

Appendix I-5
Letter Report; Dump Area and Maintenance Area Sampling Results
Nelson, Pope & Voorhis, LLC
February 19, 2019



February 19, 2019

Jim Tsunis
The Northwind Group
1 Rabro Drive
Hauppauge, New York 11788

Re: Dump Area and Maintenance Area
Sampling Results
Indian Hills Golf Course, Fort Salonga
NP&V Job# 86047

Dear Mr. Tsunis:

This letter has been provided to summarize the sampling analytical results for surface soil samples collected from the backfilled parking area in the maintenance yard as well as the organic material dumping area in the eastern portion of the golf course. The location of each sample collected are depicted on **Figure 1**.

Review of the analytical results did not detect the presence of any semi-volatile organic compounds or herbicides in any of the samples collected. Several pesticides, PCBs and metals were detected in all or some of the samples collected but at concentrations below their respective Part 375 soil cleanup objectives (SCOs) for the protection of groundwater. Finally, the only volatile organic compound detected consisted of acetone and was only found in samples PA-2 and DA-1 at concentrations of 74.2 micrograms per liter (ug/l) and 76.5 ug/l, respectively. These concentrations slightly exceeded the Part 375 SCO for the protection of groundwater of 50 ug/l established for acetone. However, acetone is an extremely volatile organic compound with a relatively short-half life in nature. Based on the low levels found in the samples collected and its high volatility the concentrations detected are not expected to present a significant impact to the subject property.

A copy of the laboratory analytical results are summarized in **Table 1** and the laboratory analytical data sheets are provided in **Attachment 1**.

Very truly yours,

Nelson, Pope & Voorhis, LLC

Eric C. Arnesen, PG
Project Manager/Hydrogeologist

FIGURES

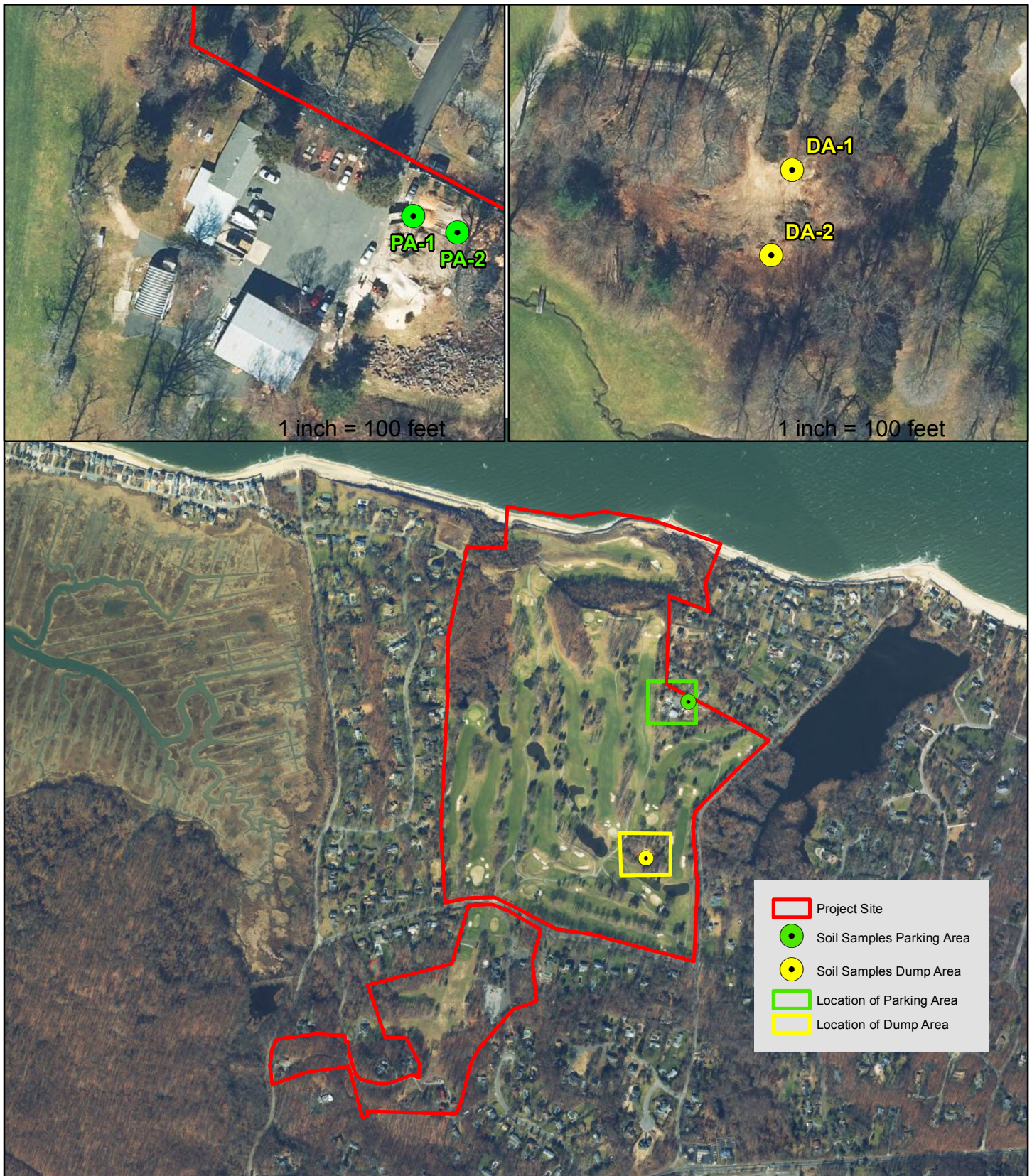


FIGURE 1
SAMPLE LOCATION MAP

Source: NYS Orthophotography, 2016
Scale: 1 inch = 1,000 feet



**The Preserve at
Indian Hills
Northport**

Limited Phase II ESA

TABLE

Table 1

Indian Hills Country Club Maintenance Area Parking Area & Golf Course Disposal Area

Sample ID	PA-1	PA-2	DA-1	DA-2	Part 375 Protection of Groundwater
Volatiles	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Acetone	ND	74.2	76.5	ND	50
Semi-volatiles	None Detected				
Pesticides	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
4,4-DDD	ND	ND	2.84	ND	14,000
4,4-DDE	22.6	30.1	ND	ND	17,000
4,4-DDT	52.8	67.8	ND	ND	136,000
cis-Chlordane	7.87	19.6	ND	ND	2,900
Endrin	6.36	ND	ND	ND	60
Herbicides	None Detected				
PCBs	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Aroclor-1260	282	379	ND	ND	3,200
Metals	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic		3.59	ND	ND	16
Barium	28.2	53.6	13.6	18.9	820
Trivalent Chromium	9.62	21.81	5.23	6.64	NS
Hexavalent Chromium	ND	1.19	ND	ND	19
Copper	10.3	38.4	4.48	4.57	1,720
Lead	7.75	37.3	5.88	9.41	450
Manganese	95.9	143	72.5	128	2,000
Nickel	3.59	12.4	3.85	6.10	130
Zinc	31	270	12.5	17.4	2,480
Mercury	0.06	0.02	0.03	0.03	0.73

ATTACHEMNT 1

**LONG
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ANALYTICAL
LABORATORIES INC.****"TOMORROWS ANALYTICAL SOLUTIONS TODAY"**Laboratory ReportNYSDOH ELAP# 11693
USEPA# NY01273
CTDOH# PH-0284
AIHA# 164456
NJDEP# NY012
PADEP# 68-2943

LIAL# 9012214

February 06, 2019

Nelson, Pope & Voorhis
Eric Arnesen
572 Walt Whitman Road
Melville, NY 11747

Re: IHCC

Dear Eric Arnesen,

Enclosed please find the laboratory Analysis Report(s) for sample(s) received on January 22, 2019. Long Island Analytical laboratories analyzed the samples on February 05, 2019 for the following:

SAMPLE ID	ANALYSIS
PA-1	NYC Part 375 Package
PA-2	NYC Part 375 Package
DA-1	NYC Part 375 Package
DA-2	NYC Part 375 Package

Samples received at 2.3 ° C

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories Inc. is a NELAP accredited laboratory. All reported results meet the requirements of the NELAP standards unless noted. Report shall not be reproduced except in full without the written approval of the laboratory. Results related only to items tested. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,

Long Island Analytical Laboratories, Inc.**Michael Veraldi - Laboratory Director**

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:30	Sample ID: PA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-01 % Solid:85.17
Matrix: Soil	ELAP: #11693

Volatiles Low Level Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1-Trichloroethane	71-55-6	5.84	<5.84	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.84	<5.84	ug/kg dry	
1,1-Dichloroethene	75-35-4	5.84	<5.84	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.84	<5.84	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.84	<5.84	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.84	<5.84	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.84	<5.84	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.84	<5.84	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.84	<5.84	ug/kg dry	
1,4-Dioxane	123-91-1	29.2	<29.2	ug/kg dry	
Acetone	67-64-1	23.3	<23.3	ug/kg dry	
Benzene	71-43-2	5.84	<5.84	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.84	<5.84	ug/kg dry	4.K
Chlorobenzene	108-90-7	5.84	<5.84	ug/kg dry	
Chloroform	67-66-3	5.84	<5.84	ug/kg dry	
cis-1,2-Dichloroethene	156-59-2	5.84	<5.84	ug/kg dry	
Ethylbenzene	100-41-4	5.84	<5.84	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	11.7	<11.7	ug/kg dry	
Methyl Ethyl Ketone (2-Butanone)	78-93-3	11.7	<11.7	ug/kg dry	
Methylene Chloride	75-09-2	5.84	<5.84	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.84	<5.84	ug/kg dry	
n-Butylbenzene	104-51-8	5.84	<5.84	ug/kg dry	
n-Propylbenzene	103-65-1	5.84	<5.84	ug/kg dry	
o-Xylene	95-47-6	5.84	<5.84	ug/kg dry	
sec-Butylbenzene	135-98-8	5.84	<5.84	ug/kg dry	
tert-Butylbenzene	98-06-6	5.84	<5.84	ug/kg dry	
Tetrachloroethene	127-18-4	5.84	<5.84	ug/kg dry	
Toluene	108-88-3	5.84	<5.84	ug/kg dry	
trans-1,2-Dichloroethene	156-60-5	5.84	<5.84	ug/kg dry	
Trichloroethene	79-01-6	5.84	<5.84	ug/kg dry	

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:30	Sample ID: PA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-01 % Solid:85.17
Matrix: Soil	ELAP: #11693

Volatiles Low Level Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Vinyl chloride	75-01-4	5.84	<5.84	ug/kg dry	4.K

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
1,2-Dichloroethane-d4	10706-07-0	185	71.6-131	4.E
4-Bromofluorobenzene	460-00-4	114	75.4-133	
Dibromofluoromethane	1868-53-7	94	75.6-135	
Toluene-d8	2037-26-5	107	79.9-123	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	58	50-200	
1,4-Difluorobenzene	540-36-3	91	50-200	
Chlorobenzene-d5	3114-55-4	68	50-200	
Pentafluorobenzene	363-72-4	134	50-200	

Date Prepared: 01/23/2019

Preparation Method: EPA 5035A-L

Date Analyzed: 01/23/2019

Analytical Method: EPA 8260 C

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:30	Sample ID: PA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-01 % Solid:85.17
Matrix: Soil	ELAP: #11693

Semivolatile Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
2-Methylphenol	95-48-7	352	<352	ug/kg dry	
3/4-Methylphenol	108-39-4/106-44-5	176	<176	ug/kg dry	
Acenaphthene	83-32-9	176	<176	ug/kg dry	
Acenaphthylene	208-96-8	176	<176	ug/kg dry	
Anthracene	120-12-7	176	<176	ug/kg dry	
Benzo(a)anthracene	56-55-3	176	<176	ug/kg dry	
Benzo(a)pyrene	50-32-8	176	<176	ug/kg dry	
Benzo(b)fluoranthene	205-99-2	352	<352	ug/kg dry	
Benzo(g,h,i)perylene	191-24-2	176	<176	ug/kg dry	
Benzo(k)fluoranthene	207-08-9	176	<176	ug/kg dry	
Chrysene	218-01-9	176	<176	ug/kg dry	
Dibenzo(a,h)anthracene	53-70-3	176	<176	ug/kg dry	
Dibenzofuran	132-64-9	176	<176	ug/kg dry	
Fluoranthene	206-44-0	176	<176	ug/kg dry	
Fluorene	86-73-7	176	<176	ug/kg dry	
Hexachlorobenzene	118-74-1	176	<176	ug/kg dry	
Indeno(1,2,3-cd)pyrene	193-39-5	176	<176	ug/kg dry	
Naphthalene	91-20-3	176	<176	ug/kg dry	
Pentachlorophenol	87-86-5	176	<176	ug/kg dry	
Phenanthrene	85-01-8	176	<176	ug/kg dry	
Phenol	108-95-2	176	<176	ug/kg dry	
Pyrene	129-00-0	176	<176	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4,6-Tribromophenol	118-79-6	38	30.8-109	
2-Fluorobiphenyl	321-60-8	67	32.6-96.2	
2-Fluorophenol	367-12-4	66	32.8-95.8	
Nitrobenzene-d5	4165-60-0	59	28.1-100	
Phenol-d6	13127-88-3	64	31.2-102	
Terphenyl-d14	1718-51-0	66	32.6-110	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	108	50-200	

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:30	Sample ID: PA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-01 % Solid:85.17
Matrix: Soil	ELAP: #11693

Semivolatile Analysis

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
Acenaphthene-d10	15067-26-2	108	50-200	
Chrysene-d12	1719-03-5	97	50-200	
Naphthalene-d8	1146-65-2	108	50-200	
Perylene-d12	1520-96-3	105	50-200	
Phenanthrene-d10	1517-22-2	104	50-200	

Date Prepared: 01/23/2019

Preparation Method: EPA 3545 A

Date Analyzed: 01/24/2019

Analytical Method: EPA 8270 D



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Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:30	Sample ID: PA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-01 % Solid:85.17
Matrix: Soil	ELAP: #11693

Pesticides Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
4,4'-DDD	72-54-8	2.35	<2.35	ug/kg dry	
4,4'-DDE	72-55-9	2.35	22.6	ug/kg dry	
4,4'-DDT	50-29-3	2.35	52.8	ug/kg dry	
Aldrin	309-00-2	2.35	<2.35	ug/kg dry	
alpha-BHC	319-84-6	5.87	<5.87	ug/kg dry	
beta-BHC	319-85-7	5.87	<5.87	ug/kg dry	
cis-Chlordane	5103-71-9	5.87	7.87	ug/kg dry	
delta-BHC	319-86-8	5.87	<5.87	ug/kg dry	
Dieldrin	60-57-1	2.35	<2.35	ug/kg dry	
Endosulfan I	959-98-8	5.87	<5.87	ug/kg dry	
Endosulfan II	33213-65-9	5.87	<5.87	ug/kg dry	
Endosulfan Sulfate	1031-07-8	5.87	<5.87	ug/kg dry	
Endrin	72-20-8	5.87	6.36	ug/kg dry	
gamma-BHC	58-89-9	5.87	<5.87	ug/kg dry	
Heptachlor	76-44-8	5.87	<5.87	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
Decachlorobiphenyl	2051-24-3	152	50.4-127	4.E
Tetrachloro-m-xylene	877-09-8	158	57.5-127	4.E

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1-Bromo-2-Nitrobenzene	108-31-6	97	50-200	

Date Prepared: 01/28/2019

Preparation Method: EPA 3545 A

Date Analyzed: 01/29/2019

Analytical Method: EPA 8081 B

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:30	Sample ID: PA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-01 % Solid:85.17
Matrix: Soil	ELAP: #11693

PCB/Aroclor Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Aroclor-1016	12674-11-2	11.7	<11.7	ug/kg dry	
Aroclor-1221	11104-28-2	11.7	<11.7	ug/kg dry	
Aroclor-1232	11141-16-5	11.7	<11.7	ug/kg dry	
Aroclor-1242	53469-21-9	11.7	<11.7	ug/kg dry	
Aroclor-1248	12672-29-6	11.7	<11.7	ug/kg dry	
Aroclor-1254	11097-69-1	11.7	<11.7	ug/kg dry	
Aroclor-1260	11096-82-5	11.7	282	ug/kg dry	
Aroclor-1262	37324-23-5	11.7	<11.7	ug/kg dry	
Aroclor-1268	11100-14-4	11.7	<11.7	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
Decachlorobiphenyl	2051-24-3	174	25.1-153	4.E
Tetrachloro-m-xylene	877-09-8	173	44-152	4.E

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1-Bromo-2-Nitrobenzene	108-31-6	114	50-200	

Date Prepared: 01/28/2019

Preparation Method: EPA 3545 A

Date Analyzed: 01/28/2019

Analytical Method: EPA 8082 A

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:30	Sample ID: PA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-01 % Solid:85.17
Matrix: Soil	ELAP: #11693

Herbicide Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
2,4,5-TP (Silvex)	93-72-1	29	<29	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4-Dichlorophenylacetic Acid	19719-28-9	62	36.3-123	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
4,4'-Dibromoocafuorobiphenyl	10386-84-2	137	50-200	

Date Prepared: 02/01/2019

Preparation Method: EPA 3545 A

Date Analyzed: 02/05/2019

Analytical Method: EPA 8151 A



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Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:30	Sample ID: PA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-01 % Solid:85.17
Matrix: Soil	ELAP: #11693

Total Metals Analysis

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Arsenic	01/24/2019	EPA 6010 C	1.86	<1.86	mg/kg dry	
Barium	01/24/2019	EPA 6010 C	1.86	28.2	mg/kg dry	
Beryllium	01/24/2019	EPA 6010 C	1.86	<1.86	mg/kg dry	
Cadmium	01/24/2019	EPA 6010 C	1.86	<1.86	mg/kg dry	4.K, 4.M
Chromium	01/24/2019	EPA 6010 C	1.86	9.62	mg/kg dry	
Copper	01/24/2019	EPA 6010 C	1.86	10.3	mg/kg dry	
Lead	01/24/2019	EPA 6010 C	1.86	7.75	mg/kg dry	
Manganese	01/24/2019	EPA 6010 C	1.86	95.9	mg/kg dry	
Nickel	01/24/2019	EPA 6010 C	1.86	3.59	mg/kg dry	4.M
Selenium	01/24/2019	EPA 6010 C	1.86	<1.86	mg/kg dry	4.C, 4.M
Silver	01/24/2019	EPA 6010 C	1.86	<1.86	mg/kg dry	
Zinc	01/24/2019	EPA 6010 C	1.86	31.0	mg/kg dry	

Date Prepared: 01/23/2019

Preparation Method: EPA 3050B

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Hexavalent Chromium	01/24/2019	EPA 7196 A	0.561	<0.561	mg/kg dry	

Date Prepared: 01/23/2019

Preparation Method: EPA 3060A

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Mercury	01/31/2019	EPA 7471 B	0.02	0.06	mg/kg dry	

Date Prepared: 01/23/2019

Preparation Method: EPA 7471 B

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Cyanide	01/30/2019	EPA 9014	0.23	<0.23	mg/kg dry	

Date Prepared: 01/28/2019

Preparation Method: Distillation Prep

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:45	Sample ID: PA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-02 % Solid:82.82
Matrix: Soil	ELAP: #11693

Volatiles Low Level Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1-Trichloroethane	71-55-6	6.00	<6.00	ug/kg dry	
1,1-Dichloroethane	75-34-3	6.00	<6.00	ug/kg dry	
1,1-Dichloroethene	75-35-4	6.00	<6.00	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	6.00	<6.00	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	6.00	<6.00	ug/kg dry	
1,2-Dichloroethane	107-06-2	6.00	<6.00	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	6.00	<6.00	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	6.00	<6.00	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	6.00	<6.00	ug/kg dry	
1,4-Dioxane	123-91-1	30.0	<30.0	ug/kg dry	
Acetone	67-64-1	24.0	74.2	ug/kg dry	
Benzene	71-43-2	6.00	<6.00	ug/kg dry	
Carbon Tetrachloride	56-23-5	6.00	<6.00	ug/kg dry	4.K
Chlorobenzene	108-90-7	6.00	<6.00	ug/kg dry	
Chloroform	67-66-3	6.00	<6.00	ug/kg dry	
cis-1,2-Dichloroethene	156-59-2	6.00	<6.00	ug/kg dry	
Ethylbenzene	100-41-4	6.00	<6.00	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	12.0	<12.0	ug/kg dry	
Methyl Ethyl Ketone (2-Butanone)	78-93-3	12.0	<12.0	ug/kg dry	
Methylene Chloride	75-09-2	6.00	<6.00	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	6.00	<6.00	ug/kg dry	
n-Butylbenzene	104-51-8	6.00	<6.00	ug/kg dry	
n-Propylbenzene	103-65-1	6.00	<6.00	ug/kg dry	
o-Xylene	95-47-6	6.00	<6.00	ug/kg dry	
sec-Butylbenzene	135-98-8	6.00	<6.00	ug/kg dry	
tert-Butylbenzene	98-06-6	6.00	<6.00	ug/kg dry	
Tetrachloroethene	127-18-4	6.00	<6.00	ug/kg dry	
Toluene	108-88-3	6.00	<6.00	ug/kg dry	
trans-1,2-Dichloroethene	156-60-5	6.00	<6.00	ug/kg dry	
Trichloroethene	79-01-6	6.00	<6.00	ug/kg dry	

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:45	Sample ID: PA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-02 % Solid:82.82
Matrix: Soil	ELAP: #11693

Volatiles Low Level Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Vinyl chloride	75-01-4	6.00	<6.00	ug/kg dry	4.K

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
1,2-Dichloroethane-d4	10706-07-0	162	71.6-131	4.E
4-Bromofluorobenzene	460-00-4	105	75.4-133	
Dibromofluoromethane	1868-53-7	53	75.6-135	4.D
Toluene-d8	2037-26-5	105	79.9-123	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	60	50-200	
1,4-Difluorobenzene	540-36-3	84	50-200	
Chlorobenzene-d5	3114-55-4	65	50-200	
Pentafluorobenzene	363-72-4	107	50-200	

Date Prepared: 01/23/2019

Preparation Method: EPA 5035A-L

Date Analyzed: 01/23/2019

Analytical Method: EPA 8260 C

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:45	Sample ID: PA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-02 % Solid:82.82
Matrix: Soil	ELAP: #11693

Semivolatile Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
2-Methylphenol	95-48-7	362	<362	ug/kg dry	
3/4-Methylphenol	108-39-4/106-44-5	181	<181	ug/kg dry	
Acenaphthene	83-32-9	181	<181	ug/kg dry	
Acenaphthylene	208-96-8	181	<181	ug/kg dry	
Anthracene	120-12-7	181	<181	ug/kg dry	
Benzo(a)anthracene	56-55-3	181	<181	ug/kg dry	
Benzo(a)pyrene	50-32-8	181	<181	ug/kg dry	
Benzo(b)fluoranthene	205-99-2	362	<362	ug/kg dry	
Benzo(g,h,i)perylene	191-24-2	181	<181	ug/kg dry	
Benzo(k)fluoranthene	207-08-9	181	<181	ug/kg dry	
Chrysene	218-01-9	181	<181	ug/kg dry	
Dibenzo(a,h)anthracene	53-70-3	181	<181	ug/kg dry	
Dibenzofuran	132-64-9	181	<181	ug/kg dry	
Fluoranthene	206-44-0	181	<181	ug/kg dry	
Fluorene	86-73-7	181	<181	ug/kg dry	
Hexachlorobenzene	118-74-1	181	<181	ug/kg dry	
Indeno(1,2,3-cd)pyrene	193-39-5	181	<181	ug/kg dry	
Naphthalene	91-20-3	181	<181	ug/kg dry	
Pentachlorophenol	87-86-5	181	<181	ug/kg dry	
Phenanthrene	85-01-8	181	<181	ug/kg dry	
Phenol	108-95-2	181	<181	ug/kg dry	
Pyrene	129-00-0	181	<181	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4,6-Tribromophenol	118-79-6	36	30.8-109	
2-Fluorobiphenyl	321-60-8	49	32.6-96.2	
2-Fluorophenol	367-12-4	42	32.8-95.8	
Nitrobenzene-d5	4165-60-0	44	28.1-100	
Phenol-d6	13127-88-3	48	31.2-102	
Terphenyl-d14	1718-51-0	56	32.6-110	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	104	50-200	

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:45	Sample ID: PA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-02 % Solid:82.82
Matrix: Soil	ELAP: #11693

Semivolatile Analysis

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
Acenaphthene-d10	15067-26-2	103	50-200	
Chrysene-d12	1719-03-5	94	50-200	
Naphthalene-d8	1146-65-2	105	50-200	
Perylene-d12	1520-96-3	101	50-200	
Phenanthrene-d10	1517-22-2	101	50-200	

Date Prepared: 01/23/2019

Preparation Method: EPA 3545 A

Date Analyzed: 01/24/2019

Analytical Method: EPA 8270 D



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Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:45	Sample ID: PA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-02 % Solid:82.82
Matrix: Soil	ELAP: #11693

Pesticides Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
4,4'-DDD	72-54-8	2.41	<2.41	ug/kg dry	
4,4'-DDE	72-55-9	2.41	30.1	ug/kg dry	
4,4'-DDT	50-29-3	2.41	67.8	ug/kg dry	
Aldrin	309-00-2	2.41	<2.41	ug/kg dry	
alpha-BHC	319-84-6	6.04	<6.04	ug/kg dry	
beta-BHC	319-85-7	6.04	<6.04	ug/kg dry	
cis-Chlordane	5103-71-9	6.04	19.6	ug/kg dry	
delta-BHC	319-86-8	6.04	<6.04	ug/kg dry	
Dieldrin	60-57-1	2.41	<2.41	ug/kg dry	
Endosulfan I	959-98-8	6.04	<6.04	ug/kg dry	
Endosulfan II	33213-65-9	6.04	<6.04	ug/kg dry	
Endosulfan Sulfate	1031-07-8	6.04	<6.04	ug/kg dry	
Endrin	72-20-8	6.04	<6.04	ug/kg dry	
gamma-BHC	58-89-9	6.04	<6.04	ug/kg dry	
Heptachlor	76-44-8	6.04	<6.04	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
Decachlorobiphenyl	2051-24-3	131	50.4-127	4.E
Tetrachloro-m-xylene	877-09-8	139	57.5-127	4.E

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1-Bromo-2-Nitrobenzene	108-31-6	99	50-200	

Date Prepared: 01/28/2019

Preparation Method: EPA 3545 A

Date Analyzed: 01/29/2019

Analytical Method: EPA 8081 B

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:45	Sample ID: PA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-02 % Solid:82.82
Matrix: Soil	ELAP: #11693

PCB/Aroclor Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Aroclor-1016	12674-11-2	12.1	<12.1	ug/kg dry	
Aroclor-1221	11104-28-2	12.1	<12.1	ug/kg dry	
Aroclor-1232	11141-16-5	12.1	<12.1	ug/kg dry	
Aroclor-1242	53469-21-9	12.1	<12.1	ug/kg dry	
Aroclor-1248	12672-29-6	12.1	<12.1	ug/kg dry	
Aroclor-1254	11097-69-1	12.1	<12.1	ug/kg dry	
Aroclor-1260	11096-82-5	12.1	379	ug/kg dry	
Aroclor-1262	37324-23-5	12.1	<12.1	ug/kg dry	
Aroclor-1268	11100-14-4	12.1	<12.1	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
Decachlorobiphenyl	2051-24-3	147	25.1-153	
Tetrachloro-m-xylene	877-09-8	148	44-152	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1-Bromo-2-Nitrobenzene	108-31-6	116	50-200	

Date Prepared: 01/28/2019

Preparation Method: EPA 3545 A

Date Analyzed: 01/28/2019

Analytical Method: EPA 8082 A

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:45	Sample ID: PA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-02 % Solid:82.82
Matrix: Soil	ELAP: #11693

Herbicide Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
2,4,5-TP (Silvex)	93-72-1	30	<30	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4-Dichlorophenylacetic Acid	19719-28-9	69	36.3-123	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
4,4'-Dibromoocafuorobiphenyl	10386-84-2	115	50-200	

Date Prepared: 02/01/2019

Preparation Method: EPA 3545 A

Date Analyzed: 02/05/2019

Analytical Method: EPA 8151 A



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Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 12:45	Sample ID: PA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-02 % Solid:82.82
Matrix: Soil	ELAP: #11693

Total Metals Analysis

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Arsenic	01/24/2019	EPA 6010 C	1.80	3.59	mg/kg dry	
Barium	01/24/2019	EPA 6010 C	1.80	53.6	mg/kg dry	
Beryllium	01/24/2019	EPA 6010 C	1.80	<1.80	mg/kg dry	
Cadmium	01/24/2019	EPA 6010 C	1.80	<1.80	mg/kg dry	4.K, 4.M
Chromium	01/24/2019	EPA 6010 C	1.80	23.0	mg/kg dry	
Copper	01/24/2019	EPA 6010 C	1.80	38.4	mg/kg dry	
Lead	01/24/2019	EPA 6010 C	1.80	37.3	mg/kg dry	
Manganese	01/24/2019	EPA 6010 C	1.80	143	mg/kg dry	
Nickel	01/24/2019	EPA 6010 C	1.80	12.4	mg/kg dry	4.M
Selenium	01/24/2019	EPA 6010 C	1.80	<1.80	mg/kg dry	4.C, 4.M
Silver	01/24/2019	EPA 6010 C	1.80	<1.80	mg/kg dry	
Zinc	01/24/2019	EPA 6010 C	1.80	270	mg/kg dry	

Date Prepared: 01/23/2019

Preparation Method: EPA 3050B

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Hexavalent Chromium	01/24/2019	EPA 7196 A	0.558	1.19	mg/kg dry	5.E

Date Prepared: 01/23/2019

Preparation Method: EPA 3060A

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Mercury	01/31/2019	EPA 7471 B	0.02	0.02	mg/kg dry	

Date Prepared: 01/23/2019

Preparation Method: EPA 7471 B

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Cyanide	01/30/2019	EPA 9014	0.24	<0.24	mg/kg dry	

Date Prepared: 01/28/2019

Preparation Method: Distillation Prep

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:00	Sample ID: DA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-03 % Solid:81.67
Matrix: Soil	ELAP: #11693

Volatiles Low Level Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1-Trichloroethane	71-55-6	6.15	<6.15	ug/kg dry	
1,1-Dichloroethane	75-34-3	6.15	<6.15	ug/kg dry	
1,1-Dichloroethene	75-35-4	6.15	<6.15	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	6.15	<6.15	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	6.15	<6.15	ug/kg dry	
1,2-Dichloroethane	107-06-2	6.15	<6.15	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	6.15	<6.15	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	6.15	<6.15	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	6.15	<6.15	ug/kg dry	
1,4-Dioxane	123-91-1	30.7	<30.7	ug/kg dry	
Acetone	67-64-1	24.6	76.5	ug/kg dry	
Benzene	71-43-2	6.15	<6.15	ug/kg dry	
Carbon Tetrachloride	56-23-5	6.15	<6.15	ug/kg dry	4.K
Chlorobenzene	108-90-7	6.15	<6.15	ug/kg dry	
Chloroform	67-66-3	6.15	<6.15	ug/kg dry	
cis-1,2-Dichloroethene	156-59-2	6.15	<6.15	ug/kg dry	
Ethylbenzene	100-41-4	6.15	<6.15	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	12.3	<12.3	ug/kg dry	
Methyl Ethyl Ketone (2-Butanone)	78-93-3	12.3	<12.3	ug/kg dry	
Methylene Chloride	75-09-2	6.15	<6.15	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	6.15	<6.15	ug/kg dry	
n-Butylbenzene	104-51-8	6.15	<6.15	ug/kg dry	
n-Propylbenzene	103-65-1	6.15	<6.15	ug/kg dry	
o-Xylene	95-47-6	6.15	<6.15	ug/kg dry	
sec-Butylbenzene	135-98-8	6.15	<6.15	ug/kg dry	
tert-Butylbenzene	98-06-6	6.15	<6.15	ug/kg dry	
Tetrachloroethene	127-18-4	6.15	<6.15	ug/kg dry	
Toluene	108-88-3	6.15	<6.15	ug/kg dry	
trans-1,2-Dichloroethene	156-60-5	6.15	<6.15	ug/kg dry	
Trichloroethene	79-01-6	6.15	<6.15	ug/kg dry	

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:00	Sample ID: DA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-03 % Solid:81.67
Matrix: Soil	ELAP: #11693

Volatiles Low Level Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Vinyl chloride	75-01-4	6.15	<6.15	ug/kg dry	4.K

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
1,2-Dichloroethane-d4	10706-07-0	179	71.6-131	4.E
4-Bromofluorobenzene	460-00-4	123	75.4-133	
Dibromofluoromethane	1868-53-7	100	75.6-135	
Toluene-d8	2037-26-5	106	79.9-123	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	74	50-200	
1,4-Difluorobenzene	540-36-3	80	50-200	
Chlorobenzene-d5	3114-55-4	61	50-200	
Pentafluorobenzene	363-72-4	107	50-200	

Date Prepared: 01/23/2019

Preparation Method: EPA 5035A-L

Date Analyzed: 01/23/2019

Analytical Method: EPA 8260 C

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:00	Sample ID: DA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-03 % Solid:81.67
Matrix: Soil	ELAP: #11693

Semivolatile Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
2-Methylphenol	95-48-7	367	<367	ug/kg dry	
3/4-Methylphenol	108-39-4/106-44-5	184	<184	ug/kg dry	
Acenaphthene	83-32-9	184	<184	ug/kg dry	
Acenaphthylene	208-96-8	184	<184	ug/kg dry	
Anthracene	120-12-7	184	<184	ug/kg dry	
Benzo(a)anthracene	56-55-3	184	<184	ug/kg dry	
Benzo(a)pyrene	50-32-8	184	<184	ug/kg dry	
Benzo(b)fluoranthene	205-99-2	367	<367	ug/kg dry	
Benzo(g,h,i)perylene	191-24-2	184	<184	ug/kg dry	
Benzo(k)fluoranthene	207-08-9	184	<184	ug/kg dry	
Chrysene	218-01-9	184	<184	ug/kg dry	
Dibenzo(a,h)anthracene	53-70-3	184	<184	ug/kg dry	
Dibenzofuran	132-64-9	184	<184	ug/kg dry	
Fluoranthene	206-44-0	184	<184	ug/kg dry	
Fluorene	86-73-7	184	<184	ug/kg dry	
Hexachlorobenzene	118-74-1	184	<184	ug/kg dry	
Indeno(1,2,3-cd)pyrene	193-39-5	184	<184	ug/kg dry	
Naphthalene	91-20-3	184	<184	ug/kg dry	
Pentachlorophenol	87-86-5	184	<184	ug/kg dry	
Phenanthrene	85-01-8	184	<184	ug/kg dry	
Phenol	108-95-2	184	<184	ug/kg dry	
Pyrene	129-00-0	184	<184	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4,6-Tribromophenol	118-79-6	53	30.8-109	
2-Fluorobiphenyl	321-60-8	56	32.6-96.2	
2-Fluorophenol	367-12-4	60	32.8-95.8	
Nitrobenzene-d5	4165-60-0	52	28.1-100	
Phenol-d6	13127-88-3	56	31.2-102	
Terphenyl-d14	1718-51-0	53	32.6-110	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	95	50-200	

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:00	Sample ID: DA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-03 % Solid:81.67
Matrix: Soil	ELAP: #11693

Semivolatile Analysis

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
Acenaphthene-d10	15067-26-2	99	50-200	
Chrysene-d12	1719-03-5	84	50-200	
Naphthalene-d8	1146-65-2	99	50-200	
Perylene-d12	1520-96-3	89	50-200	
Phenanthrene-d10	1517-22-2	93	50-200	

Date Prepared: 01/23/2019

Preparation Method: EPA 3545 A

Date Analyzed: 01/24/2019

Analytical Method: EPA 8270 D



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Date (Time) Collected: 01/22/2019 13:00	Sample ID: DA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-03 % Solid:81.67
Matrix: Soil	ELAP: #11693

Pesticides Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
4,4'-DDD	72-54-8	2.45	2.84	ug/kg dry	
4,4'-DDE	72-55-9	2.45	<2.45	ug/kg dry	
4,4'-DDT	50-29-3	2.45	<2.45	ug/kg dry	
Aldrin	309-00-2	2.45	<2.45	ug/kg dry	
alpha-BHC	319-84-6	6.12	<6.12	ug/kg dry	
beta-BHC	319-85-7	6.12	<6.12	ug/kg dry	
cis-Chlordane	5103-71-9	6.12	<6.12	ug/kg dry	
delta-BHC	319-86-8	6.12	<6.12	ug/kg dry	
Dieldrin	60-57-1	2.45	<2.45	ug/kg dry	
Endosulfan I	959-98-8	6.12	<6.12	ug/kg dry	
Endosulfan II	33213-65-9	6.12	<6.12	ug/kg dry	
Endosulfan Sulfate	1031-07-8	6.12	<6.12	ug/kg dry	
Endrin	72-20-8	6.12	<6.12	ug/kg dry	
gamma-BHC	58-89-9	6.12	<6.12	ug/kg dry	
Heptachlor	76-44-8	6.12	<6.12	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
Decachlorobiphenyl	2051-24-3	132	50.4-127	4.E
Tetrachloro-m-xylene	877-09-8	135	57.5-127	4.E

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1-Bromo-2-Nitrobenzene	108-31-6	92	50-200	

Date Prepared: 01/28/2019

Preparation Method: EPA 3545 A

Date Analyzed: 01/29/2019

Analytical Method: EPA 8081 B



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Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:00	Sample ID: DA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-03 % Solid:81.67
Matrix: Soil	ELAP: #11693

PCB/Aroclor Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Aroclor-1016	12674-11-2	12.2	<12.2	ug/kg dry	
Aroclor-1221	11104-28-2	12.2	<12.2	ug/kg dry	
Aroclor-1232	11141-16-5	12.2	<12.2	ug/kg dry	
Aroclor-1242	53469-21-9	12.2	<12.2	ug/kg dry	
Aroclor-1248	12672-29-6	12.2	<12.2	ug/kg dry	
Aroclor-1254	11097-69-1	12.2	<12.2	ug/kg dry	
Aroclor-1260	11096-82-5	12.2	<12.2	ug/kg dry	
Aroclor-1262	37324-23-5	12.2	<12.2	ug/kg dry	
Aroclor-1268	11100-14-4	12.2	<12.2	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
Decachlorobiphenyl	2051-24-3	152	25.1-153	
Tetrachloro-m-xylene	877-09-8	148	44-152	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1-Bromo-2-Nitrobenzene	108-31-6	107	50-200	

Date Prepared: 01/28/2019

Preparation Method: EPA 3545 A

Date Analyzed: 01/28/2019

Analytical Method: EPA 8082 A

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:00	Sample ID: DA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-03 % Solid:81.67
Matrix: Soil	ELAP: #11693

Herbicide Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
2,4,5-TP (Silvex)	93-72-1	31	<31	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4-Dichlorophenylacetic Acid	19719-28-9	118	36.3-123	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
4,4'-Dibromoocafuorobiphenyl	10386-84-2	127	50-200	

Date Prepared: 02/01/2019

Preparation Method: EPA 3545 A

Date Analyzed: 02/05/2019

Analytical Method: EPA 8151 A



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Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:00	Sample ID: DA-1
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-03 % Solid:81.67
Matrix: Soil	ELAP: #11693

Total Metals Analysis

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Arsenic	01/24/2019	EPA 6010 C	1.98	<1.98	mg/kg dry	
Barium	01/24/2019	EPA 6010 C	1.98	13.6	mg/kg dry	
Beryllium	01/24/2019	EPA 6010 C	1.98	<1.98	mg/kg dry	
Cadmium	01/24/2019	EPA 6010 C	1.98	<1.98	mg/kg dry	4.K, 4.M
Chromium	01/24/2019	EPA 6010 C	1.98	5.23	mg/kg dry	
Copper	01/24/2019	EPA 6010 C	1.98	4.84	mg/kg dry	
Lead	01/24/2019	EPA 6010 C	1.98	5.88	mg/kg dry	
Manganese	01/24/2019	EPA 6010 C	1.98	72.5	mg/kg dry	
Nickel	01/24/2019	EPA 6010 C	1.98	3.85	mg/kg dry	4.M
Selenium	01/24/2019	EPA 6010 C	1.98	<1.98	mg/kg dry	4.C, 4.M
Silver	01/24/2019	EPA 6010 C	1.98	<1.98	mg/kg dry	
Zinc	01/24/2019	EPA 6010 C	1.98	12.5	mg/kg dry	

Date Prepared: 01/23/2019

Preparation Method: EPA 3050B

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Hexavalent Chromium	01/24/2019	EPA 7196 A	1.38	<1.38	mg/kg dry	

Date Prepared: 01/23/2019

Preparation Method: EPA 3060A

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Mercury	01/31/2019	EPA 7471 B	0.02	0.03	mg/kg dry	

Date Prepared: 01/23/2019

Preparation Method: EPA 7471 B

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Cyanide	01/30/2019	EPA 9014	0.24	<0.24	mg/kg dry	

Date Prepared: 01/28/2019

Preparation Method: Distillation Prep

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:15	Sample ID: DA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-04 % Solid:88.99
Matrix: Soil	ELAP: #11693

Volatiles Low Level Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1-Trichloroethane	71-55-6	5.59	<5.59	ug/kg dry	
1,1-Dichloroethane	75-34-3	5.59	<5.59	ug/kg dry	
1,1-Dichloroethene	75-35-4	5.59	<5.59	ug/kg dry	
1,2,4-Trimethylbenzene	95-63-6	5.59	<5.59	ug/kg dry	
1,2-Dichlorobenzene	95-50-1	5.59	<5.59	ug/kg dry	
1,2-Dichloroethane	107-06-2	5.59	<5.59	ug/kg dry	
1,3,5-Trimethylbenzene	108-67-8	5.59	<5.59	ug/kg dry	
1,3-Dichlorobenzene	541-73-1	5.59	<5.59	ug/kg dry	
1,4-Dichlorobenzene	106-46-7	5.59	<5.59	ug/kg dry	
1,4-Dioxane	123-91-1	27.9	<27.9	ug/kg dry	
Acetone	67-64-1	22.3	<22.3	ug/kg dry	
Benzene	71-43-2	5.59	<5.59	ug/kg dry	
Carbon Tetrachloride	56-23-5	5.59	<5.59	ug/kg dry	4.K
Chlorobenzene	108-90-7	5.59	<5.59	ug/kg dry	
Chloroform	67-66-3	5.59	<5.59	ug/kg dry	
cis-1,2-Dichloroethene	156-59-2	5.59	<5.59	ug/kg dry	
Ethylbenzene	100-41-4	5.59	<5.59	ug/kg dry	
m,p-Xylenes	108-38-3/106-42-3	11.2	<11.2	ug/kg dry	
Methyl Ethyl Ketone (2-Butanone)	78-93-3	11.2	<11.2	ug/kg dry	
Methylene Chloride	75-09-2	5.59	<5.59	ug/kg dry	
Methyl-tert-Butyl Ether	1634-04-4	5.59	<5.59	ug/kg dry	
n-Butylbenzene	104-51-8	5.59	<5.59	ug/kg dry	
n-Propylbenzene	103-65-1	5.59	<5.59	ug/kg dry	
o-Xylene	95-47-6	5.59	<5.59	ug/kg dry	
sec-Butylbenzene	135-98-8	5.59	<5.59	ug/kg dry	
tert-Butylbenzene	98-06-6	5.59	<5.59	ug/kg dry	
Tetrachloroethene	127-18-4	5.59	<5.59	ug/kg dry	
Toluene	108-88-3	5.59	<5.59	ug/kg dry	
trans-1,2-Dichloroethene	156-60-5	5.59	<5.59	ug/kg dry	
Trichloroethene	79-01-6	5.59	<5.59	ug/kg dry	

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:15	Sample ID: DA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-04 % Solid:88.99
Matrix: Soil	ELAP: #11693

Volatiles Low Level Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Vinyl chloride	75-01-4	5.59	<5.59	ug/kg dry	4.K

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
1,2-Dichloroethane-d4	10706-07-0	192	71.6-131	4.E
4-Bromofluorobenzene	460-00-4	116	75.4-133	
Dibromofluoromethane	1868-53-7	91	75.6-135	
Toluene-d8	2037-26-5	105	79.9-123	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	53	50-200	
1,4-Difluorobenzene	540-36-3	84	50-200	
Chlorobenzene-d5	3114-55-4	64	50-200	
Pentafluorobenzene	363-72-4	128	50-200	

Date Prepared: 01/23/2019

Preparation Method: EPA 5035A-L

Date Analyzed: 01/23/2019

Analytical Method: EPA 8260 C

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:15	Sample ID: DA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-04 % Solid:88.99
Matrix: Soil	ELAP: #11693

Semivolatile Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
2-Methylphenol	95-48-7	337	<337	ug/kg dry	
3/4-Methylphenol	108-39-4/106-44-5	169	<169	ug/kg dry	
Acenaphthene	83-32-9	169	<169	ug/kg dry	
Acenaphthylene	208-96-8	169	<169	ug/kg dry	
Anthracene	120-12-7	169	<169	ug/kg dry	
Benzo(a)anthracene	56-55-3	169	<169	ug/kg dry	
Benzo(a)pyrene	50-32-8	169	<169	ug/kg dry	
Benzo(b)fluoranthene	205-99-2	337	<337	ug/kg dry	
Benzo(g,h,i)perylene	191-24-2	169	<169	ug/kg dry	
Benzo(k)fluoranthene	207-08-9	169	<169	ug/kg dry	
Chrysene	218-01-9	169	<169	ug/kg dry	
Dibenzo(a,h)anthracene	53-70-3	169	<169	ug/kg dry	
Dibenzofuran	132-64-9	169	<169	ug/kg dry	
Fluoranthene	206-44-0	169	<169	ug/kg dry	
Fluorene	86-73-7	169	<169	ug/kg dry	
Hexachlorobenzene	118-74-1	169	<169	ug/kg dry	
Indeno(1,2,3-cd)pyrene	193-39-5	169	<169	ug/kg dry	
Naphthalene	91-20-3	169	<169	ug/kg dry	
Pentachlorophenol	87-86-5	169	<169	ug/kg dry	
Phenanthrene	85-01-8	169	<169	ug/kg dry	
Phenol	108-95-2	169	<169	ug/kg dry	
Pyrene	129-00-0	169	<169	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4,6-Tribromophenol	118-79-6	65	30.8-109	
2-Fluorobiphenyl	321-60-8	60	32.6-96.2	
2-Fluorophenol	367-12-4	64	32.8-95.8	
Nitrobenzene-d5	4165-60-0	55	28.1-100	
Phenol-d6	13127-88-3	61	31.2-102	
Terphenyl-d14	1718-51-0	59	32.6-110	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	113	50-200	

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:15	Sample ID: DA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-04 % Solid:88.99
Matrix: Soil	ELAP: #11693

Semivolatile Analysis

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
Acenaphthene-d10	15067-26-2	115	50-200	
Chrysene-d12	1719-03-5	105	50-200	
Naphthalene-d8	1146-65-2	114	50-200	
Perylene-d12	1520-96-3	112	50-200	
Phenanthrene-d10	1517-22-2	113	50-200	

Date Prepared: 01/23/2019

Preparation Method: EPA 3545 A

Date Analyzed: 01/24/2019

Analytical Method: EPA 8270 D



**LONG
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Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:15	Sample ID: DA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-04 % Solid:88.99
Matrix: Soil	ELAP: #11693

Pesticides Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
4,4'-DDD	72-54-8	2.25	<2.25	ug/kg dry	
4,4'-DDE	72-55-9	2.25	<2.25	ug/kg dry	
4,4'-DDT	50-29-3	2.25	<2.25	ug/kg dry	
Aldrin	309-00-2	2.25	<2.25	ug/kg dry	
alpha-BHC	319-84-6	5.62	<5.62	ug/kg dry	
beta-BHC	319-85-7	5.62	<5.62	ug/kg dry	
cis-Chlordane	5103-71-9	5.62	<5.62	ug/kg dry	
delta-BHC	319-86-8	5.62	<5.62	ug/kg dry	
Dieldrin	60-57-1	2.25	<2.25	ug/kg dry	
Endosulfan I	959-98-8	5.62	<5.62	ug/kg dry	
Endosulfan II	33213-65-9	5.62	<5.62	ug/kg dry	
Endosulfan Sulfate	1031-07-8	5.62	<5.62	ug/kg dry	
Endrin	72-20-8	5.62	<5.62	ug/kg dry	
gamma-BHC	58-89-9	5.62	<5.62	ug/kg dry	
Heptachlor	76-44-8	5.62	<5.62	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
Decachlorobiphenyl	2051-24-3	114	50.4-127	
Tetrachloro-m-xylene	877-09-8	117	57.5-127	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1-Bromo-2-Nitrobenzene	108-31-6	96	50-200	

Date Prepared: 01/28/2019

Preparation Method: EPA 3545 A

Date Analyzed: 01/29/2019

Analytical Method: EPA 8081 B

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:15	Sample ID: DA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-04 % Solid:88.99
Matrix: Soil	ELAP: #11693

PCB/Aroclor Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Aroclor-1016	12674-11-2	11.2	<11.2	ug/kg dry	
Aroclor-1221	11104-28-2	11.2	<11.2	ug/kg dry	
Aroclor-1232	11141-16-5	11.2	<11.2	ug/kg dry	
Aroclor-1242	53469-21-9	11.2	<11.2	ug/kg dry	
Aroclor-1248	12672-29-6	11.2	<11.2	ug/kg dry	
Aroclor-1254	11097-69-1	11.2	<11.2	ug/kg dry	
Aroclor-1260	11096-82-5	11.2	<11.2	ug/kg dry	4.F
Aroclor-1262	37324-23-5	11.2	<11.2	ug/kg dry	
Aroclor-1268	11100-14-4	11.2	<11.2	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
Decachlorobiphenyl	2051-24-3	130	25.1-153	4.E
Tetrachloro-m-xylene	877-09-8	128	44-152	4.E

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1-Bromo-2-Nitrobenzene	108-31-6	113	50-200	

Date Prepared: 01/28/2019

Preparation Method: EPA 3545 A

Date Analyzed: 01/28/2019

Analytical Method: EPA 8082 A

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:15	Sample ID: DA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-04 % Solid:88.99
Matrix: Soil	ELAP: #11693

Herbicide Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
2,4,5-TP (Silvex)	93-72-1	28	<28	ug/kg dry	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4-Dichlorophenylacetic Acid	19719-28-9	51	36.3-123	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
4,4'-Dibromoocafuorobiphenyl	10386-84-2	171	50-200	

Date Prepared: 02/01/2019

Preparation Method: EPA 3545 A

Date Analyzed: 02/05/2019

Analytical Method: EPA 8151 A

Client: Nelson, Pope & Voorhis	Client ID: IHCC
Date (Time) Collected: 01/22/2019 13:15	Sample ID: DA-2
Date (Time) Received: 01/22/2019 16:57	Laboratory ID: 9012214-04 % Solid:88.99
Matrix: Soil	ELAP: #11693

Total Metals Analysis

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Arsenic	01/24/2019	EPA 6010 C	1.86	<1.86	mg/kg dry	
Barium	01/24/2019	EPA 6010 C	1.86	18.9	mg/kg dry	
Beryllium	01/24/2019	EPA 6010 C	1.86	<1.86	mg/kg dry	
Cadmium	01/24/2019	EPA 6010 C	1.86	<1.86	mg/kg dry	4.K, 4.M
Chromium	01/24/2019	EPA 6010 C	1.86	6.44	mg/kg dry	
Copper	01/24/2019	EPA 6010 C	1.86	4.57	mg/kg dry	
Lead	01/24/2019	EPA 6010 C	1.86	9.41	mg/kg dry	
Manganese	01/24/2019	EPA 6010 C	1.86	128	mg/kg dry	
Nickel	01/24/2019	EPA 6010 C	1.86	6.10	mg/kg dry	4.M
Selenium	01/24/2019	EPA 6010 C	1.86	<1.86	mg/kg dry	4.C, 4.M
Silver	01/24/2019	EPA 6010 C	1.86	<1.86	mg/kg dry	
Zinc	01/24/2019	EPA 6010 C	1.86	17.4	mg/kg dry	

Date Prepared: 01/23/2019

Preparation Method: EPA 3050B

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Hexavalent Chromium	01/24/2019	EPA 7196 A	0.540	<0.540	mg/kg dry	4.G

Date Prepared: 01/23/2019

Preparation Method: EPA 3060A

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Mercury	01/31/2019	EPA 7471 B	0.02	0.03	mg/kg dry	

Date Prepared: 01/23/2019

Preparation Method: EPA 7471 B

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Cyanide	01/30/2019	EPA 9014	0.22	<0.22	mg/kg dry	

Date Prepared: 01/28/2019

Preparation Method: Distillation Prep

Data Qualifiers Key Reference:

- 4.C Target compound found in blank.
- 4.D Surrogate recovery has failed low.
- 4.E Surrogate recovery has failed high.
- 4.F Spike recovery does not meet QC criteria due to high target compound concentration.
- 4.G Spike recovery out of range due to matrix interference.
- 4.K Continuing Calibration Verification (CCV) quality control levels failed high, values are considered to be estimated.
- 4.M LCS recovery was above QC acceptance limit.
- 5.E Level found exceeds the maximum contaminant level (MCL) as set by local, state or federal agencies.
- MDL Minimum Detection Limit
- LOQ Limit of Quantitation

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS NYV 572 West 100th Ave Melville NY 11747				CONTACT: Ease Anderson PHONE: 631-427-5665 EMAIL:		SAMPLER (SIGNATURE) Ease Anderson		SAMPLER NAME (PRINT) Ease Anderson		SAMPLER SEaled YES / NO		9012214	
PROJECT LOCATION: THC				TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms		SAMPLES RECEIVED AT 23 °C		ANALYSIS REQUIRED PA-375 VOL PA-375 SVAC PA-375 MTHS PA-375 PEST PA-375 H2O3 PA-375 PCBs					
LABORATORY ID # For Laboratory Use Only	MATRIX	TYPE	pH	RES. CHLORINE	PRES.	DATE	TIME	SAMPLE # LOCATION	CONTAINERS				
1.	SG	-	-	12/21/19		12:30	PA-1	X	X	X	X	X	3
2.							PA-2	X	X	X	X	X	3
3.							DA-1	X	X	X	X	X	3
4.							DA-2	X	X	X	X	X	3
5.													
6.													
7.													
8.													
9.													
10.													
11.													
12.													
13.													
14.													

REQUIRED CONTAINERS, PRESERVATION TECHNIQUES & HOLDING TIMES

NAME	CONTAINER ¹	PRESERVATION	MAX. HOLDING TIME
Bacterial Tests:			
Coliform, fecal & total	P,G	Cool 4°C, 0.008% Na ₂ S ₂ O ₃ if chlorinated	6 hours
Fecal streptococci	P,G	Cool 4°C, 0.008% Na ₂ S ₂ O ₃ if chlorinated	6 hours
Inorganic Tests:			
Acidity	P,G	Cool 4°C	14 days
Alkalinity	P,G	Cool 4°C	14 days
Ammonia	P,G	Cool 4°C, H ₂ SO ₄ to pH<2	28 days
BOD	P,G	Cool 4°C	48 hours
Bromide	P,G	None required	28 days
BOD, carbonaceous	P,G	Cool 4°C	48 hours
Chemical oxygen demand	P,G	Cool 4°C, H ₂ SO ₄ to pH<2	28 days
Chloride	P,G	None required	28 days
Chlorine, total residual	P,G	None required	Analyze Immediately
Color	P,G	Cool 4°C	48 hours
Cyanide, total and amenable to chlorination	P,G	Cool, 4°C, NaOH to pH 12	14 days
Fluoride	P	None required	28 days
Hardness	P,G	HNO ₃ to pH<2, H ₂ SO ₄ to pH<2	6 months
Hydrogen ion (pH)	P,G	None required	Analyze Immediately
Kjeldahl and organic nitrogen	P,G	Cool 4°C, H ₂ SO ₄ to pH<2	28 days
Metals:			
Chromium VI	P,G	Cool 4°C	24 hours
Mercury	P,G	NHO ₃ to pH<2	28 days
Metals, except Chromium VI & mercury	P,G	NHO ₃ to pH<2	6 months
Nitrate	P,G	Cool, 4°C	48 hours
Nitrate-nitrite	P,G	Cool, 4°C, H ₂ SO ₄ to pH <2	28 days
Nitrite	P,G	Cool, 4°C	48 hours
Oil and grease	G	Cool, 4°C, H ₂ SO ₄ to pH <2	28 days
Organic carbon	P,G	Cool, 4°C, HCl or H ₂ SO ₄ to pH <2	28 days
Orthophosphate	P,G	Filter Immediately, cool, 4°C	48 hours
Oxygen, Dissolved Probe	G Bottle and top	None required	Analyze immediately
Winkler	G Bottle and top	Fix on site and store in dark	48 hours
Phenols	G	Cool, 4°C, Ph ₃ O ₄ to pH <2	28 days
Phosphorus (elemental)	G	Cool, 4°C	48 hours
Phosphorus, total	P,G	Cool, 4°C, H ₂ SO ₄ to pH <2	28 days
Residue, total	P,G	Cool, 4°C	7 days
Residue, filterable	P,G	Cool, 4°C	7 days
Residue, Nonfilterable (TSS)	P,G	Cool, 4°C	7 days
Residue, Settleable	P,G	Cool, 4°C	48 hours
Residue, Volatile	P,G	Cool, 4°C	7 days
Silica	P	Cool, 4°C	28 days
Specific conductance	P,G	Cool, 4°C	28 days
Sulfate	P,G	Cool, 4°C	28 days
Sulfide	P,G	Cool, 4°C, add zinc acetate + NaOH to pH>9	7 days
Sulfite	P,G	None required	Analyze immediately
Surfactants	P,G	Cool, 4°C	48 hours
Temperature	P,G	None required	Analyze immediately
Turbidity	P,G	Cool, 4°C	48 hours
Organic Tests:			
Purgeable Halocarbons	G, Teflon-lined septum	Cool, 4°C, 0.0008% Na ₂ S ₂ O ₃	14 days
Purgeable aromatic hydrocarbons	G, Teflon-lined septum	Cool, 4°C, 0.0008% Na ₂ S ₂ O ₃ HCl to pH <2	14 days
Acrolein and acrylonitrile	G, Teflon-lined septum	Cool, 4°C, 0.0008% Na ₂ S ₂ O ₃ Adjust pH to 4-5	14 days
Phenols	G, Teflon-lined cap	Cool, 4°C, 0.0008% Na ₂ S ₂ O ₃	7 days until extraction
Benzidines	G, Teflon-lined cap	Cool, 4°C, 0.0008% Na ₂ S ₂ O ₃	7 days until extraction
Phthalate esters	G, Teflon-lined cap	Cool, 4°C	7 days until extraction
Nitrosamines	G, Teflon-lined cap	Cool, 4°C, 0.0008% Na ₂ S ₂ O ₃ , store in dark	40 days after extraction
PCBs, acrylonitrile	G, Teflon-lined cap	Cool, 4°C	40 days after extraction
Nitroaromatics and isophorone	G, Teflon-lined cap	Cool, 4°C, 0.0008% Na ₂ S ₂ O ₃ , store in dark	40 days after extraction
Polynuclear aromatic hydrocarbons	G, Teflon-lined cap	Cool, 4°C, 0.0008% Na ₂ S ₂ O ₃ , store in dark	40 days after extraction
Haloethers	G, Teflon-lined cap	Cool, 4°C, 0.0008% Na ₂ S ₂ O ₃	40 days after extraction
Chlorinated hydrocarbons	G, Teflon-lined cap	Cool, 4°C	40 days after extraction
TOC	G, Teflon-lined cap	Cool, 4°C, 0.0008% Na ₂ S ₂ O ₃	7 days
Pesticides Tests:			
Pesticides	G, Teflon-lined cap	Cool, 4°C, pH 5-9	40 days after extraction

¹Polyethylene (P) or Glass(G)