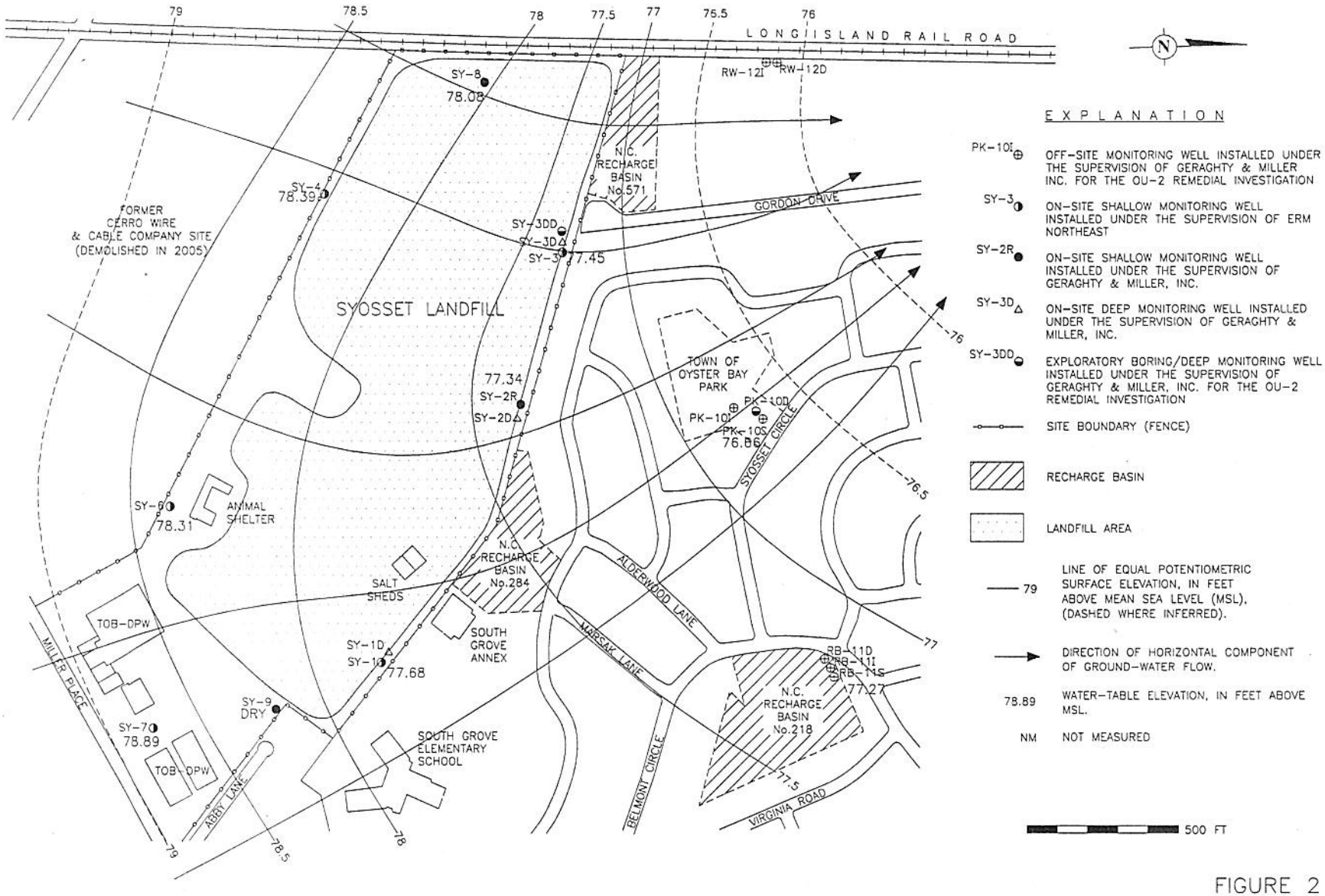


FIGURE 2

POTENTIOMETRIC SURFACE OF THE SHALLOW ZONE OF THE MAGOTHY AQUIFER ON MARCH 4, 2018
SYOSSET LANDFILL, SYOSSET, NY

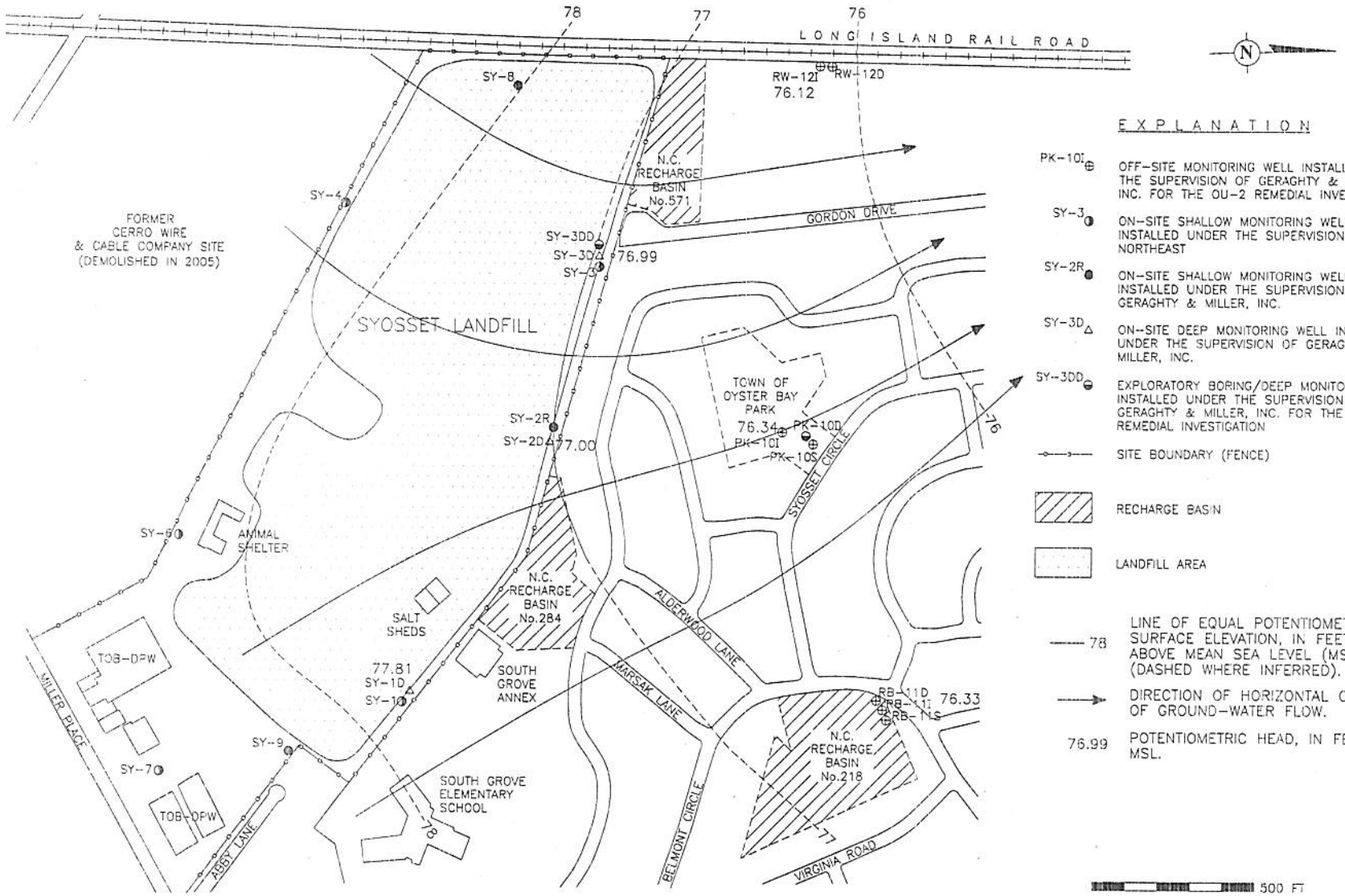


FIGURE 3

POTENTIOMETRIC SURFACE OF THE INTERMEDIATE ZONE OF THE MAGOTHY AQUIFER ON MARCH 14, 2018
SYOSSET LANDFILL, SYOSSET, NY

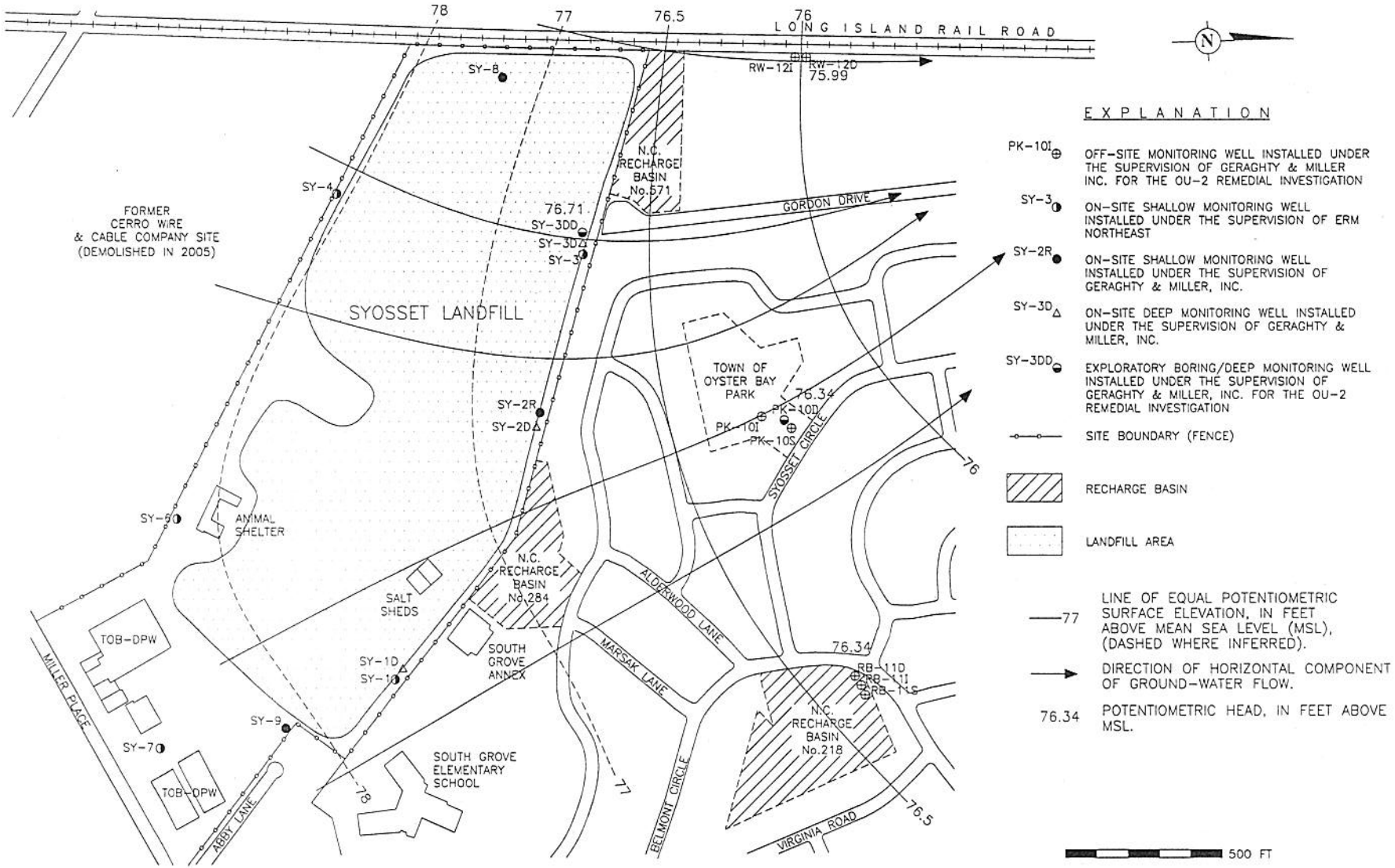
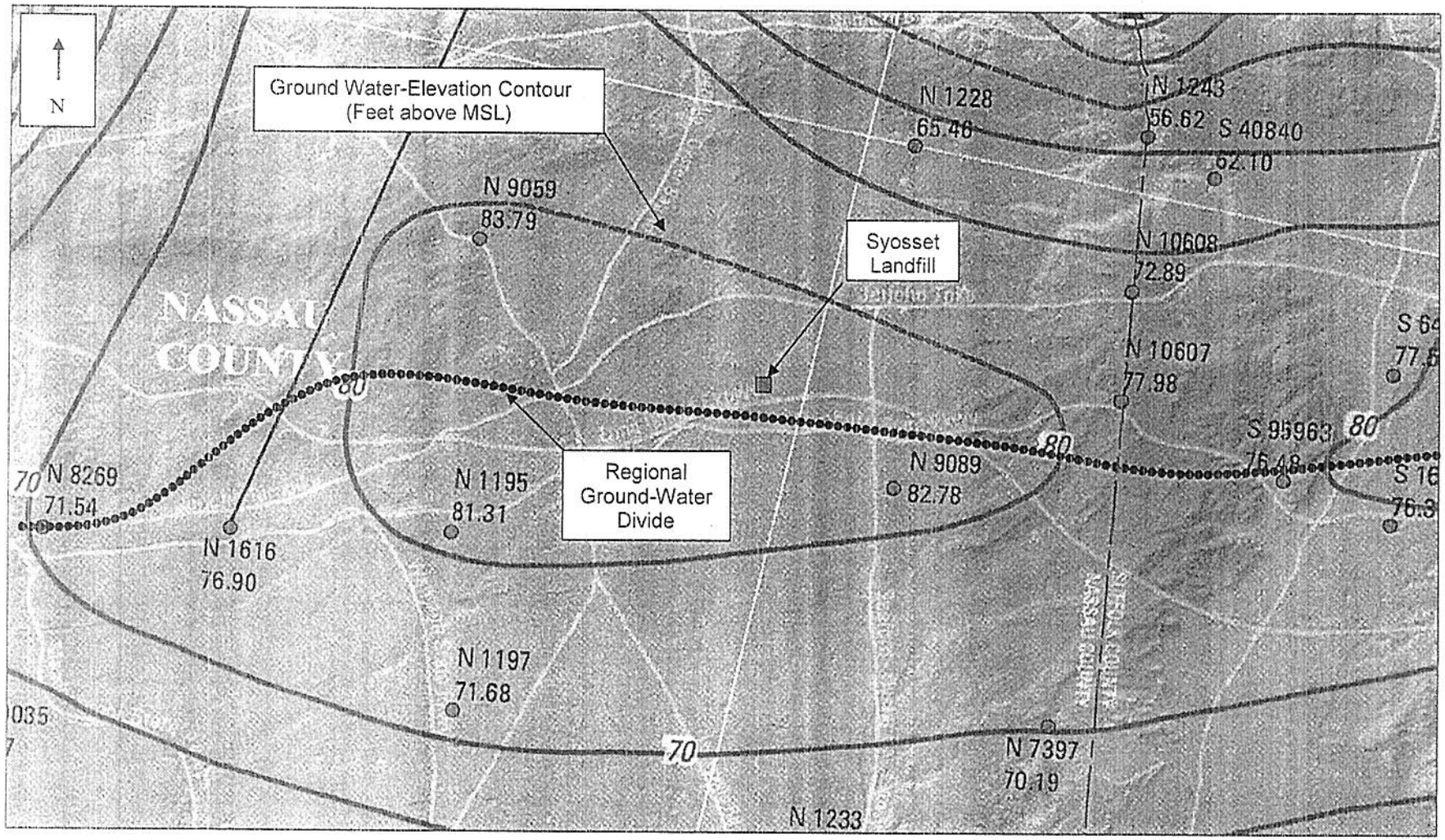


FIGURE 4

DEEP POTENTIOMETRIC SURFACE ZONE OF THE MAGOTHY AQUIFER ON MARCH 14, 2018
SYOSSET LANDFILL, SYOSSET, NY



Source: Sheet 1 of USGS Scientific Investigations Map 3326, showing water table-elevation contours during April-May 2013.

FIGURE 5

LOCATION OF SYOSSET LANDFILL
RELATIVE TO REGIONAL GROUND-WATER DIVIDE

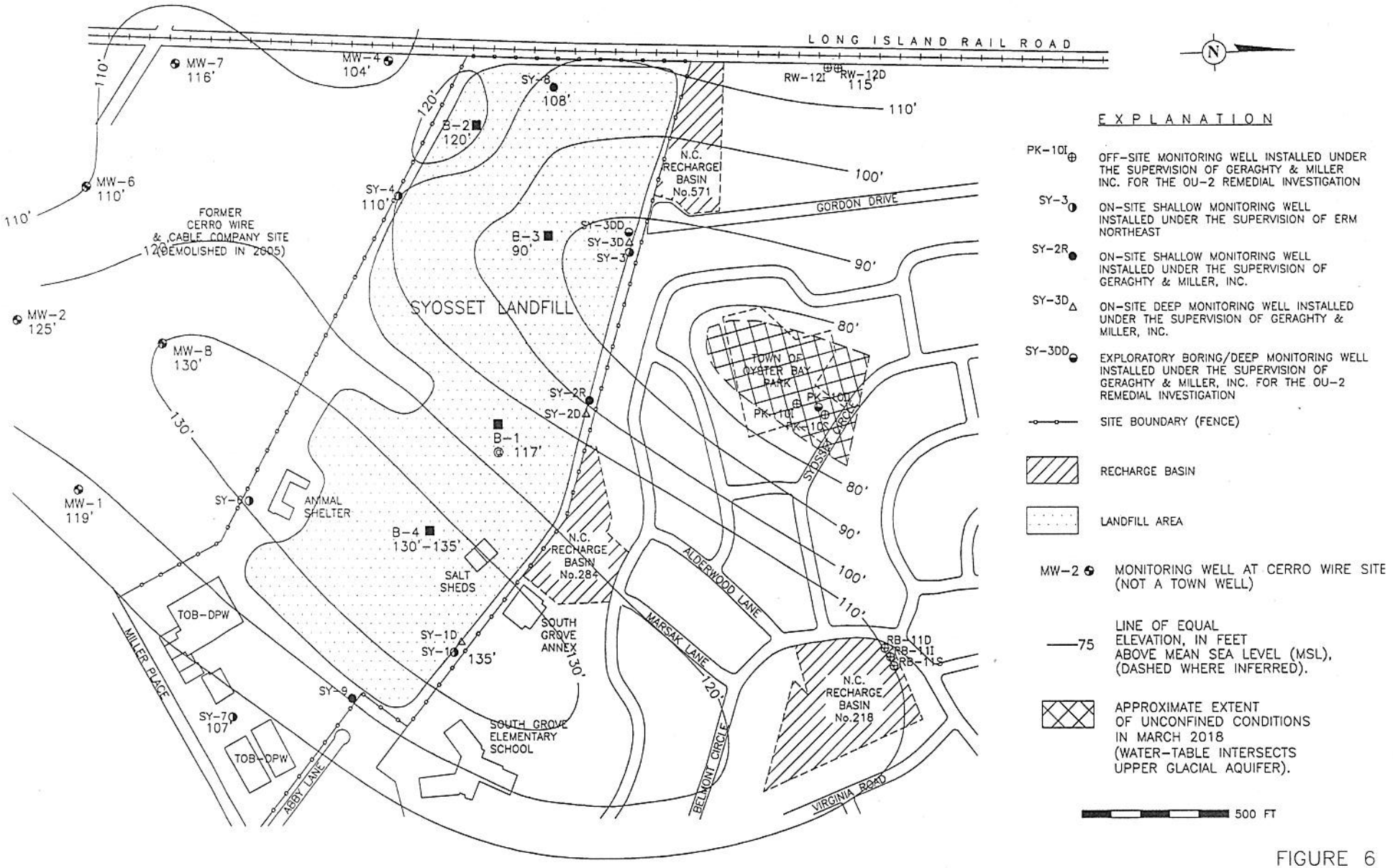


FIGURE 6

GENERALIZED STRUCTURE CONTOUR MAP OF THE TOP OF THE MAGOTHY FORMATION
SYOSSET LANDFILL, SYOSSET, NY

Table 1
Summary of Ground Water-Monitoring Results for Emerging Contaminants
Syosset Landfill 2018 Groundwater Monitoring Event

Emerging Contaminants		Upgradient Well	Downgradient Wells										
			On-Site						Off-Site				
		SY-6	SY-2R	SY-2D	SY-3	SY-5[3]	SY-3D	SY-3DD	PK-10S	PK-10I	PK-10D	RW-12I	RW-12D
1,4-Dioxane[1]	ug/L	<0.02	0.1	0.16	**0.46 J**	**0.45**	**0.43**	<0.02	<0.02	**2.1**	**1.5**	**12 J**	**12.9 J**
Per- and Polyfluoroalkyl Substances (PFAS)													
6:2 fluorotelomersulfonate*	ng/L	<2.9	<2.9	<2.8	<3.7	<3.7	<3.7	6.8 J	<2.9	<2.9	<2.8	<2.9	<2.9
8:2 fluorotelomersulfonate*	ng/L	<1.9	<2.0	<1.9	<2.5	<2.5	<2.5	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
N-EtFOSAA[4]*	ng/L	<0.97	<0.98	<0.93	<1.2	<1.2	<1.2	<0.94	<0.96	<0.95	<0.95	<0.96	<0.96
N-MeFOSAA[5]*	ng/L	<0.97	<0.98	<0.93	<1.2	<1.2	<1.2	<0.94	<0.96	<0.95	<0.95	<0.96	<0.96
Perfluorobutanesulfonate	ng/L	0.91 J	3.0	2.1	3.3 J	3.3	2.1 J	<0.28	0.57 J	1.9	0.52 J	12 J	2.2 J
Perfluorobutanoic acid	ng/L	13	11	14	33	33	36	<1.9	56	53	3.3 J	25 J	7.0
Perfluorodecanesulfonate*	ng/L	<0.58	<0.59	<0.56	<0.75	<0.75	<0.75	<0.56	<0.58	<0.57	<0.57	<0.58	<0.58
Perfluorodecanoic acid	ng/L	<0.97	3.1	9.9	3.0	3.0	4.8	<0.94	2.5	3.9	<0.95	0.97 J	<0.96
Perfluorododecanoic acid*	ng/L	<0.29	<0.29	0.56 J	<0.37	<0.37	<0.37	<0.28	<0.29	<0.29	<0.28	<0.29	<0.29
Perfluoroheptanesulfonate*	ng/L	<0.39	<0.39	<0.37	<0.50	<0.50	0.56 J	<1.9	<0.38	<0.38	<0.38	1.0 J	<0.39
Perfluoroheptanoic acid	ng/L	12	18	20	32	32	37	<0.28	35	37	1.0	16	3.1
Perfluorohexanesulfonate	ng/L	0.69 J	2.8	2.3	3.7	3.7	4.8	<0.38	0.63 J	4.4	1.2 J	17	4.0
Perfluorohexanoic acid	ng/L	<11	14	19	46	46	49	<0.38	57	50	<2.5	28	<11
Perfluorononanoic acid	ng/L	21	5.2	12	3.3	3.2	6.7	<0.38	2.3	12	<0.38	1.1 J	<0.39
Perfluorooctanesulfonamide*	ng/L	<0.97 J	<0.98 J	<0.93 J	<1.2 J	<1.2 J	<1.2 J	<0.94 J	<0.96 J	<0.95 J	<0.95 J	<0.96 J	<0.96 J
Perfluoro-octanesulfonate (PFOS)[2]	ng/L	1.6 J	6.1	16	5.6	6.9	13	<0.38	1.5 J	13	2.7	9.8	4.6
Perfluorooctanoic acid (PFOA)[2]	ng/L	35	13	20	35	35	**78**	<0.28	6.9	42	9.9	**150**	48
Sum of PFOS and PFOA[2]:	ng/L	36.6 J	19.1	36	40.6	41.9	**91**	<0.66	8.4 J	55	12.6	**159.8**	52.6
Perfluoropentanoic acid	ng/L	10	11	15	51	52	42	<1.9	52	48	2.0 J	<1.9	<1.9
Perfluorotetradecanoic acid*	ng/L	<0.29	<0.29	<0.28	<0.37	<0.37	<0.37	<0.28	<0.29	<0.29	<0.28	<0.29	<0.29
Perfluorotridecanoic acid*	ng/L	<0.29	<0.29	<0.28	<0.37	<0.37	<0.37	<0.28	<0.29	<0.29	<0.28	<0.29	<0.29
Perfluoroundecanoic acid	ng/L	<0.39	2.4	2.1	<0.50	<0.50	<0.50	<0.38	<0.38	<0.38	<0.38	0.54 J	<0.39
No. of Target PFAS Detected:	out of 21	8/21	11/21	12/21	10/21	10/21	11/21	1/21	10/21	10/21	7/21	11/21	6/21
Total Detected PFAS Concentration:	ng/L	94.2 J	89.6	133 J	216 J	218	274 J	6.8 J	214 J	265	20.6 J	261 J	68.9 J

Notes:

ug/L = micrograms per Liter.

ng/L = nanograms per Liter.

1 = The NYSDEC internal guidance value for 1,4-dioxane is 0.35 ug/L, and the USEPA screening level for tap water is 0.46 ug/L.

2 = The USEPA health advisory level for PFOS, or PFOA or their sum in drinking water is 70 ng/L.

3 = Duplicate sample collected from Well SY-3.

4 = N-ethyl perfluorooctanesulfonamidoacetic Acid.

5 = N-methyl perfluorooctanesulfonamidoacetic Acid.

J = Estimated concentration.

Bold = Exceeds current NYSDEC internal guidance value for 1,4-dioxane.

Bold and Underlined = Exceeds current EPA screening level for 1,4-dioxane or health advisory level for PFOA and/or PFOS.

* = Analyte not detected (7 of 21) or only detected sporadically at low, estimated concentration(s) (3 of 21).

APPENDIX A

VALIDATED LABORATORY RESULTS

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/26/18
Project:	Syosset Landfill	Date Received:	03/27/18
Client Sample ID:	SY-6-20180326	SDG No.:	J2083
Lab Sample ID:	J2083-01	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095923.D	1	03/30/18 08:07	04/02/18 12:34	PB107832

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.1	U	0.02	0.05	0.1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.43		30 - 150		108%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.4		30 - 150		100%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.42		20 - 139		105%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.47		10 - 173		117%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.57		20 - 171		142%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1148	8.418				
1146-65-2	Naphthalene-d8	4668	11.257				
15067-26-2	Acenaphthene-d10	2764	14.992				
1517-22-2	Phenanthrene-d10	6389	17.697				
1719-03-5	Chrysene-d12	6647	21.79				
1520-96-3	Perylene-d12	6500	24.418				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements
J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

2

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/26/18
Project:	Syosset Landfill	Date Received:	03/27/18
Client Sample ID:	SY-3DD-20180326	SDG No.:	J2083
Lab Sample ID:	J2083-02	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095924.D	1	03/30/18 08:07	04/02/18 13:10	PB107832

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.1	U	0.02	0.05	0.1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.41		30 - 150		102%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.4		30 - 150		100%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.42		20 - 139		105%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.48		10 - 173		120%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.52		20 - 171		130%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1189	8.419				
1146-65-2	Naphthalene-d8	4805	11.255				
15067-26-2	Acenaphthene-d10	2851	14.991				
1517-22-2	Phenanthrene-d10	6407	17.696				
1719-03-5	Chrysene-d12	6974	21.788				
1520-96-3	Perylene-d12	6851	24.422				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

4/2/18

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Report of Analysis

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/27/18
Project:	Syosset Landfill	Date Received:	03/28/18
Client Sample ID:	SY-3D-20180327	SDG No.:	J2116
Lab Sample ID:	J2116-01	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095925.D	1	03/30/18 08:07	04/02/18 13:46	PB107832

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.43		0.02	0.05	0.1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.41		30 - 150		102%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.38		30 - 150		95%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.43		20 - 139		108%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.44		10 - 173		110%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.48		20 - 171		120%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1326	8.417				
1146-65-2	Naphthalene-d8	5338	11.257				
15067-26-2	Acenaphthene-d10	3130	14.99				
1517-22-2	Phenanthrene-d10	7167	17.695				
1719-03-5	Chrysene-d12	7593	21.79				
1520-96-3	Perylene-d12	7610	24.421				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
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Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
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A = Aldol-Condensation Reaction Products

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Report of Analysis

4

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/27/18
Project:	Syosset Landfill	Date Received:	03/28/18
Client Sample ID:	SY-3-20180327	SDG No.:	J2116
Lab Sample ID:	J2116-04	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095928.D	1	03/30/18 08:07	04/02/18 15:33	PB107832

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.46 J		0.02	0.05	0.1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.4		30 - 150		100%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.38		30 - 150		95%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.4		20 - 139		100%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.47		10 - 173		117%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.51		20 - 171		127%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1179	8.419				
1146-65-2	Naphthalene-d8	4787	11.255				
15067-26-2	Acenaphthene-d10	2776	14.991				
1517-22-2	Phenanthrene-d10	6455	17.696				
1719-03-5	Chrysene-d12	6918	21.789				
1520-96-3	Perylene-d12	6805	24.419				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

nw 5/28/18

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Report of Analysis

5

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/27/18
Project:	Syosset Landfill	Date Received:	03/28/18
Client Sample ID:	SY-2R-20180327	SDG No.:	J2116
Lab Sample ID:	J2116-05	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	990 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095929.D	1	03/30/18 08:07	04/02/18 16:06	PB107832

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.1		0.02	0.05	0.1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.45		30 - 150		113%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.45		30 - 150		113%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.45		20 - 139		113%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.56		10 - 173		140%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.69	*	20 - 171		173%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1088	8.42				
1146-65-2	Naphthalene-d8	4427	11.256				
15067-26-2	Acenaphthene-d10	2582	14.991				
1517-22-2	Phenanthrene-d10	5729	17.697				
1719-03-5	Chrysene-d12	6171	21.79				
1520-96-3	Perylene-d12	6166	24.423				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
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M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
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A = Aldol-Condensation Reaction Products

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Report of Analysis

3

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/28/18
Project:	Syosset Landfill	Date Received:	03/28/18
Client Sample ID:	PK-10I-20180328	SDG No.:	J2136
Lab Sample ID:	J2136-03	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095934 D	1	04/02/18 08:58	04/02/18 19:05	PB107891

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	2.1		0.02	0.05	0.1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.43		30 - 150		108%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.39		30 - 150		97%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.43		20 - 139		108%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.45		10 - 173		113%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.49		20 - 171		123%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1207	8.417				
1146-65-2	Naphthalene-d8	4911	11.256				
15067-26-2	Acenaphthene-d10	2962	14.992				
1517-22-2	Phenanthrene-d10	6644	17.696				
1719-03-5	Chrysene-d12	7089	21.789				
1520-96-3	Perylene-d12	7008	24.419				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
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M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
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D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

MD 5/28/18

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Report of Analysis

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/28/18
Project:	Syosset Landfill	Date Received:	04/04/18
Client Sample ID:	RW-12D-20180328	SDG No.:	J2215
Lab Sample ID:	J2215-01	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095978.D	1	04/06/18 08:41	04/11/18 19:33	PB108058

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	12.4 ~~12.1~~ J K		~~0.02~~ 0.2	~~0.05~~ 0.5	~~0.1~~ 1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.43		30 - 150		108%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.45		30 - 150		112%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.51		20 - 139		126%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.69		10 - 173		172%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.55		20 - 171		137%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1348	8.38				
1146-65-2	Naphthalene-d8	5423	11.22				
15067-26-2	Acenaphthene-d10	3218	14.97				
1517-22-2	Phenanthrene-d10	6647	17.67				
1719-03-5	Chrysene-d12	7010	21.78				
1520-96-3	Perylene-d12	6760	24.39				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
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Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

MW 5/29/18

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Report of Analysis

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/28/18
Project:	Syosset Landfill	Date Received:	04/04/18
Client Sample ID:	RW-12D-20180328DL	SDG No.:	J2215
Lab Sample ID:	J2215-01DL	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095985.D	10	04/06/18 08:41	04/12/18 10:26	PB108058

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	12.9	J	0.2	0.5	1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.49		30 - 150		123%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.48		30 - 150		120%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.58	*	20 - 139		145%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.79	*	10 - 173		198%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.58		20 - 171		145%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1290	8.39				
1146-65-2	Naphthalene-d8	5051	11.22				
15067-26-2	Acenaphthene-d10	2916	14.97				
1517-22-2	Phenanthrene-d10	6804	17.67				
1719-03-5	Chrysene-d12	7492	21.78				
1520-96-3	Perylene-d12	6964	24.39				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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Report of Analysis

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/28/18
Project:	Syosset Landfill	Date Received:	04/04/18
Client Sample ID:	RW-12I-20180328	SDG No.:	J2215
Lab Sample ID:	J2215-02	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095979.D	1	04/06/18 08:41	04/11/18 20:09	PB108058

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	~~10.7~~ 12	E J	~~0.02~~ 0.2	~~0.05~~ 0.5	~~0.1~~ 1	ng/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.43		30 - 150		108%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.43		30 - 150		108%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.52		20 - 139		129%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.77	*	10 - 173		193%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.54		20 - 171		135%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1364	8.39				
1146-65-2	Naphthalene-d8	5345	11.22				
15067-26-2	Acenaphthene-d10	3002	14.97				
1517-22-2	Phenanthrene-d10	6871	17.68				
1719-03-5	Chrysene-d12	7453	21.78				
1520-96-3	Perylene-d12	7125	24.39				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

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B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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Report of Analysis

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/28/18 2DL
Project:	Syosset Landfill	Date Received:	04/04/18
Client Sample ID:	RW-12I-20180328DL	SDG No.:	J2215
Lab Sample ID:	J2215-02DL	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100 Use original
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095986.D	10	04/06/18 08:41	04/12/18 11:02	PB108058

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	12 J	B	0.2	0.5	1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.46		30 - 150		115%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.46		30 - 150		115%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.56	*	20 - 139		140%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.87	*	10 - 173		217%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.6		20 - 171		150%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1333	8.39				
1146-65-2	Naphthalene-d8	5080	11.22				
15067-26-2	Acenaphthene-d10	2867	14.97				
1517-22-2	Phenanthrene-d10	6951	17.67				
1719-03-5	Chrysene-d12	7460	21.77				
1520-96-3	Perylene-d12	7078	24.39				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
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M = MS/MSD acceptance criteria did not meet requirements

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B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
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() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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Report of Analysis

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	04/04/18
Project:	Syosset Landfill	Date Received:	04/05/18
Client Sample ID:	FIELD-BLANK-20180404	SDG No.:	J2252
Lab Sample ID:	J2252-01	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095981.D	1	04/06/18 08:41	04/11/18 21:20	PB108058

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.1	U	0.02	0.05	0.1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.44		30 - 150		110%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.45		30 - 150		113%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.45		20 - 139		112%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.61		10 - 173		151%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.61		20 - 171		151%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1274	8.39				
1146-65-2	Naphthalene-d8	4928	11.22				
15067-26-2	Acenaphthene-d10	2703	14.97				
1517-22-2	Phenanthrene-d10	6527	17.67				
1719-03-5	Chrysene-d12	7162	21.78				
1520-96-3	Perylene-d12	6772	24.39				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

REVISED

Sample Description: SY-6-20180326 Grab Groundwater
Syosset Landfill

Project Name: J2171

Submittal Date/Time: 03/29/2018 09:35
Collection Date/Time: 03/26/2018 14:30
SDG#: CMH07-01

Chemtech Consulting Group,Inc.
ELLE Sample #: GW 9531029
ELLE Group #: 1925237
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	N.D.	2.9	8.8	1
14473	8:2 fluorotelomersulfonate	39108-34-4	N.D.	1.9	5.8	1
14473	NEtFOSAA	2991-50-6	N.D.	0.97	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	N.D.	0.97	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonate	375-73-5	0.91 J	0.29	0.97	1
14473	Perfluorobutanoic acid	375-22-4	13	1.9	5.8	1
14473	Perfluorodecanesulfonate	335-77-3	N.D.	0.58	1.9	1
14473	Perfluorodecanoic acid	335-76-2	N.D.	0.97	1.9	1
14473	Perfluorododecanoic acid	307-55-1	N.D.	0.29	0.97	1
14473	Perfluoroheptanesulfonate	375-92-8	N.D.	0.39	1.9	1
14473	Perfluoroheptanoic acid	375-85-9	12	0.29	0.97	1
14473	Perfluorohexanesulfonate	355-46-4	0.69 J	0.39	1.9	1
14473	Perfluorohexanoic acid	307-24-4	11 B U	0.39	1.9	1
14473	Perfluorononanoic acid	375-95-1	21	0.39	1.9	1
14473	Perfluorooctanesulfonamide	754-91-6	N.D. U J	0.97	2.9	1
14473	Perfluoro-octanesulfonate	1763-23-1	1.6 J	0.39	1.9	1
14473	Perfluorooctanoic acid	335-67-1	35	0.29	0.97	1
14473	Perfluoropentanoic acid	2706-90-3	10	1.9	5.8	1
14473	Perfluorotetradecanoic acid	376-06-7	N.D.	0.29	0.97	1
14473	Perfluorotridecanoic acid	72629-94-8	N.D.	0.29	0.97	1
14473	Perfluoroundecanoic acid	2058-94-8	N.D.	0.39	1.9	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18091004	04/12/2018 17:04	Mark Makowiecki	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18091004	04/02/2018 07:30	Pamela Rothharpt	1

*=This limit was used in the evaluation of the final result

Rev 5/29/18

2 REVISED

Sample Description: SY-3DD-20180326 Grab Groundwater
Syosset Landfill

Project Name: J2171

Submittal Date/Time: 03/29/2018 09:35
Collection Date/Time: 03/26/2018 16:00
SDG#: CMH07-02

Chemtech Consulting Group,Inc.
ELLE Sample #: GW 9531030
ELLE Group #: 1925237
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	6.8 J	2.8	8.4	1
14473	8:2 fluorotelomersulfonate	39108-34-4	N.D.	1.9	5.6	1
14473	NEtFOSAA	2991-50-6	N.D.	0.94	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	N.D.	0.94	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonate	375-73-5	N.D.	0.28	0.94	1
14473	Perfluorobutanoic acid	375-22-4	N.D.	1.9	5.6	1
14473	Perfluorodecanesulfonate	335-77-3	N.D.	0.56	1.9	1
14473	Perfluorodecanoic acid	335-76-2	N.D.	0.94	1.9	1
14473	Perfluorododecanoic acid	307-55-1	N.D.	0.28	0.94	1
14473	Perfluoroheptanesulfonate	375-92-8	N.D.	0.38	1.9	1
14473	Perfluoroheptanoic acid	375-85-9	N.D.	0.28	0.94	1
14473	Perfluorohexanesulfonate	355-46-4	N.D.	0.38	1.9	1
14473	Perfluorohexanoic acid	307-24-4	1.9 ~~1.3~~ J8 U	0.38	1.9	1
14473	Perfluorononanoic acid	375-95-1	N.D.	0.38	1.9	1
14473	Perfluorooctanesulfonamide	754-91-6	~~N.D.~~ U J	0.94	2.8	1
14473	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.38	1.9	1
14473	Perfluorooctanoic acid	335-67-1	N.D.	0.28	0.94	1
14473	Perfluoropentanoic acid	2706-90-3	N.D.	1.9	5.6	1
14473	Perfluorotetradecanoic acid	376-06-7	N.D.	0.28	0.94	1
14473	Perfluorotridecanoic acid	72629-94-8	N.D.	0.28	0.94	1
14473	Perfluoroundecanoic acid	2058-94-8	N.D.	0.38	1.9	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside the holding time and no reportable hits were detected in the method blank. The data is reported from the in-hold extraction Both sets of data are included in the data package.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18091004	04/12/2018 17:19	Mark Makowiecki	1

*=This limit was used in the evaluation of the final result

pw 3/29/18

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Analysis Report

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3 REVISED

Sample Description: SY-3D-20180327 Grab Groundwater
Syosset Landfill

Project Name: J2171

Submittal Date/Time: 03/29/2018 09:35
Collection Date/Time: 03/27/2018 11:00
SDG#: CMH07-03

Chemtech Consulting Group,Inc.
ELLE Sample #: GW 9531031
ELLE Group #: 1925237
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	N.D.	3.7	11	1
14473	8:2 fluorotelomersulfonate	39108-34-4	N.D.	2.5	7.5	1
14473	NEtFOSAA	2991-50-6	N.D.	1.2	3.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	N.D.	1.2	3.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonate	375-73-5	2.1 J	0.37	1.2	1
14473	Perfluorobutanoic acid	375-22-4	36	2.5	7.5	1
14473	Perfluorodecanesulfonate	335-77-3	N.D.	0.75	2.5	1
14473	Perfluorodecanoic acid	335-76-2	4.8	1.2	2.5	1
14473	Perfluorododecanoic acid	307-55-1	N.D.	0.37	1.2	1
14473	Perfluoroheptanesulfonate	375-92-8	0.56 J	0.50	2.5	1
14473	Perfluoroheptanoic acid	375-85-9	37	0.37	1.2	1
14473	Perfluorohexanesulfonate	355-46-4	4.8	0.50	2.5	1
14473	Perfluorohexanoic acid	307-24-4	49 β	0.50	2.5	1
14473	Perfluorononanoic acid	375-95-1	6.7	0.50	2.5	1
14473	Perfluorooctanesulfonamide	754-91-6	N.D. UJ	1.2	3.7	1
14473	Perfluoro-octanesulfonate	1763-23-1	13	0.50	2.5	1
14473	Perfluorooctanoic acid	335-67-1	78	0.37	1.2	1
14473	Perfluoropentanoic acid	2706-90-3	42	2.5	7.5	1
14473	Perfluorotetradecanoic acid	376-06-7	N.D.	0.37	1.2	1
14473	Perfluorotridecanoic acid	72629-94-8	N.D.	0.37	1.2	1
14473	Perfluoroundecanoic acid	2058-94-8	N.D.	0.50	2.5	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Several labeled compounds used as extraction standard areas were outside of the QC limits as noted on the QC Summary for both the initial injection and the re-injection. The values here are from the initial injection of the sample

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

MW 5/29/18

4 REVISED

Sample Description: SY-3-20180327 Grab Groundwater
Syosset Landfill

Project Name: J2171

Submittal Date/Time: 03/29/2018 09:35
Collection Date/Time: 03/27/2018 12:00
SDG#: CMH07-04

Chemtech Consulting Group,Inc.
ELLE Sample #: GW 9531032
ELLE Group #: 1925237
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	N.D.	3.7	11	1
14473	8:2 fluorotelomersulfonate	39108-34-4	N.D.	2.5	7.5	1
14473	NEtFOSAA	2991-50-6	N.D.	1.2	3.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	N.D.	1.2	3.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonate	375-73-5	3.3 J	0.37	1.2	1
14473	Perfluorobutanoic acid	375-22-4	33	2.5	7.5	1
14473	Perfluorodecanesulfonate	335-77-3	N.D.	0.75	2.5	1
14473	Perfluorodecanoic acid	335-76-2	2.9	1.2	2.5	1
14473	Perfluorododecanoic acid	307-55-1	N.D.	0.37	1.2	1
14473	Perfluoroheptanesulfonate	375-92-8	N.D.	0.50	2.5	1
14473	Perfluoroheptanoic acid	375-85-9	33	0.37	1.2	1
14473	Perfluorohexanesulfonate	355-46-4	3.9	0.50	2.5	1
14473	Perfluorohexanoic acid	307-24-4	46 B	0.50	2.5	1
14473	Perfluorononanoic acid	375-95-1	3.3	0.50	2.5	1
14473	Perfluorooctanesulfonamide	754-91-6	N.D. UJ	1.2	3.7	1
14473	Perfluoro-octanesulfonate	1763-23-1	5.6	0.50	2.5	1
14473	Perfluorooctanoic acid	335-67-1	35	0.37	1.2	1
14473	Perfluoropentanoic acid	2706-90-3	51	2.5	7.5	1
14473	Perfluorotetradecanoic acid	376-06-7	N.D.	0.37	1.2	1
14473	Perfluorotridecanoic acid	72629-94-8	N.D.	0.37	1.2	1
14473	Perfluoroundecanoic acid	2058-94-8	N.D.	0.50	2.5	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Several labeled compounds used as extraction standard areas were outside of the QC limits as noted on the QC Summary for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

AM 5/2.9/18

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Analysis Report

5 REVISED

Sample Description: SY-5-20180327 Grab Groundwater
Syosset Landfill

Project Name: J2171

Submittal Date/Time: 03/29/2018 09:35
Collection Date/Time: 03/27/2018 12:15
SDG#: CMH07-05

Chemtech Consulting Group,Inc.
ELLE Sample #: GW 9531033
ELLE Group #: 1925237
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	N.D.	3.7	11	1
14473	8:2 fluorotelomersulfonate	39108-34-4	N.D.	2.5	7.5	1
14473	NEtFOSAA	2991-50-6	N.D.	1.2	3.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	N.D.	1.2	3.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonate	375-73-5	3.3	0.37	1.2	1
14473	Perfluorobutanoic acid	375-22-4	33	2.5	7.5	1
14473	Perfluorodecanesulfonate	335-77-3	N.D.	0.75	2.5	1
14473	Perfluorodecanoic acid	335-76-2	3.0	1.2	2.5	1
14473	Perfluorododecanoic acid	307-55-1	N.D.	0.37	1.2	1
14473	Perfluoroheptanesulfonate	375-92-8	N.D.	0.50	2.5	1
14473	Perfluoroheptanoic acid	375-85-9	32	0.37	1.2	1
14473	Perfluorohexanesulfonate	355-46-4	3.7	0.50	2.5	1
14473	Perfluorohexanoic acid	307-24-4	46 J	0.50	2.5	1
14473	Perfluorononanoic acid	375-95-1	3.2	0.50	2.5	1
14473	Perfluorooctanesulfonamide	754-91-6	N.D. UJ	1.2	3.7	1
14473	Perfluoro-octanesulfonate	1763-23-1	6.9	0.50	2.5	1
14473	Perfluorooctanoic acid	335-67-1	35	0.37	1.2	1
14473	Perfluoropentanoic acid	2706-90-3	52	2.5	7.5	1
14473	Perfluorotetradecanoic acid	376-06-7	N.D.	0.37	1.2	1
14473	Perfluorotridecanoic acid	72629-94-8	N.D.	0.37	1.2	1
14473	Perfluoroundecanoic acid	2058-94-8	N.D.	0.50	2.5	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18091004	04/12/2018 18:06	Mark Makowiecki	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18091004	04/02/2018 07:30	Pamela Rothharpt	1

*=This limit was used in the evaluation of the final result

MW 5/29/18

6 REVISED

Sample Description: SY-2R-20180327 Grab Groundwater
Syosset Landfill

Project Name: J2171

Submittal Date/Time: 03/29/2018 09:35
Collection Date/Time: 03/27/2018 13:45
SDG#: CMH07-06

Chemtech Consulting Group,Inc.
ELLE Sample #: GW 9531034
ELLE Group #: 1925237
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	N.D.	2.9	8.8	1
14473	8:2 fluorotelomersulfonate	39108-34-4	N.D.	2.0	5.9	1
14473	NEtFOSAA	2991-50-6	N.D.	0.98	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	N.D.	0.98	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonate	375-73-5	3.0	0.29	0.98	1
14473	Perfluorobutanoic acid	375-22-4	11	2.0	5.9	1
14473	Perfluorodecanesulfonate	335-77-3	N.D.	0.59	2.0	1
14473	Perfluorodecanoic acid	335-76-2	3.1	0.98	2.0	1
14473	Perfluorododecanoic acid	307-55-1	N.D.	0.29	0.98	1
14473	Perfluoroheptanesulfonate	375-92-8	N.D.	0.39	2.0	1
14473	Perfluoroheptanoic acid	375-85-9	18	0.29	0.98	1
14473	Perfluorohexanesulfonate	355-46-4	2.8	0.39	2.0	1
14473	Perfluorohexanoic acid	307-24-4	14 B	0.39	2.0	1
14473	Perfluorononanoic acid	375-95-1	5.2	0.39	2.0	1
14473	Perfluorooctanesulfonamide	754-91-6	N.D. UJ	0.98	2.9	1
14473	Perfluoro-octanesulfonate	1763-23-1	6.1	0.39	2.0	1
14473	Perfluorooctanoic acid	335-67-1	13	0.29	0.98	1
14473	Perfluoropentanoic acid	2706-90-3	11	2.0	5.9	1
14473	Perfluorotetradecanoic acid	376-06-7	N.D.	0.29	0.98	1
14473	Perfluorotridecanoic acid	72629-94-8	N.D.	0.29	0.98	1
14473	Perfluoroundecanoic acid	2058-94-8	2.4	0.39	2.0	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18091004	04/17/2018 05:30	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18091004	04/02/2018 07:30	Pamela Rothhaupt	1

*=This limit was used in the evaluation of the final result

MW 5/29/18

7 REVISED

Sample Description: SY-2D-20180327 Grab Groundwater
Syosset Landfill

Project Name: J2171

Submittal Date/Time: 03/29/2018 09:35
Collection Date/Time: 03/27/2018 15:10
SDG#: CMH07-07

Chemtech Consulting Group,Inc.
ELLE Sample #: GW 9531035
ELLE Group #: 1925237
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	N.D.	2.8	8.4	1
14473	8:2 fluorotelomersulfonate	39108-34-4	N.D.	1.9	5.6	1
14473	NEtFOSAA	2991-50-6	N.D.	0.93	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	N.D.	0.93	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonate	375-73-5	2.1	0.28	0.93	1
14473	Perfluorobutanoic acid	375-22-4	14	1.9	5.6	1
14473	Perfluorodecanesulfonate	335-77-3	N.D.	0.56	1.9	1
14473	Perfluorodecanoic acid	335-76-2	9.9	0.93	1.9	1
14473	Perfluorododecanoic acid	307-55-1	0.56 J	0.28	0.93	1
14473	Perfluoroheptanesulfonate	375-92-8	N.D.	0.37	1.9	1
14473	Perfluoroheptanoic acid	375-85-9	20	0.28	0.93	1
14473	Perfluorohexanesulfonate	355-46-4	2.3	0.37	1.9	1
14473	Perfluorohexanoic acid	307-24-4	19 B	0.37	1.9	1
14473	Perfluorononanoic acid	375-95-1	12	0.37	1.9	1
14473	Perfluorooctanesulfonamide	754-91-6	N.D. NJ	0.93	2.8	1
14473	Perfluoro-octanesulfonate	1763-23-1	16	0.37	1.9	1
14473	Perfluorooctanoic acid	335-67-1	20	0.28	0.93	1
14473	Perfluoropentanoic acid	2706-90-3	15	1.9	5.6	1
14473	Perfluorotetradecanoic acid	376-06-7	N.D.	0.28	0.93	1
14473	Perfluorotridecanoic acid	72629-94-8	N.D.	0.28	0.93	1
14473	Perfluoroundecanoic acid	2058-94-8	2.1	0.37	1.9	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18091004	04/12/2018 18:37	Mark Makowiecki	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18091004	04/02/2018 07:30	Pamela Rothharpt	1

*=This limit was used in the evaluation of the final result

MW 5/29/18

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Analysis Report

8 REVISED

Sample Description: PK-10D-20180328 Grab Groundwater
Syosset Landfill

Project Name: J2171

Submittal Date/Time: 03/29/2018 09:35
Collection Date/Time: 03/28/2018 10:00
SDG#: CMH07-08

Chemtech Consulting Group,Inc.
ELLE Sample #: GW 9531036
ELLE Group #: 1925237
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	N.D.	2.8	8.5	1
14473	8:2 fluorotelomersulfonate	39108-34-4	N.D.	1.9	5.7	1
14473	NEtFOSAA	2991-50-6	N.D.	0.95	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	N.D.	0.95	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonate	375-73-5	0.52 J	0.28	0.95	1
14473	Perfluorobutanoic acid	375-22-4	3.3 J	1.9	5.7	1
14473	Perfluorodecanesulfonate	335-77-3	N.D.	0.57	1.9	1
14473	Perfluorodecanoic acid	335-76-2	N.D.	0.95	1.9	1
14473	Perfluorododecanoic acid	307-55-1	N.D.	0.28	0.95	1
14473	Perfluoroheptanesulfonate	375-92-8	N.D.	0.38	1.9	1
14473	Perfluoroheptanoic acid	375-85-9	1.0	0.28	0.95	1
14473	Perfluorohexanesulfonate	355-46-4	1.2 J	0.38	1.9	1
14473	Perfluorohexanoic acid	307-24-4	2.5 J U	0.38	1.9	1
14473	Perfluorononanoic acid	375-95-1	N.D.	0.38	1.9	1
14473	Perfluorooctanesulfonamide	754-91-6	N.D. UJ	0.95	2.8	1
14473	Perfluoro-octanesulfonate	1763-23-1	2.7	0.38	1.9	1
14473	Perfluorooctanoic acid	335-67-1	9.9	0.28	0.95	1
14473	Perfluoropentanoic acid	2706-90-3	2.0 J	1.9	5.7	1
14473	Perfluorotetradecanoic acid	376-06-7	N.D.	0.28	0.95	1
14473	Perfluorotridecanoic acid	72629-94-8	N.D.	0.28	0.95	1
14473	Perfluoroundecanoic acid	2058-94-8	N.D.	0.38	1.9	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside the holding time and no reportable hits were detected in the method blank. The data is reported from the in-hold extraction. Both sets of data are included in the data package.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

MW 5/29/18

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Report of Analysis

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Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/28/18
Project:	Syosset Landfill	Date Received:	03/28/18
Client Sample ID:	PK-10S-20180328	SDG No.:	J2136
Lab Sample ID:	J2136-02	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095933.D	1	04/02/18 08:58	04/02/18 18:29	PB107891

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.1	U	0.02	0.05	0.1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.44		30 - 150		110%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.41		30 - 150		102%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.44		20 - 139		110%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.47		10 - 173		117%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.57		20 - 171		142%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1215	8.417				
1146-65-2	Naphthalene-d8	4902	11.257				
15067-26-2	Acenaphthene-d10	2869	14.99				
1517-22-2	Phenanthrene-d10	6648	17.695				
1719-03-5	Chrysene-d12	7004	21.79				
1520-96-3	Perylene-d12	6961	24.418				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/28/18
Project:	Syosset Landfill	Date Received:	03/28/18
Client Sample ID:	PK-10D-20180328	SDG No.:	J2136
Lab Sample ID:	J2136-01	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095932.D	1	04/02/18 08:58	04/02/18 17:54	PB107891

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	1.5		0.02	0.05	0.1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.41		30 - 150		102%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.37		30 - 150		93%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.41		20 - 139		102%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.47		10 - 173		117%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.46		20 - 171		115%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1151	8.411				
1146-65-2	Naphthalene-d8	4757	11.257				
15067-26-2	Acenaphthene-d10	2738	14.99				
1517-22-2	Phenanthrene-d10	6401	17.696				
1719-03-5	Chrysene-d12	6740	21.789				
1520-96-3	Perylene-d12	6611	24.418				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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Report of Analysis

7

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/27/18
Project:	Syosset Landfill	Date Received:	03/28/18
Client Sample ID:	SY-2D-20180327	SDG No.:	J2116
Lab Sample ID:	J2116-07	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	985 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095931.D	1	03/30/18 08:07	04/02/18 17:18	PB107832

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.16		0.02	0.05	0.1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.47		30 - 150		117%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.45		30 - 150		113%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.47		20 - 139		117%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.55		10 - 173		138%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.59		20 - 171		147%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	787	8.418				
1146-65-2	Naphthalene-d8	3333	11.257				
15067-26-2	Acenaphthene-d10	1942	14.991				
1517-22-2	Phenanthrene-d10	4452	17.695				
1719-03-5	Chrysene-d12	4731	21.789				
1520-96-3	Perylene-d12	4740	24.418				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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Report of Analysis

6

Client:	Lockwood, Kessler, & Bartlett	Date Collected:	03/27/18
Project:	Syosset Landfill	Date Received:	03/28/18
Client Sample ID:	SY-5-20180327	SDG No.:	J2116
Lab Sample ID:	J2116-06	Matrix:	Water
Analytical Method:	SW8270SIM	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-SIMGroup1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BE095930.D	1	03/30/18 08:07	04/02/18 16:42	PB107832

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
123-91-1	1,4-Dioxane	0.45		0.02	0.05	0.1	ug/L
SURROGATES							
7297-45-2	2-Methylnaphthalene-d10	0.42		30 - 150		105%	SPK: 0.4
93951-69-0	Fluoranthene-d10	0.4		30 - 150		100%	SPK: 0.4
4165-60-0	Nitrobenzene-d5	0.42		20 - 139		105%	SPK: 0.4
321-60-8	2-Fluorobiphenyl	0.52		10 - 173		130%	SPK: 0.4
1718-51-0	Terphenyl-d14	0.52		20 - 171		130%	SPK: 0.4
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	1113	8.417				
1146-65-2	Naphthalene-d8	4453	11.256				
15067-26-2	Acenaphthene-d10	2622	14.99				
1517-22-2	Phenanthrene-d10	5994	17.695				
1719-03-5	Chrysene-d12	6554	21.79				
1520-96-3	Perylene-d12	6382	24.419				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
Q = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

9 REVISED

Sample Description: PK-10S-20180328 Grab Groundwater
Syosset Landfill

Project Name: J2171

Submittal Date/Time: 03/29/2018 09:35
Collection Date/Time: 03/28/2018 10:50
SDG#: CMH07-09

Chemtech Consulting Group,Inc.
ELLE Sample #: GW 9531037
ELLE Group #: 1925237
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	N.D.	2.9	8.6	1
14473	8:2 fluorotelomersulfonate	39108-34-4	N.D.	1.9	5.8	1
14473	NEtFOSAA	2991-50-6	N.D.	0.96	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	N.D.	0.96	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonate	375-73-5	0.57 J	0.29	0.96	1
14473	Perfluorobutanoic acid	375-22-4	56	1.9	5.8	1
14473	Perfluorodecanesulfonate	335-77-3	N.D.	0.58	1.9	1
14473	Perfluorodecanoic acid	335-76-2	2.5	0.96	1.9	1
14473	Perfluorododecanoic acid	307-55-1	N.D.	0.29	0.96	1
14473	Perfluoroheptanesulfonate	375-92-8	N.D.	0.38	1.9	1
14473	Perfluoroheptanoic acid	375-85-9	35	0.29	0.96	1
14473	Perfluorohexanesulfonate	355-46-4	0.63 J	0.38	1.9	1
14473	Perfluorohexanoic acid	307-24-4	57	0.38	1.9	1
14473	Perfluorononanoic acid	375-95-1	2.3	0.38	1.9	1
14473	Perfluorooctanesulfonamide	754-91-6	N.D. UJ	0.96	2.9	1
14473	Perfluoro-octanesulfonate	1763-23-1	1.5 J	0.38	1.9	1
14473	Perfluorooctanoic acid	335-67-1	6.9	0.29	0.96	1
14473	Perfluoropentanoic acid	2706-90-3	52	1.9	5.8	1
14473	Perfluorotetradecanoic acid	376-06-7	N.D.	0.29	0.96	1
14473	Perfluorotridecanoic acid	72629-94-8	N.D.	0.29	0.96	1
14473	Perfluoroundecanoic acid	2058-94-8	N.D.	0.38	1.9	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18091004	04/12/2018 19:39	Mark Makowiecki	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18091004	04/02/2018 07:30	Pamela Rothharpt	1

*=This limit was used in the evaluation of the final result

MW 5/29/18

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Analysis Report

0 REVISED

Sample Description: PK-10i-20180328 Grab Groundwater Syosset Landfill

Project Name: J2171

Submittal Date/Time: 03/29/2018 09:35
Collection Date/Time: 03/28/2018 12:40
SDG#: CMH07-10

Chemtech Consulting Group,Inc.
ELLE Sample #: GW 9531038
ELLE Group #: 1925237
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	N.D.	2.9	8.6	1
14473	8:2 fluorotelomersulfonate	39108-34-4	N.D.	1.9	5.7	1
14473	NEtFOSAA	2991-50-6	N.D.	0.95	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	N.D.	0.95	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonate	375-73-5	1.9	0.29	0.95	1
14473	Perfluorobutanoic acid	375-22-4	53	1.9	5.7	1
14473	Perfluorodecanesulfonate	335-77-3	N.D.	0.57	1.9	1
14473	Perfluorodecanoic acid	335-76-2	3.9	0.95	1.9	1
14473	Perfluorododecanoic acid	307-55-1	N.D.	0.29	0.95	1
14473	Perfluoroheptanesulfonate	375-92-8	N.D.	0.38	1.9	1
14473	Perfluoroheptanoic acid	375-85-9	37	0.29	0.95	1
14473	Perfluorohexanesulfonate	355-46-4	4.4	0.38	1.9	1
14473	Perfluorohexanoic acid	307-24-4	50	0.38	1.9	1
14473	Perfluorononanoic acid	375-95-1	12	0.38	1.9	1
14473	Perfluorooctanesulfonamide	754-91-6	N.D. UJ	0.95	2.9	1
14473	Perfluoro-octanesulfonate	1763-23-1	13	0.38	1.9	1
14473	Perfluorooctanoic acid	335-67-1	42	0.29	0.95	1
14473	Perfluoropentanoic acid	2706-90-3	48	1.9	5.7	1
14473	Perfluorotetradecanoic acid	376-06-7	N.D.	0.29	0.95	1
14473	Perfluorotridecanoic acid	72629-94-8	N.D.	0.29	0.95	1
14473	Perfluoroundecanoic acid	2058-94-8	N.D.	0.38	1.9	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18091004	04/12/2018 19:54	Mark Makowiecki	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18091004	04/02/2018 07:30	Pamela Rothhaupt	1

*=This limit was used in the evaluation of the final result

AW 5/1/18

|| REVISED

Sample Description: RW-12D-20180328 Grab Groundwater
Syosset Landfill

Project Name: J2171

Submittal Date/Time: 03/29/2018 09:35
Collection Date/Time: 03/28/2018 15:00
SDG#: CMH07-11

Chemtech Consulting Group,Inc.
ELLE Sample #: GW 9531039
ELLE Group #: 1925237
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 Version 1.1 Modified		ng/l	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	N.D.	2.9	8.7	1
14473	8:2 fluorotelomersulfonate	39108-34-4	N.D.	1.9	5.8	1
14473	NEtFOSAA	2991-50-6	N.D.	0.96	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	N.D.	0.96	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonate	375-73-5	2.2 J	0.29	0.96	1
14473	Perfluorobutanoic acid	375-22-4	7.0	1.9	5.8	1
14473	Perfluorodecanesulfonate	335-77-3	N.D.	0.58	1.9	1
14473	Perfluorodecanoic acid	335-76-2	N.D.	0.96	1.9	1
14473	Perfluorododecanoic acid	307-55-1	N.D.	0.29	0.96	1
14473	Perfluoroheptanesulfonate	375-92-8	N.D.	0.39	1.9	1
14473	Perfluoroheptanoic acid	375-85-9	3.1	0.29	0.96	1
14473	Perfluorohexanesulfonate	355-46-4	4.0	0.39	1.9	1
14473	Perfluorohexanoic acid	307-24-4	11 J U	0.39	1.9	1
14473	Perfluorononanoic acid	375-95-1	N.D.	0.39	1.9	1
14473	Perfluorooctanesulfonamide	754-91-6	N.D. UJ	0.96	2.9	1
14473	Perfluoro-octanesulfonate	1763-23-1	4.6	0.39	1.9	1
14473	Perfluorooctanoic acid	335-67-1	48	0.29	0.96	1
14473	Perfluoropentanoic acid	2706-90-3	N.D.	1.9	5.8	1
14473	Perfluorotetradecanoic acid	376-06-7	N.D.	0.29	0.96	1
14473	Perfluorotridecanoic acid	72629-94-8	N.D.	0.29	0.96	1
14473	Perfluoroundecanoic acid	2058-94-8	N.D.	0.39	1.9	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Several labeled compounds used as extraction standard areas were outside of the QC limits as noted on the QC Summary for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

mw 5/2 9/18

12 REVISED

Sample Description: RW-12I-20180328 Grab Groundwater
Syosset Landfill

Project Name: J2171

Submittal Date/Time: 03/29/2018 09:35
Collection Date/Time: 03/28/2018 16:15
SDG#: CMH07-12

Chemtech Consulting Group,Inc.
ELLE Sample #: GW 9531040
ELLE Group #: 1925237
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	N.D.	2.9	8.7	1
14473	8:2 fluorotelomersulfonate	39108-34-4	N.D.	1.9	5.8	1
14473	NEtFOSAA	2991-50-6	N.D.	0.96	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA	2355-31-9	N.D.	0.96	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonate	375-73-5	12 J	0.29	0.96	1
14473	Perfluorobutanoic acid	375-22-4	25 J	1.9	5.8	1
14473	Perfluorodecanesulfonate	335-77-3	N.D.	0.58	1.9	1
14473	Perfluorodecanoic acid	335-76-2	0.97 J	0.96	1.9	1
14473	Perfluorododecanoic acid	307-55-1	N.D.	0.29	0.96	1
14473	Perfluoroheptanesulfonate	375-92-8	1.0 J	0.38	1.9	1
14473	Perfluoroheptanoic acid	375-85-9	16	0.29	0.96	1
14473	Perfluorohexanesulfonate	355-46-4	17	0.38	1.9	1
14473	Perfluorohexanoic acid	307-24-4	28 J	0.38	1.9	1
14473	Perfluorononanoic acid	375-95-1	1.1 J	0.38	1.9	1
14473	Perfluorooctanesulfonamide	754-91-6	N.D. UJ	0.96	2.9	1
14473	Perfluoro-octanesulfonate	1763-23-1	9.8	0.38	1.9	1
14473	Perfluorooctanoic acid	335-67-1	150	0.29	0.96	1
14473	Perfluoropentanoic acid	2706-90-3	N.D.	1.9	5.8	1
14473	Perfluorotetradecanoic acid	376-06-7	N.D.	0.29	0.96	1
14473	Perfluorotridecanoic acid	72629-94-8	N.D.	0.29	0.96	1
14473	Perfluoroundecanoic acid	2058-94-8	0.54 J	0.38	1.9	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

The sample injection standard areas and labeled compounds used as extraction standard areas were outside of the QC limits as noted on the QC Summary for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Amsl 4/9/18

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Sample Description: FIELD-BLANK-20180404 Water
Syosset Landfill

Project Name: J2253

Submittal Date/Time: 04/10/2018 17:20
Collection Date/Time: 04/04/2018 14:00
SDG#: CMH08-01FB

Chemtech Consulting Group,Inc.
ELLE Sample #: WW 9551162
ELLE Group #: 1929914
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		ng/l	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	N.D.	2.8	8.5	1
14473	8:2 fluorotelomersulfonate	39108-34-4	N.D.	1.9	5.7	1
14473	NEtFOSAA	2991-50-6	N.D.	0.95	2.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid					
14473	NMeFOSAA	2355-31-9	N.D.	0.95	2.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonate	375-73-5	N.D.	0.28	0.95	1
14473	Perfluorobutanoic acid	375-22-4	N.D.	1.9	5.7	1
14473	Perfluorodecanesulfonate	335-77-3	N.D.	0.57	1.9	1
14473	Perfluorodecanoic acid	335-76-2	N.D.	0.95	1.9	1
14473	Perfluorododecanoic acid	307-55-1	N.D.	0.28	0.95	1
14473	Perfluoroheptanesulfonate	375-92-8	N.D.	0.38	1.9	1
14473	Perfluoroheptanoic acid	375-85-9	N.D.	0.28	0.95	1
14473	Perfluorohexanesulfonate	355-46-4	N.D.	0.38	1.9	1
14473	Perfluorohexanoic acid	307-24-4	N.D.	0.38	1.9	1
14473	Perfluorononanoic acid	375-95-1	N.D.	0.38	1.9	1
14473	Perfluorooctanesulfonamide	754-91-6	N.D. UJ	0.95	2.8	1
14473	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.38	1.9	1
14473	Perfluorooctanoic acid	335-67-1	N.D.	0.28	0.95	1
14473	Perfluoropentanoic acid	2706-90-3	N.D.	1.9	5.7	1
14473	Perfluorotetradecanoic acid	376-06-7	N.D.	0.28	0.95	1
14473	Perfluorotridecanoic acid	72629-94-8	N.D.	0.28	0.95	1
14473	Perfluoroundecanoic acid	2058-94-8	N.D.	0.38	1.9	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	18102003	04/17/2018 07:18	Mark Makowiecki	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18102003	04/12/2018 07:45	Pamela Rothharpt	1

*=This limit was used in the evaluation of the final result