



BOSWELL ENGINEERING

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PRIVILEGED AND CONFIDENTIAL

VIA ELECTRONIC AND REGULAR MAIL

August 3, 2015

Marilyn R. Greenberg, Esq.
Riker Danzig Scherer Hyland & Perretti LLP
Headquarters Plaza
One Speedwell Avenue
Morristown, NJ 07962-1981

Re: Pesticide Remedial Investigation
Galaxy Landscape Company Nursery &
Landscape Center
Block 1402, Lot 7
Borough of Woodcliff Lake
Bergen County, New Jersey
Our File No. WL-942

Dear Ms. Greenberg:

Pursuant to your July 30, 2015 email, Boswell Engineering (Boswell) is pleased to provide this letter report associated with the environmental areas of concern (AOC) at the above referenced property.

In support of this letter report we have attached the following:

- Attachment A: Site Location Map;
- Attachment B: Sample Location Map;
- Attachment C: Pesticide Vertical Delineation Plan;
- Attachment D: Analytical Results Summary Tables;
- Attachment E: Soil Boring Logs;
- Attachment F: Sampling Photodocumentation;
- Attachment G: Quality Assurance/Quality Control Summary Table;

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- Attachment H: Sample Summary Table; and,
- Attachment I: Estimated Remediation and Restoration Costs.

1. Background

The site encompasses 2.25-acres and is located at 223 Woodcliff Avenue (Block 1402, Lot 7) in a predominantly residential area in the Borough of Woodcliff Lake, Bergen County, New Jersey. The property is bordered by Woodcliff Avenue to the north and an excavating contractor to the south. Additionally, Our Lady Mother of the Church borders to the east and Werimus Road to the west.

The site includes a 1-story main office building, a garage utilized for fertilizer storage, a retail garden center, two (2) greenhouses used for storage and nursery operations and five (5) storage sheds. Asphalt and crushed stone access driveways and paths traverse the site.

The property is currently owned by Mr. Peter Molyneux. Since 1986, Galaxy Gardens Landscaping (Galaxy) has operated a landscaping and plant nursery on the property. Previously, the site operated as a gasoline service station from potentially as early as 1925 until circa 1991.

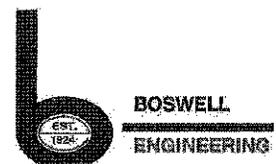
2. Langan Phase I Environmental Site Assessment

In May, 2014, Langan Engineering and Environmental Services, Inc., (Langan) prepared a Phase I Environmental Site Assessment (ESA) for the site. Langan's Phase I ESA identified three (3) recognized environmental conditions (REC) associated with the property. Specifically,

REC-1: NJDEP Case No. 96-05-07-1620-44/SRP PI No. 009294

Langan's Phase I ESA identified a NJDEP Case Number concerning the site's underground storage tanks (UST). Specifically, in May 1996, seven (7) USTs were removed from the site and soil/groundwater contamination was identified. Since that time soil and groundwater investigations have been performed and several reports were submitted to the NJDEP.

Mr. Brian Pederson of Arcadis US, Inc., (Arcadis) was subsequently retained as the project's Licensed Site Remediation Professional



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(LSRP). On May 23, 2011 Arcadis submitted a Groundwater Remedial Investigation Report (RIR) and Remedial Investigation Workplan (RIW) for the site's former service station (Woodcliff Lake Friendly Service Station). In summary, Arcadis' groundwater sampling results indicated that volatile organic compound (VOC) and lead concentrations in the shallow overburden and bedrock aquifers have decreased significantly since 1999 through in-situ natural attenuation. Current data indicates that contaminants remaining above the NJDEP GQC are limited to one (1) monitoring well, MW-5, located near the corner of Woodcliff Avenue and Werimus Road. Arcadis proposed additional investigation and delineation, however, Mr. Pederson indicated that no further investigation or remediation has occurred since their 2011 RIW submission.

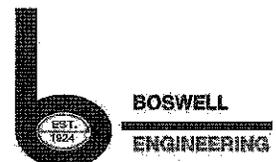
REC-2: Septic System

The office building was likely constructed in the early 1930s. Boswell spoke with the Bergen County Utilities Authority (BCUA) who reported that the municipal sanitary sewer service was installed in the area in the early 1970s. Therefore the building must have utilized a septic system for at least 40 years. In July 2014, Langan contracted Delta Geophysics, Inc. to perform a geophysical survey to locate the former septic system however no anomalies consistent with a septic system were identified.

Septic systems at service stations are typically problematic. In many instances chlorinated solvents such as degreasers are intentionally or unintentionally deposited down shop sink drains or in floor drains. However in the case of the subject property the building was too small to be utilized as a garage. Moreover, groundwater sampling at the site only revealed the presence of petroleum related contaminants.

REC-3: Historic/Current Garden/Nursery/Landscape Operations

The site appears to have been historic agricultural farmland since at least the 1930s. As previously indicated Galaxy Gardens has operated on the site since at least 1986. The pesticide contamination appears to result from historic applications rather than the garden center's operation.



Additional Items

Based on the age of the structures, some buildings may contain asbestos containing material (ACM) and lead based paint (LBP). Prior to any building renovation or demolition the appropriate surveys should be made.

3. Langan Focused Phase II Site Investigation

In November 2014 Langan prepared a Focused Phase II Subsurface Investigation Report on the site for the Borough of Woodcliff Lake. Langan's Phase II Report addressed the soil investigation activities associated with REC. Langan advanced 15 borings throughout the site and collected a total of 30 soil samples (S-1A/B through S-15A/B). Soil borings S-1A/B through S-5A/B were advanced with a Geoprobe to depths varying from 11.0' below ground surface (bgs) to 15.0' bgs. Soil samples S-6A/B through S-15A/B were collected using a hand-auger. The "A" samples were collected from a depth interval of 0.0'-0.5' bgs, while the "B" samples were collected from a depth interval of 1.0'-1.5' bgs. The samples were analyzed for both organic and inorganic pesticides (e.g. lead and arsenic).

Soil Results

Langan detected chlordane above the NJDEP Residential Direct Contact Soil Remediation Standards (RDCSRS) in samples S-2B, S-3A, S-5B, S-6B, S-7B, S-8B, S-12B and S-13B. Chlordane was also detected above the NJDEP Impact to Groundwater Soil Remediation Standards (IGWSSL) in samples S-2A, S-4B, S-5A, S-6A, S-7A, S-10A, S-11B, and S-14B. Dieldrin was detected above the NJDEP IGWSSL in samples S-5B and S-6A.

Arsenic was detected in sample S-8B at 20 parts per million (ppm), slightly above the NJDEP RDCSRS of 19 ppm. Lead was not detected in any sample above the applicable regulatory standard.

Groundwater Results

Temporary well points were installed within borings S-1 through S-5. Well points S-GW-1 through S-GW-3 were installed to a depth of approximately 15.0' bgs, while S-GW-4 and S-GW-5 were installed to a depth of approximately 11.0' bgs. Groundwater was not observed

in temporary well point S-GW-5, therefore, a sample was not collected at that location.

The groundwater sampling did not reveal the presence of any targeted contaminants above the applicable NJDEP Groundwater Quality Criteria (GQC).

4. Boswell Vertical Delineation Sampling

Based upon Langan's results, Boswell conducted vertical delineation sampling on June 26, 2015. The analytical data was compared with the most recent version of the NJDEP RDCSRS or IGWSSL.

Boswell first established a sampling plan based on Langan's July 2014 Sample Locations and Exceedances Plan. We then instructed the contractor to advance 10 soil borings at Langan's previous sample locations. Two (2) samples were collected from each boring. The 6" soil interval was sampled from each 2.5'-3.0' and 3.5'-4.0' vertical depth. Initially, samples collected from the 2.5'-3.0' were analyzed for Target Compound List (TCL) organic pesticides. Samples collected from the 3.5'-4.0' were placed on hold pending the results of the shallower soil sample interval.

Overall, a total of 13 soil samples were analyzed, including one (1) QA/QC duplicate (S-6DD).

Soil Sample Results

Laboratory analysis of the site's soil identified pesticide concentrations above the most stringent NJDEP standards in samples S-6C and S-7C collected at a depth of 2.5'-3.0' in the central-eastern portion of the property. Specifically, the pesticides analysis identified alpha-chlordane, gamma-chlordane and dieldrin above their respective IGWSSL in sample S-6C. Alpha-chlordane and gamma-chlordane were also detected in sample S-7C at concentrations exceeding their respective RDCSRS. Total chlordane was detected in both samples S-6C and S-7C at concentrations exceeding the RDCSRS.

Since samples S-6C and S-7C exhibited pesticide concentrations exceeding NJDEP standards, Boswell instructed the laboratory to activate the contingent analysis on samples S-6D and S-7D which were collected from the 3.5'-4.0' depth interval. The laboratory did not report the presence of pesticides in either sample above the applicable regulatory standards.

Duplicate Sample - Soil

Sample S-6DD, a duplicate of soil sample S-6D was also analyzed for pesticides. The laboratory results were similar in concentration.

5. Conclusion & Recommendations

Petroleum Contamination

The petroleum contamination remaining on the property appears to be relatively minor. In speaking with the site's LSRP we learned that petroleum impacted soil remains beneath the existing office building, however only at concentrations exceeding the IGWSSL. Additionally, groundwater contaminants remain above the NJDEP's GQC in only one (1) of the site's monitoring wells located at the property's northeast corner.

Boswell recommends coordinating any future remedial work with the responsible party (RP) and Arcadis. For example, if the site will be redeveloped the remaining soil contamination can be excavated following the building's demolition. Additionally since it appears that no progress has been made since 2011 we also recommend maintaining more frequent contact with the RP and Arcadis to perhaps hasten the remediation's progress.

Pesticide Contamination

Based upon the sampling results, Boswell concludes that the site's pesticide contamination has been both horizontally and vertically delineated. Horizontally, the pesticide contamination extends to the property boundaries and vertically it does not extend past depths greater than 3.5'-4.0' bgs.

There are essentially three (3) options regarding the pesticide remediation, the first two (2), excavation and disposal or soil blending remediate the property to an unrestricted-use standard. The third, capping, remediates the site to a restricted-use standard.

The first option is excavation and off-site disposal. Approximately 5,700-cubic yards (9,000-tons) of pesticide contaminated soil would require excavation and disposal. Certified

clean fill must then be brought in to backfill the excavation. We estimate the cost to excavate, transport dispose and backfill the excavation to be approximately \$1 million. It should be noted that chlordane is considered an immobile contaminant therefore the actual excavation depths (and associated costs) may be less.

A second option involves soil blending as an alternative to excavation and disposal. When historic pesticide contamination is encountered the NJDEP allows blending of the contaminated soil with clean soil found onsite, or brought in from elsewhere. This option could potentially be less expensive than excavation and disposal however the exact cost is predicated upon the success of the blending operation. When the soil is blended it is necessary to collect confirmation samples. If the sample results are not below the NJDEP's standards additional blending and sampling is required. It has been our experience on some sites that although initially less expensive, the extra work involved may exceed the original estimated costs. If the client would like to explore this option we can provide a cost estimate however it should be understood that there will be a greater degree of uncertainty with the estimate.

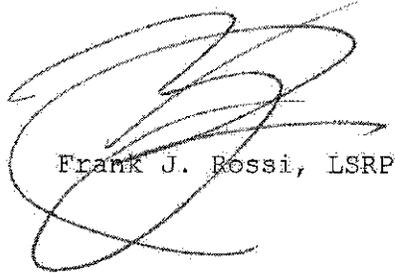
A third option is to remediate the site to a restricted-use standard by implementing institutional (deed notice) and engineering (cap) controls. The cap can either be clean fill or a proposed development. If a clean fill cap is chosen, approximately 6" to 1' of material is brought in to cap the pesticide contaminated soil. Similarly if a development is proposed for the site, the contaminated soil is excavated to the depths required by the design and properly disposed. The site is then capped with the proposed improvements including building slabs, parking lots and landscaped areas. This remedial method is fairly common; however it does involve some perpetual reporting requirements. For example, the cap must be inspected yearly and repaired/replaced as necessary. Additionally, a LSRP must be hired to perform a biennial inspection and submit the requisite reports to the NJDEP. Lastly, there are also initial and yearly permit fees associated with the Remedial Action Permit for Soils.

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August 3, 2015
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We thank you for the opportunity of performing your environmental work and should you have any questions or require anything further, please do not hesitate to contact me.

Very truly yours,

BOSWELL ENGINEERING

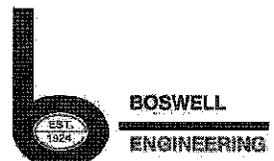


Frank J. Rossi, LSRP

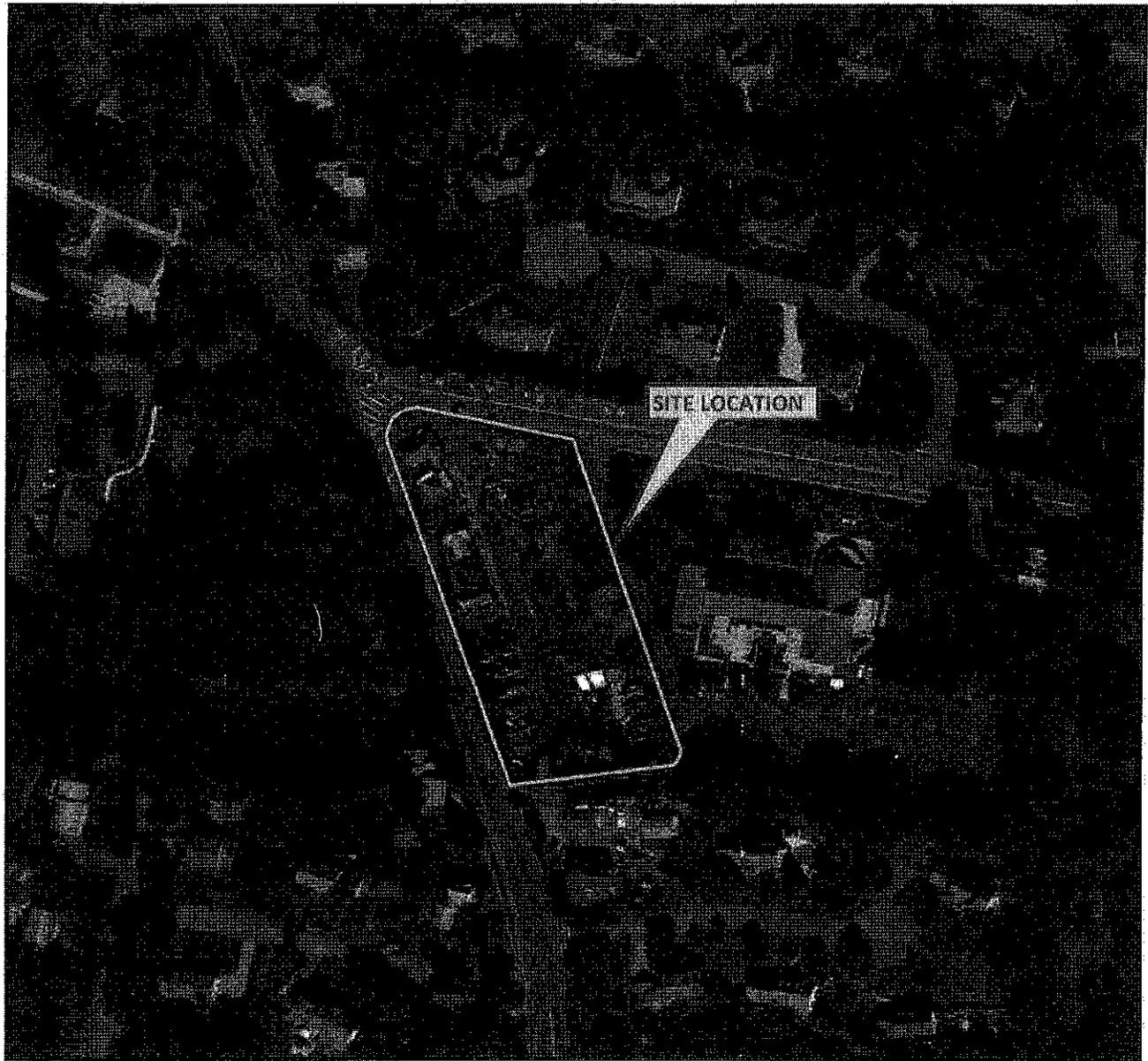
FJR/cr
Attachments

cc: Linda M. Herlihy, Esq.
Matthew A. Karmel, Esq.

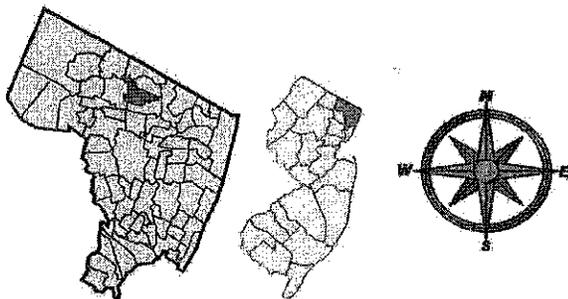
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ATTACHMENT A
Site Location Map



Source: Google Earth



b BOSWELL McCLAVE ENGINEERING 330 PHILLIPS AVE., SOUTH HACKENSACK, N.J. 07606		
GALAXY GARDENS 223 WOODCLIFF AVENUE. BLOCK 1402 LOT 7 BOROUGH OF WOODCLIFF LAKE		
BERGEN COUNTY		NEW JERSEY
NJDEP FI NO. 009294		NJDEP CASE NO. 96-05-07-1620-44
DR. BY: NAD	SCALE: NTS	JOB NO. WL-942
CKD. BY: FJR	DATE: JULY 2015	AERIAL

ATTACHMENT B
Sample Location Map



LEGEND:
 ○ S-# LANGAN SOIL SAMPLE LOCATION
 □ S-# BOSWELL SOIL SAMPLE LOCATION

NO.	DATE	DESCRIPTION	FUNCTION	DATE	REVISION

BOSWELL McCLAVE ENGINEERING
 ENGINEERS - SURVEYORS - PLANNERS - SCIENTISTS
 300 WILSON AVENUE SOUTH FARM (201) 424-1800
 174 CRESTVIEW AVENUE, SUITE 200, SOUTH BRUNSWICK, NJ 08853-5000

SOIL SAMPLE LOCATION PLAN
 223 WOODCLIFF AVENUE
 BOROUGH OF WOODCLIFF LAKE
 BLOCK 1402 LOT 7
 BERGEN COUNTY NEW JERSEY
 DRAWN BY: JAC DATE: 10/20/08
 CHECKED BY: JAC DATE: 10/20/08
 DATE: 10/20/08
 SHEET NO. 1 OF 1
 SCALE: 1" = 100'

ATTACHMENT C
Pesticide Vertical Delineation Plan



LEGEND:

-  BOSWELL SOIL SAMPLE LOCATION
-  LANGAN SOIL SAMPLE LOCATION
-  NO PESTICIDES EXCEEDED
-  PESTICIDES EXCEEDED 1.0' BGS
-  PESTICIDE ASSUMED DEPTH
-  PESTICIDES EXCEEDED 2.0' BGS
-  PESTICIDES EXCEEDED 3.5' BGS

NOTE: NO PESTICIDES EXCEEDED 4.0' BGS

NO.	DATE	DESCRIPTION	PROJECT	DATE	PROJECT

Boswell McClave ENGINEERING

ENGINEERS SURVEYORS PLANNERS SCIENTISTS
 330 WALL ST. 4TH FL. N. J. 07030
 TEL: (201) 641-0770 • FAX: (201) 641-1831
 REG. STATE OF NEW JERSEY NO. 247578500

PESTICIDE VERTICAL DELINEATION PLAN
 223 WOODCLIFF AVENUE
 BOROUGH OF WOODCLIFF LAKE

LOT 7
 NEW JERSEY
 APR 22 10 42 AM '94
 DATE

DESIGNED BY: []
 CHECKED BY: []
 DATE: []

DATE PLOTTED: 01-11-94
 PLOT NO: WL-942-PEST
 SCALE: C

ATTACHMENT D

Analytical Result Summary Tables

Boswell Sampling

ANALYTICAL RESULT SUMMARY TABLE
SOIL SAMPLING - BOSWELL REMEDIAL INVESTIGATION

GALAXY GARDENS
 223 WOODCLIFF AVENUE
 WOODCLIFF LAKE, BERGEN COUNTY, NEW JERSEY
 - OUR FILE NO. WL-942

Sample Number	S-2C	S-3C	S-4C	S-5C	S-6C	S-9D	S-7C	S-7D	S-8C	S-11C	S-12C	S-14C
Lab ID	J887979-1	J887979-3	J887979-5	J887979-7	J887979-10	J887979-11R	J887979-12	J887979-13R	J887979-14	J887979-16	J887979-18	J887979-20
Sampling Date	6/29/2015	6/29/2015	6/29/2015	6/29/2015	6/29/2015	6/29/2015	6/29/2015	6/29/2015	6/29/2015	6/29/2015	6/29/2015	6/29/2015
Matrix	Soil											
Depth	2.5'-3.0'	2.5'-3.0'	2.5'-3.0'	2.5'-3.0'	2.5'-3.0'	2.5'-4.0'	2.5'-3.0'	3.5'-4.0'	2.5'-3.0'	2.5'-3.0'	2.5'-3.0'	2.5'-3.0'
PID	0 ppm											
Sampler	SG											
Sampling Time	8:18	10:15	9:25	10:45	9:50	9:35	9:35	9:40	9:05	8:50	10:35	10:25
Units	mg/kg (ppm)											
Analytical Parameters												
Permittives (TCL Pect)												
Aroclor	ND											
alpha-BHC	ND											
beta-BHC	ND											
delta-BHC	ND											
gamma-Chlorane	ND	0.072	ND	0.019	0.030	0.001	0.030	ND	ND	ND	ND	ND
gamma-Chlorane	ND	0.008	ND	0.0064*	0.011	0.0079	0.0079	ND	ND	ND	ND	0.0066*
trans-Nonachlor	ND	0.0152	ND	0.0254	0.030	0.0018	0.0018	ND	ND	ND	ND	0.0052*
trans-Nonachlor	ND	ND	ND	ND	0.0001	ND	ND	ND	ND	ND	ND	0.0098
4,4'-DDE	ND	ND	ND	ND	0.0068	ND	0.0701	ND	0.0154	ND	ND	0.144
4,4'-DDE	0.0028	0.244*	ND	0.0204	0.0739	ND	0.154	0.003	0.0196	ND	0.0046	0.356**
Endrin	ND	0.0573	ND	0.0528	0.0346*	ND	0.0446	ND	0.0036*	ND	ND	0.0739
Endosulfan sulfate	ND											
Endrin aldehyde	ND											
Endosulfan I	ND											
Endosulfan II	ND											
Heptachlor	ND											
Heptachlor epoxide	ND											
Methoxychlor	ND											
Endrin ketone	ND	ND	ND	ND	0.0082	ND	0.0704*	ND	ND	ND	ND	ND
Toxaphene	ND											
General Chemistry												
Percent Solids	88.7%	85.9%	86.2%	71.2%	87.9%	89.5%	88.1%	85.9%	85.0%	87.2%	87.2%	83.9%

NOTES:
 RDC = NJDEP Residential Direct Contact Soil Remediation Standard
 NRDC = NJDEP Non-Residential Direct Contact Soil Remediation Standard
 IGWSSL = Impact to Groundwater Soil Screening Level
 EOC = Exceeds NJDEP RDC/SRS
 EOC = Exceeds NJDEP IGWSSL
 * = Reported from 2nd signal
 ** = More than 40% RPD for detected concentrations between the two GC columns
 PID = Photolysis Detector
 * = Remediation Standard Not Established
 ND = Not Detected
 mg/kg = milligrams per kilogram = ppm = parts per million

Langan Sampling

ANALYTICAL RESULT SUMMARY TABLE

SOIL SAMPLING - LANGAN

GALAXY GARDENS
223 WOODCLIFF AVENUE
WOODCLIFF LAKE, BERGEN COUNTY, NEW JERSEY
OUR FILE No. WL-942

Sample Number	S-1A	S-1B	S-2A	S-2B	S-3A	S-3B	S-4A	S-4B	S-5A	S-5B
Lab ID	AG79553-001	AG79553-002	AG79553-003	AG79553-004	AG79553-005	AG79553-006	AG79553-007	AG79553-008	AG79553-009	AG79553-010
Sampling Date	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Depth	1.0'-1.5'	1.0'-1.5'	0.0'-0.5'	1.0'-1.5'	0.0'-0.5'	1.0'-1.5'	0.0'-0.5'	1.0'-1.5'	0.0'-0.5'	1.0'-1.5'
Units	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)
Analytical Parameter										
TAL Metals										
Arsenic	4.9	5.4	4.7	ND	5.5	ND	5.7	11	ND	5.2
Lead	5.2	6.8	18	45	28	30	15	66	11	35
Pesticides (TCL Pest)										
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC	ND	ND	ND	ND (0.0056)	ND	ND (0.0057)	ND	ND	ND	ND
beta-BHC	ND	ND	ND	ND (0.0056)	ND	ND (0.0057)	ND	ND	ND	ND
delta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC (Lindane)	ND	ND	ND	ND (0.0056)	ND	ND (0.0057)	ND	ND	ND	ND
total-Chlordane	ND	ND	0.21	0.34	1	0.2 *	ND	0.11	0.033	1.1
Dieldrin	ND	ND	0.0019 ^d	ND (0.0056)	0.0025 ^d	ND (0.0057)	ND	ND	ND	0.11
4,4'-DDD	ND	ND	0.0058	0.021	0.034	0.21	ND	0.023	0.008	0.041
4,4'-DDE	ND	0.008	0.0089	0.021	0.066	0.34	ND	0.069	0.0062	0.073
4,4'-DDT	ND	0.014	0.0030 ^d	ND	0.0042 ^d	0.644	ND	0.013	ND	0.0043 ^d
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-II	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	ND	ND	ND	ND (0.028)	ND	ND (0.029)	ND	ND	ND	ND
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Chemistry										
Percent Solids	94%	94%	87%	89%	83%	87%	97%	87%	92%	91%

NOTES:
 RDC = NJDEP Residential Direct Contact Soil Remediation Standard
 NRDC = NJDEP Non-Residential Direct Contact Soil Remediation Standard
 IGWSSL = Impact to Groundwater Soil Screening Level
 () = Exceeds NJDEP RDC/SRS
 d = Exceeds NJDEP IGWSSL
 * = Concentration between primary and secondary columns is greater than 40% the lower concentration, is generally reported as the lower concentration.
 - = Remediation Standard Not Established
 ND = Not detected
 mg/kg = milligrams per kilogram = ppm = parts per million
 ND () = Not Detected, Laboratory RL exceeds IGWSSL
 * = Rounded down to significant figures

ANALYTICAL RESULT SUMMARY TABLE

SOIL SAMPLING - LANGAN

GALAXY GARDENS
223 WOODCLIFF AVENUE
WOODCLIFF LAKE, BERGEN COUNTY, NEW JERSEY
OUR FILE No. WL-842

Sample Number	S-6A	S-6B	S-7A	S-7B	S-8A	S-8B	S-9A	S-9B	S-10A	S-10B	NUDEP Soil Remediation Standards		
Lab. ID	AC79553-011	AC79553-012	AC79553-013	AC79553-014	AC79553-015	AC79553-016	AC79553-017	AC79553-018	AC79553-019	AC79553-020	RDC	NRDC	IGWSSL
Sampling Date	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	19	13	19
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	400	800	800
Depth	0.0-0.8'	1.0-1.5'	0.0-0.5'	1.0-1.8'	0.0-0.5'	1.0-1.5'	0.0-0.5'	1.0-1.5'	0.0-0.5'	1.0-1.5'			
Units	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)			
Analytical Parameter													
TAL Metals													
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.2	19	19
Lead	12	30	42	35	8.6	11	7.7	ND	ND	ND	400	800	800
Pesticides (TCL Past)													
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.04	0.2	0.2
alpha-BHC	ND	ND (0.0036)	ND	ND	ND	ND (0.0054)	ND	ND	ND	ND	0.1	0.5	0.002
beta-BHC	ND	ND (0.0056)	ND	ND	ND	ND (0.0054)	ND	ND	ND	ND	0.4	2	0.002
delta-BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
gamma-BHC (Lindane)	ND	ND (0.0056)	ND	ND	ND	ND (0.0054)	ND	ND	ND	ND	0.4	2	0.002
Total-Chlordane	0.05 *	2.5	0.12	2.3	ND	0.26	ND	ND	ND	ND (0.15)	0.2	1	0.05
Dieldrin	0.0094	ND (0.0068)	ND	ND	ND	ND	ND	ND	ND	ND	0.04	0.2	0.003
4,4'-DDD	0.02	0.1	0.0954	0.019 ^d	ND	ND	0.0045	ND	ND	ND	3	13	4
4,4'-DDE	0.027	0.17	0.91	0.073	ND	0.014	0.0056 ^d	ND	0.007	0.27	2	9	18
4,4'-DDT	0.022	0.016 ^d	ND	ND	ND	ND	ND	ND	ND	0.071	2	8	11
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	23	340	1
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	470	6,800	2
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Endosulfan-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Endosulfan-II	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	470	6,800	4
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	470	6,800	4
Heptachlor epoxide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1	0.7	0.5
Methoxychlor	ND	ND (0.028)	ND	ND	ND	ND (0.027)	ND	ND	ND	ND (0.03)	0.07	0.3	0.01
Endrin ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	390	5,700	160
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
General Chemistry													
Percent Solids	73%	88%	76%	91%	97%	93%	74%	91%	75%	83%			

NOTES:

RDC = NJDEP Residential Direct Contact Soil Remediation Standard
 NRDC = NJDEP Non-Residential Direct Contact Soil Remediation Standard
 IGWSSL = Impact to Groundwater Soil Screening Level
 ND = Not detected
 * = Remediation Standard Not Established
 ND = Not detected
 mg/kg = milligrams per kilogram = ppm = parts per million
 ND () = Not Detected, Laboratory RL exceeds IGWSSL
 * = Rounded down to significant figures

ANALYTICAL RESULT SUMMARY TABLE

SOIL SAMPLING - LANGAN

GALAXY GARDENS
223 WOODCLIFF AVENUE
WOODCLIFF LAKE, BERGEN COUNTY, NEW JERSEY
OUR FILE NO. WL-942

Sample Number	S-11A	S-11B	S-12A	S-12B	S-13A	S-13B	S-14A	S-14B	S-15A	S-15B
Lab ID	AC79553-021	AC79553-022	AC79553-023	AC79553-024	AC79553-025	AC79553-026	AC79553-027	AC79553-028	AC79553-029	AC79553-030
Sampling Date	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014	7/8/2014
Matrix	Soil									
Depth	0.0-0.5'	1.0-1.5'	0.0-0.5'	1.0-1.5'	0.0-0.5'	1.0-1.5'	0.0-0.5'	1.0-1.5'	0.0-0.5'	1.0-1.5'
Units	mg/kg (ppm)									
Analytical Parameter										
TAL Metals										
Arsenic	9.4	ND	6.7	8.4	5	10	5	ND	ND	ND
Lead	14	16	7.7	61	15	77	12	22	9.4	27
Pesticides (TCL Post)										
Aldrin	ND	ND	ND	ND (0.038)	ND	ND (0.06)	ND	ND	ND	ND
alpha-BHC	ND	ND	ND (0.0057)	ND (0.012)	ND	ND (0.012)	ND	ND	ND	ND
beta-BHC	ND	ND	ND (0.0057)	ND (0.012)	ND	ND (0.012)	ND	ND	ND	ND
delta-BHC	ND									
gamma-BHC (Lindane)	ND	ND	ND (0.0057)	ND (0.012)	ND	ND	ND	ND	ND	ND
total-Chlordane	ND	0.14	ND (0.14)	0.57	0.68	0.74	ND	0.13	ND	ND
Dieldrin	ND	ND	ND (0.0057)	ND (0.012)	ND	ND (0.012)	ND	ND	ND	ND
4,4'-DDD	ND	0.02	0.038	1.1	ND	0.93	ND	0.041	ND	ND
4,4'-DDE	ND	0.11	0.058	1.5	ND	0.52	0.0099	0.098	ND	ND
4,4'-DDT	ND	ND	ND	0.34	ND	0.11	ND	0.024	ND	ND
Endrin	ND									
Endosulfan sulfate	ND	ND	0.041	ND						
Endrin aldehyde	ND									
Endosulfan-I	ND									
Endosulfan-II	ND									
Heptachlor	ND									
Heptachlor epoxide	ND	ND	ND (0.029)	ND (0.066)	ND	ND (0.06)	ND	ND	ND	ND
Methoxychlor	ND									
Endrin ketone	ND									
Toxaphene	ND									
General Chemistry										
Percent Solids	88%	82%	87%	86%	91%	83%	90%	86%	85%	93%

NOTES:
 RDC = NJDEP Residential Direct Contact Soil Remediation Standard
 NRDC = NJDEP Non-Residential Direct Contact Soil Remediation Standard
 IGWSSL = Impact to Groundwater/Soil Screening Level
 Exceeds = Exceeds NJDEP RDC/SRS
 Exceeds IGWSSL = Exceeds NJDEP IGWSSL
 - = Remediation Standard Not Established
 ND = Not detected
 mg/kg = milligrams per kilogram = ppm = parts per million
 ND () = Not Detected, Laboratory RL exceeds SRS

ATTACHMENT E
Soil Boring Logs

Boring No	S-2	BORING LOG		Sketch
Project	Galaxy Gardens	Location	223 Woodcliff Avenue Woodcliff Lake, New Jersey	See Sample Location Map
Drilling Contractor	Active Environmental Technologies Inc.	Date	6/26/2015	
Drilling Equipment	7822DT Geoprobe	Method	Direct Push	Personnel SG
Well Install	No	Construction	-	PID (Background) 0
Remarks Sample S-2C was collected from 2.5'-3.0' bgs at 9:15. Sample S-2D was collected from 3.5'-4.0' bgs at 9:20.				

Depth (ft)	PID (ppm)	DESCRIPTION	Sample No.	REMARKS
1'	0	Red/Tan Coarse Sand w/ Gravel		
2'	0	Tan Coarse Sand w/ Gravel		
3'	0	Tan/Gray Silty Clay	S-2C	Some Organics
4'	0		S-2D	
5'		End of Boring		
6'				
7'				
8'				
9'				
10'				
11'				
12'				
13'				
14'				
15'				
16'				
17'				
18'				
19'				
20'				

Boring No	S-3	BORING LOG		Sketch
Project	Galaxy Gardens	Location	223 Woodcliff Avenue Woodcliff Lake, New Jersey	See Sample Location Map
Drilling Contractor	Active Environmental Technologies Inc.	Date	6/26/2015	
Drilling Equipment	7822DT Geoprobe	Method	Direct Push	Personnel SG
Well Install	No	Construction	-	PID (Background) 0
Remarks	Sample S-3C was collected from 2.5'-3.0' bgs at 10:15. Sample S-3D was collected from 3.5'-4.0' bgs at 10:20.			

Depth (ft)	PID (ppm)	DESCRIPTION	Sample No.	REMARKS
1'	0	Red/Gray Coarse Sand w/ Gravel		
2'	0	Gray Coarse Sand w/ Gravel		
3'	0	Gray Silty Clay	S-3C	
4'	0	Gray/Red Sandy Clay	S-3D	
5'		End of Boring		
6'				
7'				
8'				
9'				
10'				
11'				
12'				
13'				
14'				
15'				
16'				
17'				
18'				
19'				
20'				

Boring No	S-4	BORING LOG		Sketch
Project	Galaxy Gardens	Location	223 Woodcliff Avenue Woodcliff Lake, New Jersey	See Sample Location Map
Drilling Contractor	Active Environmental Technologies Inc.	Date	6/26/2015	
Drilling Equipment	7822DT Geoprobe	Method	Direct Push	Personnel SG
Well Install	No	Construction	-	PID (Background) 0
Remarks	Sample S-4C was collected from 2.5'-3.0' bgs at 9:25. Sample S-4D was collected from 3.5'-4.0' bgs at 9:30.			

Depth (ft)	PID (ppm)	DESCRIPTION	Sample No.	REMARKS
1'	0	Red/Gray Coarse Sand w/ Gravel		
2'	0	Brown Coarse Sand w/ Gravel		Organics/Roots
3'	0	Tan Silty Clay	S-4C	
4'	0		S-4D	
5'		End of Boring		
6'				
7'				
8'				
9'				
10'				
11'				
12'				
13'				
14'				
15'				
16'				
17'				
18'				
19'				
20'				

Boring No	S-5	BORING LOG		Sketch
Project	Galaxy Gardens	Location	223 Woodcliff Avenue Woodcliff Lake, New Jersey	See Sample Location Map
Drilling Contractor	Active Environmental Technologies Inc.	Date	6/26/2015	
Drilling Equipment	7822DT Geoprobe	Method	Direct Push	Personnel SG
Well Install	No	Construction	-	PID (Background) 0
Remarks	Sample S-5C was collected from 2.5'-3.0' bgs at 10:45. Sample S-5D was collected from 3.5'-4.0' bgs at 10:50.			

Depth (ft)	PID (ppm)	DESCRIPTION	Sample No.	REMARKS
1'	0	Brown/ Tan Coarse Sand w/ Gravel		
2'	0			
3'	0	Brown Sandy Clay	S-5C	
4'	0	Gray Sandy Clay w/ Gravel	S-5D	
5'		End of Boring		
6'				
7'				
8'				
9'				
10'				
11'				
12'				
13'				
14'				
15'				
16'				
17'				
18'				
19'				
20'				

Boring No	S-6		BORING LOG		Sketch
Project	Galaxy Gardens		Location	223 Woodcliff Avenue Woodcliff Lake, New Jersey	
Drilling Contractor	Active Environmental Technologies Inc.		Date	6/26/2015	
Drilling Equipment	7822DT Geoprobe		Method	Direct Push	Personnel SG
Well Install	No	Construction	-		PID (Background) 0
Remarks	Sample S-6C was collected from 2.5'-3.0' bgs at 9:50. Sample S-6D was collected from 3.5'-4.0' bgs at 9:55.				

Depth (ft)	PID (ppm)	DESCRIPTION	Sample No.	REMARKS
1'	0	Gray Coarse Sand w/ Gravel		Some Asphalt
2'	0			
3'	0	Dark Gray Coarse Sand w/ Gravel	S-6C	
4'	0	Tan Sandy/Silty Clay	S-6D/DD	
5'		End of Boring		
6'				
7'				
8'				
9'				
10'				
11'				
12'				
13'				
14'				
15'				
16'				
17'				
18'				
19'				
20'				

Boring No	S-7		BORING LOG		Sketch
Project	Galaxy Gardens	Location	223 Woodcliff Avenue Woodcliff Lake, New Jersey		See Sample Location Map
Drilling Contractor	Active Environmental Technologies Inc.	Date	6/26/2015		
Drilling Equipment	7822DT Geoprobe	Method	Direct Push		Personnel SG
Well Install	No	Construction	-		PID (Background) 0
Remarks	Sample S-7C was collected from 2.5'-3.0' bgs at 9:35. Sample S-7D was collected from 3.5'-4.0' bgs at 9:40.				

Depth (ft)	PID (ppm)	DESCRIPTION	Sample No.	REMARKS
1'	0	Red Coarse Sand w/ Gravel		
2'	0	Gray Coarse Sand w/ Gravel		
3'	0		S-7C	
4'	0	Tan Silty Clay	S-7D	
5'		End of Boring		
6'				
7'				
8'				
9'				
10'				
11'				
12'				
13'				
14'				
15'				
16'				
17'				
18'				
19'				
20'				

Boring No	S-8	BORING LOG		Sketch
Project	Galaxy Gardens	Location	223 Woodcliff Avenue Woodcliff Lake, New Jersey	See Sample Location Map
Drilling Contractor	Active Environmental Technologies Inc.	Date	6/26/2015	
Drilling Equipment	7822DT Geoprobe	Method	Direct Push	Personnel SG
Well Install	No	Construction	-	PID (Background) 0
Remarks	Sample S-8C was collected from 2.5'-3.0' bgs at 9:05. Sample S-8D was collected from 3.5'-4.0' bgs at 9:10.			

Depth (ft)	PID (ppm)	DESCRIPTION	Sample No.	REMARKS
1'	0.5	Red/Gray Coarse Sand w/ Gravel		
2'	0	Gray Coarse Sand w/ Gravel		
3'	0	Gray Silty Clay	S-8C	
4'	0	Gray/Tan Coarse Sand w/ Gravel	S-8D	
5'		End of Boring		
6'				
7'				
8'				
9'				
10'				
11'				
12'				
13'				
14'				
15'				
16'				
17'				
18'				
19'				
20'				

Boring No	S-11		BORING LOG		Sketch
Project	Galaxy Gardens		Location	223 Woodcliff Avenue Woodcliff Lake, New Jersey	
Drilling Contractor	Active Environmental Technologies Inc.		Date	6/26/2015	
Drilling Equipment	7822DT Geoprobe		Method	Direct Push	Personnel SG
Well Install	No	Construction			PID (Background) 0
Remarks	Sample S-11C was collected from 2.5'-3.0' bgs at 8:50. Sample S-11D was collected from 3.5'-4.0' bgs at 8:55.				

Depth (ft)	PID (ppm)	DESCRIPTION	Sample No.	REMARKS
1'	70	Red Coarse Sand w/ Gravel		
2'	22	Gray Coarse Sand w/ Gravel		
3'	1.4	Gray Silty Clay	S-11C	
4'	1.2	Gray/Tan Coarse Sand w/ Gravel	S-11D	
5'		End of Boring		
6'				
7'				
8'				
9'				
10'				
11'				
12'				
13'				
14'				
15'				
16'				
17'				
18'				
19'				
20'				

Boring No	S-12	BORING LOG		Sketch
Project	Galaxy Gardens	Location	223 Woodcliff Avenue Woodcliff Lake, New Jersey	See Sample Location Map
Drilling Contractor	Active Environmental Technologies Inc.	Date	6/26/2015	
Drilling Equipment	7822DT Geoprobe	Method	Direct Push	Personnel SG
Well Install	No	Construction	-	PID (Background) 0
Remarks	Sample S-12C was collected from 2.5'-3.0' bgs at 10:35. Sample S-12D was collected from 3.5'-4.0' bgs at 10:40.			

Depth (ft)	PID (ppm)	DESCRIPTION	Sample No.	REMARKS
1'	0	Red Coarse Sand w/ Gravel		
2'	0	Gray Coarse Sand w/ Gravel		
3'	0	Tan/Brown Sandy Clay	S-12C	
4'	0		S-12D	
5'		End of Boring		
6'				
7'				
8'				
9'				
10'				
11'				
12'				
13'				
14'				
15'				
16'				
17'				
18'				
19'				
20'				

Boring No	S-14		BORING LOG		Sketch
Project	Galaxy Gardens		Location	223 Woodcliff Avenue Woodcliff Lake, New Jersey	
Drilling Contractor	Active Environmental Technologies Inc.		Date	6/26/2015	
Drilling Equipment	7822DT Geoprobe		Method	Direct Push	Personnel SG
Well Install	No	Construction	-		PID (Background) 0
Remarks	Sample S-14C was collected from 2.5'-3.0' bgs at 10:25. Sample S-14D was collected from 3.5'-4.0' bgs at 10:30.				

Depth (ft)	PID (ppm)	DESCRIPTION	Sample No.	REMARKS
1'	0	Red/Gray Coarse Sand w/ Gravel		
2'	0	Gray Coarse Sand w/ Gravel		Organics/Roots
3'	0		S-14C	
4'	0	Gray Sandy Clay	S-14D	
5'		End of Boring		
6'				
7'				
8'				
9'				
10'				
11'				
12'				
13'				
14'				
15'				
16'				
17'				
18'				
19'				
20'				

ATTACHMENT F

Sampling Photodocumentation



CLIENT NAME:
Borough of Woodcliff Lake

SITE LOCATION:
223 Woodcliff Ave, Woodcliff Lake, New Jersey 07677

PROJECT NAME:
Galaxy Gardens

PROJECT No.:
WL-942

Photo No. 1.

Description:

Soil boring S-4. Soil cores were collected in 4' intervals and field screened at 1' intervals with a photoionization detector (PID).



Photo No. 2.

Description:

Soil boring S-5 advanced in the northeast corner of the site, along Woodcliff Avenue.





CLIENT NAME:
Borough of Woodcliff Lake

SITE LOCATION:
223 Woodcliff Ave, Woodcliff Lake, New Jersey 07677

PROJECT NAME:
Galaxy Gardens

PROJECT No.:
WL-942

Photo No. 3.

Description:

Soil boring S-7. The 6" soil interval was sampled from each 2.5'-3.0' and 3.5'-4.0' vertical depth.



Photo No. 4.

Description:

Soil boring S-9 advanced at the central-eastern portion of the subject property.





CLIENT NAME: Borough of Woodcliff Lake	SITE LOCATION: 223 Woodcliff Ave, Woodcliff Lake, New Jersey 07677	PROJECT NAME: Galaxy Gardens	PROJECT No.: WL-942
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Photo No. 5

Description:

Soil boring S-14.

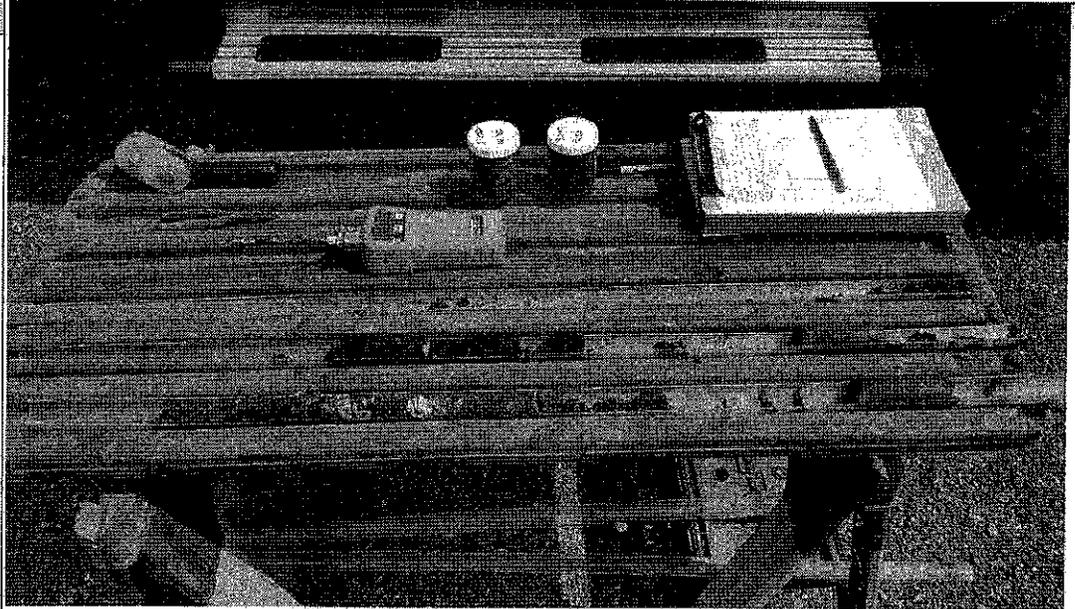


Photo No. 6

Description:

Soil boring S-14 advanced between borings S-5 and S-9, along the eastern portion of the site.



ATTACHMENT G

***Quality Assurance/Quality Control Summary
Table***

QA/QC SUMMARY TABLE

SOIL SAMPLING - REMEDIAL INVESTIGATION

GALAXY GARDENS
223 WOODCLIFF AVENUE
WOODCLIFF LAKE, BERGEN COUNTY, NEW JERSEY
OUR FILE No. WL-942

Sample Number	S-6D	S-6DD
Lab ID	JB97979-11R	JB97979-11RA
Sampling Date	6/26/2015	6/26/2015
Matrix	Soil	Soil
Depth	3.5'-4.0'	3.5'-4.0'
PID	0 ppm	0 ppm
Sampler	SG	SG
Sampling Time	9:55	10:00
Units	mg/kg (ppm)	mg/kg (ppm)
Analytical Parameter		
Pesticides (TCL Pest)		
Aldrin	ND	ND
alpha-BHC	ND	ND
beta-BHC	ND	ND
delta-BHC	ND	ND
gamma-BHC (Lindane)	ND	ND
alpha-Chlordane	0.001	0.0019 ^a
gamma-Chlordane	0.00079	0.00089 ^b
total-Chlordane	0.0018	0.0028
Dieldrin	ND	ND
4,4'-DDD	ND	ND
4,4'-DDE	ND	0.0009
4,4'-DDT	ND	ND
Endrin	ND	ND
Endosulfan sulfate	ND	ND
Endrin aldehyde	ND	ND
Endosulfan-I	ND	ND
Endosulfan-II	ND	ND
Heptachlor	ND	ND
Heptachlor epoxide	ND	ND
Methoxychlor	ND	ND
Endrin ketone	ND	ND
Toxaphene	ND	ND

NOTES:

^a = More than 40 % RPD for detected concentrations between the two GC columns

PID = Photoionization Detector

ND = Not detected

mg/kg = milligrams per kilogram = ppm = parts per million

ATTACHMENT H

Sample Summary Table

SOIL SAMPLE SUMMARY TABLE

GALAXY GARDENS

223 WOODCLIFF AVENUE
WOODCLIFF LAKE, BERGEN COUNTY, NEW JERSEY
OUR FILE No. WL-942

Boring Number	Sample Number	Date Collected	Depth of Sample (bgs)	Total Boring Depth (bgs)	GW Depth (bgs)	Maximum PID Reading (ppm) Above Background	Analytical Parameters
Soil							
S-2	S-2C	06/26/15	2.5'-3.0'	4'	NE	0	Pesticides, Pb, As
S-3	S-3C	06/26/15	2.5'-3.0'	4'	NE	0	Pesticides, Pb, As
S-4	S-4C	06/26/15	2.5'-3.0'	4'	NE	0	Pesticides, Pb, As
S-5	S-5C	06/26/15	2.5'-3.0'	4'	NE	0	Pesticides, Pb, As
S-6	S-6C	06/26/15	2.5'-3.0'	4'	NE	0	Pesticides, Pb, As
S-6	S-6D	06/26/15	3.5'-4.0'	4'	NE	0	Pesticides, Pb, As
S-6	S-6DD*	06/26/15	3.5'-4.0'	4'	NE	0	Pesticides, Pb, As
S-7	S-7C	06/26/15	2.5'-3.0'	4'	NE	0	Pesticides, Pb, As
S-7	S-7D	06/26/15	3.5'-4.0'	4'	NE	0	Pesticides, Pb, As
S-8	S-8C	06/26/15	2.5'-3.0'	4'	NE	0.5	Pesticides, Pb, As
S-11	S-11C	06/26/15	2.5'-3.0'	4'	NE	70	Pesticides, Pb, As
S-12	S-12C	06/26/15	2.5'-3.0'	4'	NE	0	Pesticides, Pb, As
S-14	S-14C	06/26/15	2.5'-3.0'	4'	NE	0	Pesticides, Pb, As

NOTES:

PID = Photoionization Detector
 GW = Groundwater
 bgs = below ground surface
 ppm = parts per million
 NE = Not encountered
 * = Duplicate Sample

Pesticides = Target Compound List Pesticides
 Pb = Lead
 As = Arsenic

ATTACHMENT I

Estimated Remediation & Restoration Costs

ESTIMATED REMEDIATION & RESTORATION COSTS

GALAXY LANDSCAPING

Prepared 7/31/2015

a. Contaminated Soil Excavation*			
i.	Mobilization/Demobilization	Event	\$ 1,500.00
ii.	Soil excavation	9,000 tons x \$13.00/ton	\$ 117,000.00
iii.	Backfill & Compaction	9,000 tons x \$36.00/ton	\$ 324,000.00
iv.	Soil Erosion & Sediment Control	Event	\$ 5,000.00
		Subtotal	\$ 447,500.00
b. Contaminated Soil Disposal			
i.	Transportation & Disposal	9,000 tons x \$40.00/ton	\$ 360,000.00
		Subtotal	\$ 360,000.00
c. Lab Analysis			
i.	Post Excavation	Pesticides - 115 samples x \$90/sample	\$ 10,350.00
ii.	Waste Class	TCL/TAL (Full) - 10 samples x \$540/sample	\$ 5,400.00
		Subtotal	\$ 15,750.00
d. Engineering*			
i.	Administrative		\$ 3,000.00
ii.	Waste Classification Sampling		\$ 4,500.00
iii.	Remedial Action Oversight		\$ 15,000.00
iv.	Disposal Coordination		\$ 3,500.00
v.	Remedial Action Report, Remedial Action Workplan, & Remedial Action Outcome		\$ 20,000.00
		Subtotal	\$ 46,000.00
e. NJDEP Costs			\$ 5,000.00

Remediation Subtotal	\$	874,250.00
15% Contingency	\$	131,137.50

Estimated Total \$ 1,005,000.00

NOTES:

1. Soil Density assumed at 1.5 tons per cubic yard + 20% contingency.
2. Excavation rate assumed at 350 cy/day
3. Estimate does not include groundwater remediation.
5. Transportation and disposal of contaminated material ~ \$30.00 - \$50.00/ton
6. Engineering ~ \$30,000.00 - \$50,000.00