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May 27, 2021 Project B1904484.00

Mr. Greg Hanson
Minnesota Department of Agriculture
625 Robert Street N
St. Paul, Minnesota 55155-2538

Re: Corrective Action Plan Report – Addendum #1
Former Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

Dear Mr. Hanson:

As requested, please find below addendum #1 to the previously submitted Corrective Action Plan Report for the of the Former Hollydale Golf Course located at 4710 Holly Lane North in Plymouth, Minnesota (Site).

As requested in the letter from Mr. Greg Hanson of the Minnesota Department of Agriculture (MDA) dated May 26, 2021, this addendum provides additional information and clarification to the recently submitted Corrective Action Plan (CAP) dated May 11, 2021 and revised on May 26, 2021.

MDA Request Item #1: Clarification on the assurance letters available is understood.

MDA Request Item #2: As requested the analytical tables have been updated with the MDA soil cleanup goals (CUGs) for chlorothalonil and propiconazole. The text of the CAP has been revised to reflect these clean up goals. Revised Tables are included as Attachment 1.

We have asked the analytical laboratory to analyze previously frozen soil samples AG-1B (0-0.5' and 2-2.5') for analysis of propiconazole to horizontally delineate propiconazole impacts. The lab has stated that we should have data by June 9, 2021.

MDA Request Item #3: The SRV for mercury changed recently and we missed correcting it on some of the tables and text that were from previous investigations performed at the Site. We have updated the SRVs in the text, figures, tables and where applicable in the revised CAP, updated Figures are included in Attachment 2.

MDA Request Item #4: This has been revised in the CAP text to reflect the CUGs for chlorothalonil and propiconazole.

MDA Request Item #5: The initial excavation depth in the mercury impacted former golf greens with be 1 foot below current grade, this depth has been added to the revised CAP on Page 13.

MDA Request Item #6: The map included soil samples that were collected only for geotechnical purposes and those that were collected for laboratory analysis. The figure has been updated to clarify the locations, updated Figures are included in Attachment 2.

MDA Request Item #7: Figures 4 and 4a have been updated and are included in Attachment 2.

MDA Request #8: See revised Figure 5 and 5a for proposed arsenic excavation area, included in Attachment 2.

MDA Request #9: Tables have been updated as follows:

- Replaced the "ND" with the reporting limits,
- Updated with the new MPCA SRVs that were released in May 2021,
- Added Nitrate detection in surface water,
- Added sample depths to tables and fixed typo in Figure 4,
- Tabel 4 updated.

Revised tables are included in Attachment 1.

MDA Request #10:

Part a: Contamination Impacts Survey included as Attachment 3.
Part b: Geologic logs from all borings included as Attachment 4.
Part c: All analytical Laboratory reports are included as Attachment 5.
Part d: The soils will be direct loaded from the Site and transported under manifest in lined and covered trucks directly to the permitted landfill. The landfill that will be used has not been finalized, we have awaiting costing from both landfills, however it will either be Demcon industrial landfill in Shakopee or SKB industrial landfill in Rosemount.
Part e: The corrective actions are estimated to take 3 -4 weeks to complete once started.
Part f: A schedule for the planned corrective action implementation is included as Attachment 6.
Part g: Volume calculations are included as Attachment 7.
Part h: Samples from the requested tee boxes will be collected and submitted for mercury analysis by June 3, 2021.

Sincerely,

BRAUN INTERTEC CORPORATION

Mark Keefer, PG
Group Manager, Senior Scientist

Attachment 1: Revised Tables
Attachment 2: Revised Figures
Attachment 3: Contamination Impacts Survey

Attachment 4: Geologic logs
Attachment 5: Analytical Laboratory reports
Attachment 6: Schedule for the planned corrective action implementation
Attachment 7: corrective action volume calculations

Attachment 1: Revised Tables

Table 1
Soil Analytical Results – 2021 Sampling
Hollydale Golf Course
Plymouth, Minnesota
Project B1904484.00

Compound/Parameter	CAS No.	Sample Identifier, and Date Collected									Residential Soil Reference Value (SRV) (mg/kg)	Industrial Soil Reference Value (SRV) (mg/kg)	Screening Soil Leaching Value (SLV) (mg/kg)	MDA Preliminary Soil Clean Up Goals
		AG-1 (0-0.5)	AG-1 (2-2.5)	AG-2 (0-0.5)	AG-2 (2-2.5)	AG-3 (0-0.5)	AG-3 (2-2.5)	AG-4 (0-0.5)	AG-4 (2-2.5)	AG-5 (2-2.5)				
		Drainage Culvert Outlet from Mixing Area		Drainage Pipe Outlet from Maintenance Shop		8th Fairway		9th Fairway		Culvert outlet inbetween Holes 4 and 15.				
		04/19/2021	04/19/2021	04/19/2021	04/19/2021	04/19/2021	04/19/2021	04/19/2021	04/19/2021	04/19/2021				
Metals (mg/kg)														
Arsenic, Total	7440-38-2	**4.2**	**4.4**	**4.1**	---	**3.0**	**4.3**	---	---	---	9[BTV]	9[BTV]	5.8	
Mercury, Total	7439-97-6	---	---	**0.22** [1]	**0.2**	**0.064**	**0.044**	**0.035**	**0.026**	---	3.1	3.1	3.3	
MDA List 1 Pesticides (mg/kg)														
Acetochlor (Harness/Surpass)	34256-82-1	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	1
Alachlor (Lasso)	15972-60-8	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	0.6
Atrazine (Aatrex)	1912-24-9	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	0.6
Chlorpyrifos (Lorsban)	2921-88-2	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	1
Cyanazine (Bladex)	21725-46-2	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	0.1
Desethylatrazine	6190-65-4	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	NE
Deisopropylatrazine	1007-28-9	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	NE
Dimethenamid (Frontier)	163515-14-8	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	1.2
EPTC (Eptam/Eradicane)	759-94-4	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	4
Ethalfluralin (Sonalan)	55283-68-6	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	0.5
Fonofos (Dyfonate)	944-22-9	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	2
Metolachlor (Dual)	51218-45-2	< 0.06	<0.061	**0.033**	**0.094**	---	---	---	---	<0.064	NE	NE	NE	1.5
Metribuzin (Lexone/Sencor)	21087-64-9	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	0.3
Pendimethalin (Prowl)	40487-42-1	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	0.8
Phorate (Thimet)	298-02-2	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	0.6
Prometon (Pramitol)	1610-18-0	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	8
Propachlor (Ramrod)	1918-16-7	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	4
Propazine (Milogard)	139-40-2	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	1
Simazine (Princep)	122-34-9	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	1
Terbufos (Counter)	13071-79-9	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	0.1
Triallate (Far-go)	2303-17-5	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	1
Trifluralin (Treflan)	1582-09-8	< 0.06	<0.061	<0.063	<0.061	---	---	---	---	<0.064	NE	NE	NE	0.5
All other reported MDA List 1 Pesticides	---	<RL	<RL	<RL	<RL	---	---	---	---	<RL	---	---	---	NE
Other Parameters (mg/kg)														
Chlorothalonil	1897-45-6	**0.356**	**0.153**	**14.2**	**3.28**	---	---	---	---	**0.219**	NE	NE	NE	0.6
Propiconazole	60207-90-1	**0.152**	**0.113**	**31.5**	**8.67**	---	---	---	---	<0.025	NE	NE	NE	0.06
Agricultural Parameters (mg/kg)											**MDA Cleanup Goal**			
Nitrogen, Kjeldahl, Total [g]	7727-37-9	**1,300**	**980**	**1,170**	**1,220**	---	---	---	---	**369**	5,000/1,000[g]			
Nitrogen, NO_2 plus NO_3	---	<6.1	<6.3	**6.32**	<6.2	---	---	---	---	<6.47	150-200			

Notes

Minnesota Pollution Control Agency (MPCA) Soil Reference Values (SRVs) updated in May 2021 and Soil Leaching Values (SLVs) updated in June 2013.

mg/kg = Milligrams per kilogram.

< = Not detected at or above the laboratory reporting limit indicated.

--- = Not analyzed or calculated for this parameter or not applicable.

BTV = Background Threshold Value. BTVs are not calculated health based SRVs. The MPCA calculated SRVs were determined to be below background values (MPCA guidance document c-r1-05, April 2021).

cPAH = Individual regulatory limit not established for this carcinogenic PAH; included in BaP equivalent calculation.

NE = Regulatory limit not established for this parameter.

RL = Reporting limits for other parameters that are not listed individually in this table because their concentrations were below reporting limits provided in the laboratory report.

[a] = Regulatory limit for combination of cis- and trans-1,3-Dichloropropene.

[b] = Regulatory limit for combination of m-, p-, and o-Xylenes.

[c] = Benzo(a)pyrene (BaP) equivalent is calculated based on the concentration and weighted toxicity of cPAHs; MPCA; 2009. If no cPAHs were detected above reasonable laboratory reporting limits the BaP equivalent is reported as 0 mg/kg per MPCA Remediation Division Policy; June 2011.

[e] = Reported result is total chromium, regulatory limit for chromium III and chromium VI are provided.

[f] = DRO/GRO concentrations greater than 100 mg/kg are not suitable for reuse as unregulated fill per MPCA Guidance Document c-rem1-01 "Best Management Practices for the Off-Site Reuse of Unregulated Fill" (February 2012).

[g] = The soil cleanup goal for total Kjeldahl nitrogen (TKN) from 0 to 2.5 feet bgs is 5,000 mg/kg and below 2.5 feet bgs is 1,000 mg/kg.

Exceeds Residential SRV
Exceeds Screening SLV
MDA Preliminary Soil Clean Up Goals
Exceeds 100 mg/kg for DRO/GRO

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Table 2
Surface Water Analytical Results s
Hollydale Golf Course
Plymouth, Minnesota
Project B1904484.00

Compound/Parameter	CAS No.	Sample Identifier, Depth to Groundwater, and Date Collected			Drinking Water Criteria (µg/L)	Source-Date
		AGSW-1	**DUP-1**	**AGSW-2**		
		Pond south of 7th Hole	Duplicate of AGSW-1	Pond south of Hole 15 green		
		4/19/2021	4/19/2021	4/19/2021		
MDA List 1 Pesticides (µg/L)						
Acetochlor (Harness/Surpass)	34256-82-1	<0.14	<0.15	<0.13	20	HRL-18
Alachlor (Lasso)	15972-60-8	<0.14	<0.15	<0.13	9	HRL-18
Atrazine (Aatrex)	1912-24-9	<0.14	<0.15	<0.13	3	MCL
Chlorpyrifos (Lorsban)	2921-88-2	<0.14	<0.15	<0.13	0.6	HBV-13
Cyanazine (Bladex)	21725-46-2	<0.14	<0.15	<0.13	1	HRL-18
Desethylatrazine	6190-65-4	<0.14	<0.15	<0.13	NE	---
Deisopropylatrazine	1007-28-9	<0.14	<0.15	<0.13	NE	---
Dimethenamid (Frontier)	163515-14-8	<0.14	<0.15	<0.13	300	HRL-15
EPTC (Eptam/Eradicane)	759-94-4	<0.14	<0.15	<0.13	40	HRL-18
Ethalfluralin (Sonalan)	55283-68-6	<0.14	<0.15	<0.13	300	HBV-99
Fonofos (Dyfonate)	944-22-9	<0.14	<0.15	<0.13	10	HBV-95
Metolachlor (Dual)	51218-45-2	<0.14	<0.15	<0.13	300	HRL-11
Metribuzin (Lexone/Sencor)	21087-64-9	<0.14	<0.15	<0.13	10	HRL-13
Pendimethalin (Prowl)	40487-42-1	<0.14	<0.15	<0.13	90	HBV-95
Phorate (Thimet)	298-02-2	<0.14	<0.15	<0.13	1	HBV-95
Prometon (Pramitol)	1610-18-0	<0.14	<0.15	<0.13	100	HRL-93
Propachlor (Ramrod)	1918-16-7	<0.14	<0.15	<0.13	90	HRL-93
Propazine (Milogard)	139-40-2	<0.14	<0.15	<0.13	10	HBV-95
Simazine (Princep)	122-34-9	<0.14	<0.15	<0.13	4	MCL
Terbufos (Counter)	13071-79-9	<0.14	<0.15	<0.13	0.2	HBV-95
Triallate (Far-go)	2303-17-5	<0.14	<0.15	<0.13	9	HBV-95
Trifluralin (Treflan)	1582-09-8	<0.14	<0.15	<0.13	5	HBV-95
All other reported MDA List 1 Pesticides	---	<RL	<RL	<RL	---	---
Other Pesticides (µg/L)						
Chlorothalonil		<0.3	<0.3	<0.3	50	HRL-94
Propiconazole		<0.3	<0.3	<0.3	90	HRL-94
Other Parameters (mg/L)						
Nitrate (as Nitrogen)	14797-55-8	<0.1	<0.1	**1**	10	MCL

Notes

Drinking Water Criteria = The most conservative value for chronic or cancer exposures provided from the following sources including the Minnesota Department of Health (MDH) Health Risk Limit (HRL), MDH Health Based Value (HBV), MDH Risk Assessment Advice (RAA) or Maximum Contaminant Level (MCL). The date of promulgation is provided, if available. Values updated April 2019.

µg/L = Micrograms per liter.

< = Not detected at or above the laboratory reporting limit indicated.

--- = Not analyzed or calculated for this parameter or not applicable.

RL = Reporting limits for other parameters that are not listed individually in this table because their concentrations were below reporting limits provided in the laboratory report.

NE = Regulatory limit not established for this parameter.

[e] = No applicable standard exists. When sampling water directly from drinking water wells, refer to the Minnesota Department of Health's (MDH's) document entitled *Guidance for Evaluating Health Risks for Gasoline and Diesel Contaminated Drinking Water,* dated November 2018

Exceeds Drinking Water Criteria

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Table 3
Soil Analytical Results - 2019 Initial Sampling
Hollydale Golf Course
Plymouth, Minnesota
Project B1904484

Compound/Parameter	CAS No.	Sample Identifier and Date Collected					Residential Soil Reference Value (SRV) (mg/kg)	Industrial Soil Reference Value (SRV) (mg/kg)	Screening Soil Leaching Value (SLV) (mg/kg)
		Hole 15 Green (0-0.5)	Hole 15 Green (1-1.5)	Hole 8 Green (0-0.5)	Hole 8 Green (1-1.5)	Wash/Mix Area Culvert Outfall (0-0.5 ft bgs)			
		05/06/2019	05/06/2019	05/06/2019	05/06/2019	05/06/2019			
Metals (mg/kg)									
Antimony, Total	7440-36-0	---	---	---	---	---	12	100	5.4
Arsenic, Total	7440-38-2	**3.8**	---	---	---	**4.5**	9[BTV]	9[BTV]	5.8
Barium, Total	7440-39-3	**64.2**	---	---	---	**180**	3,000	41,000	1,700
Cadmium, Total	7440-43-9	**1.1**	---	---	---	**0.68**	1.6	23	8.8
Chromium, Total[e]	7440-47-3	**37.7**	---	---	---	**15.3**	23,000/11[e]	100,000/62[e]	1,000,000,000/36[e]
Lead, Total	7439-92-1	**6.9**	---	---	---	**245**	300	700	2,700
Mercury, Total	7439-97-6	**77.2**	**0.027**	**27.5**	<0.022	**0.3**	3.1	3.1	3.3
Selenium, Total	7782-49-2	<1.2	---	---	---	<1.3	77	1,200	2.6
Silver, Total	7440-22-4	<0.60	---	---	---	<0.65	77	1,200	7.9

Notes

Minnesota Pollution Control Agency (MPCA) Soil Reference Values (SRVs) updated in May 2021 and Soil Leaching Values (SLVs) updated in June 2013.

mg/kg = Milligrams per kilogram.

< = Not detected at or above the laboratory reporting limit indicated.

--- = Not analyzed or calculated for this parameter or not applicable.

BTV = Background Threshold Value. BTVs are not calculated health based SRVs. The MPCA calculated SRVs were determined to be below background values (MPCA guidance document c-r1-05, April 2021).

cPAH = Individual regulatory limit not established for this carcinogenic PAH; included in BaP equivalent calculation.

NE = Regulatory limit not established for this parameter.

RL = Reporting limits for other parameters that are not listed individually in this table because their concentrations were below reporting limits provided in the laboratory report.

[a] = Regulatory limit for combination of cis- and trans-1,3-Dichloropropene.

[b] = Regulatory limit for combination of m-, p-, and o-Xylenes.

[c] = Benzo(a)pyrene (BaP) equivalent is calculated based on the concentration and weighted toxicity of cPAHs; MPCA; 2009. If no cPAHs were detected above reasonable laboratory reporting limits the BaP equivalent is reported as 0 mg/kg per MPCA Remediation Division Policy; June 2011.

[d] = Regulatory limit for 4-Methylphenol only.

[e] = Reported result is total chromium, regulatory limit for chromium III and chromium VI are provided.

[f] = DRO/GRO concentrations greater than 100 mg/kg are not suitable for reuse as unregulated fill per MPCA Guidance Document c-rem1-01 "Best Management Practices for the Off-Site Reuse of Unregulated Fill" (February 2012).

[g] = The soil cleanup goal for total Kjeldahl nitrogen (TKN) from 0 to 2.5 feet bgs is 5,000 mg/kg and below 2.5 feet bgs is 1,000 mg/kg.

Exceeds Residential SRV
Exceeds Industrial SRV
Exceeds Screening SLV
Exceeds 100 mg/kg for DRO/GRO

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Table 4 -2019 Phase II ESA
Soil Analytical Results
Hollydale Golf Course
Plymouth, Minnesota
Project B1904484.00

Compound/Parameter	CAS No.	Sample Identifier and Date Collected															Residential Soil Reference Value (SRV) (mg/kg)	Industrial Soil Reference Value (SRV) (mg/kg)	Screening Soil Leaching Value (SLV) (mg/kg)
		ST-1 (2-3)	ST-2 (2-3)	ST-3 (0-0.5)	ST-3 (1-2)	ST-4 (0-6")	ST-4 (1-2')	ST-7 (0-6")	ST-7 (1-2')	ST-14 (0-6")	ST-14 (1-2')	ST-21 (0-6")	ST-21 (1-2')	HA-1 (0-0.5)	HA-1 (2-2.5)	HA-2 (2-2.5)			
		Near ASTs	Wash/Mix Area	Wash/Mix Area Culvert Outfall	Wash/Mix Area Culvert Outfall	8th Hole Tee Box	8th Hole Tee Box	Fringe of 5th Hole Green	Fringe of 5th Hole Green	Fringe of 18th Hole Green	Fringe of 18th Hole Green	17th Hole Tee Box	17th Hole Tee Box	Below AST	Below AST	Below AST			
		10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/14/2019	10/14/2019	10/14/2019			
Volatile Organic Compounds (VOCs) (mg/kg)																			
n-Butylbenzene	104-51-8	<0.0648	<0.0582	<0.0658	<0.0658	---	---	---	---	---	---	---	---	**0.359**	<0.0618	<0.0584	110	110	NE
1,3,5-Trimethylbenzene	108-67-8	<0.0648	<0.0582	<0.0658	<0.0658	---	---	---	---	---	---	---	---	**0.431**	<0.0618	<0.0584	140	180	2.7
All other reported VOCs	---	<RL	<RL	<RL	<RL	---	---	---	---	---	---	---	---	<RL	<RL	<RL	---	---	---
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)																			
Acenaphthene	83-32-9	<0.0119	**0.0242**	---	---	---	---	---	---	---	---	---	---	<0.261	<0.0122	<0.0120	450	6,800	81
Acenaphthylene	208-96-8	<0.0119	<0.0116	---	---	---	---	---	---	---	---	---	---	<0.261	<0.0122	<0.0120	NE	NE	NE
Anthracene	120-12-7	<0.0119	**0.0547**	---	---	---	---	---	---	---	---	---	---	**0.586**	<0.0122	<0.0120	2,800	42,000	1,300
Benz(a)anthracene	56-55-3	<0.0119	**0.242**	---	---	---	---	---	---	---	---	---	---	<0.261	<0.0122	<0.0120	cPAH	cPAH	cPAH
Benzo(b)fluoranthene	205-99-2	<0.0119	**0.34**	---	---	---	---	---	---	---	---	---	---	<0.261	<0.0122	**0.0186**	cPAH	cPAH	cPAH
Benzo(k)fluoranthene	207-08-9	<0.0119	**0.143**	---	---	---	---	---	---	---	---	---	---	<0.261	<0.0122	<0.0120	cPAH	cPAH	cPAH
Benzo(a)pyrene	50-32-8	<0.0119	**0.235**	---	---	---	---	---	---	---	---	---	---	<0.261	<0.0122	<0.0120	cPAH	cPAH	cPAH
Benzo(g,h,i)perylene	191-24-2	<0.0119	**0.171**	---	---	---	---	---	---	---	---	---	---	<0.261	<0.0122	<0.0120	NE	NE	NE
Chrysene	218-01-9	<0.0119	**0.306**	---	---	---	---	---	---	---	---	---	---	<0.261	<0.0122	**0.0139**	cPAH	cPAH	cPAH
Dibenz(a,h)anthracene	53-70-3	<0.0119	**0.0472**	---	---	---	---	---	---	---	---	---	---	<0.261	<0.0122	<0.0120	cPAH	cPAH	cPAH
Fluoranthene	206-44-0	<0.0119	**0.676**	---	---	---	---	---	---	---	---	---	---	**0.299**	<0.0122	**0.0125**	200	2,700	670
Fluorene	86-73-7	<0.0119	**0.0303**	---	---	---	---	---	---	---	---	---	---	**0.485**	<0.0122	<0.0120	390	5,800	110
Indeno(1,2,3-cd)pyrene	193-39-5	<0.0119	**0.145**	---	---	---	---	---	---	---	---	---	---	<0.261	<0.0122	<0.0120	cPAH	cPAH	cPAH
Naphthalene	91-20-3	<0.0119	<0.0116	---	---	---	---	---	---	---	---	---	---	**0.289**	<0.0122	<0.0120	81	280	4.5
Phenanthrene	85-01-8	<0.0119	**0.397**	---	---	---	---	---	---	---	---	---	---	**2.55**	<0.0122	<0.0120	NE	NE	NE
Pyrene	129-00-0	<0.0119	**0.534**	---	---	---	---	---	---	---	---	---	---	**3.33**	<0.0122	<0.0120	220	3,200	440
All other reported PAHs	---	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	---	---	---
BaP Equivalent[c]	---	**0.0**	**0.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	2^{BTV}	23	1.4
Metals (mg/kg)																			
Arsenic, Total	7440-38-2	**7.5**	**6.7**	**10.5**	**7.6**	---	---	---	---	---	---	---	---	**3.7**	**5.5**	**5.4**	9^{BTV}	9^{BTV}	5.8
Barium, Total	7440-39-3	**124** [1]	**101**	**245**	**122**	---	---	---	---	---	---	---	---	**123**	**94.9**	**84.5**	3,000	41,000	1,700
Cadmium, Total	7440-43-9	<0.090	<0.088	**0.41**	**0.094**	---	---	---	---	---	---	---	---	**0.41**	<0.18	**0.31**	1.6	23	8.8
Chromium, Total[e]	7440-47-3	**23.0**	**18.5**	**17.4**	**28.0**	---	---	---	---	---	---	---	---	**9.8**	**14.3**	**15.4**	23,000/11[e]	100,000/62[e]	1,000,000,000/36[e]
Lead, Total	7439-92-1	**11.5**	**13.9**	**46.6**	**10.8**	---	---	---	---	---	---	---	---	**34.4**	**8.0**	**23.1**	300	700	2,700
Mercury, Total	7439-97-6	**0.095**	**0.022**	**0.27**	**0.035**	**0.048**	**0.026**	**1.0**	**0.03**	**0.28**	<0.023	**0.063**	**0.04**	**0.11**	**0.063**	**0.087**	3.1	3.1	3.3
Selenium, Total	7782-49-2	**0.93**	**0.8**	**1.0**	**0.63**	---	---	---	---	---	---	---	---	<1.2	<1.2	<1.1	77	1,200	2.6
Silver, Total	7440-22-4	<0.56	<0.55	<0.58	<0.57	---	---	---	---	---	---	---	---	<0.62	<0.60	<0.56	77	1,200	7.9
Other Parameters (mg/kg)																			
Diesel Range Organics (D	---	<9.7	**59.1** [2]	---	---	---	---	---	---	---	---	---	---	**18,100**	**21.0**	<8.2	NE[f]	NE[f]	NE[f]
Organochlorine Pesticides (mg/kg)																			
Organochlorine Pesticid	---	---	---	---	<RL	<RL	---	---	---	---	---	---	---	---	---	---	---		---

Notes

Minnesota Pollution Control Agency (MPCA) Soil Reference Values (SRVs) updated in May 2021 and Soil Leaching Values (SLVs) updated in June 2013.

mg/kg = Milligrams per kilogram.

< = Not detected at or above the laboratory reporting limit indicated.

--- = Not analyzed or calculated for this parameter or not applicable.

BTV = Background Threshold Value. BTVs are not calculated health based SRVs. The MPCA calculated SRVs were determined to be below background values (MPCA guidance document c-r1-05, April 2021).

cPAH = Individual regulatory limit not established for this carcinogenic PAH; included in BaP equivalent calculation.

NE = Regulatory limit not established for this parameter.

RL = Reporting limits for other parameters that are not listed individually in this table because their concentrations were below reporting limits provided in the laboratory report.

[a] = Regulatory limit for combination of cis- and trans-1,3-Dichloropropene.

[b] = Regulatory limit for combination of m-, p-, and o-Xylenes.

[c] = Benzo(a)pyrene (BaP) equivalent is calculated based on the concentration and weighted toxicity of cPAHs; MPCA; 2009. If no cPAHs were detected above reasonable laboratory reporting limits the BaP equivalent is reported as 0 mg/kg per MPCA Remediation Division Policy; June 2011.

[d] = Regulatory limit for 4-Methylphenol only.

[e] = Reported result is total chromium, regulatory limit for chromium III and chromium VI are provided.

[f] = DRO/GRO concentrations greater than 100 mg/kg are not suitable for reuse as unregulated fill per MPCA Guidance Document c-rem1-01 "Best Management Practices for the Off-Site Reuse of Unregulated Fill" (February 2012).

[g] = The soil cleanup goal for total Kjeldahl nitrogen (TKN) from 0 to 2.5 feet bgs is 5,000 mg/kg and below 2.5 feet bgs is 1,000 mg/kg.

Exceeds Residential SRV

Exceeds Screening SLV

Exceeds 100 mg/kg for DRO/GRO

BRAUN INTERTEC

Attachment 2: Revised Figures

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- SOIL BORING LOCATION
- HAND AUGER SOIL BORING LOCATION
- SOIL SAMPLE LOCATION
- GOLF GREEN
- SURFACE WATER SAMPLE LOCATION

N

150' 0 300'

SCALE: 1" = 300'

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Minneapolis, MN 55438
952.995.2000
braunintertec.com

Drawing Information

Project No:	B1904484.00
Drawing No:	B1904484-00
Drawn By:	BJB
Date Drawn:	10/4/19
Checked By:	MK
Last Modified:	5/27/21

Project Information

Hollydale Golf Course

4710 Holly Lane N.

Plymouth, Minnesota

Site Diagram

Figure 3

AG-5	
4/19/2021	
Depth	**2-2.5**
Chlorothalonil	**0.219**

ST-21		
10/10/2019		
Depth	0-6"	1-2'
Mercury	0.063	0.04

Hole 15		
4/19/2021		
Depth	**0-0.5**	**1-1.5**
Arsenic	**3.8**	---
Barium	**64.2**	---
Cadmium	**1.1**	---
Chromium[e]	**37.7**	---
Lead	**6.9**	---
Mercury	**77.2**	**0.027**
Selenium	<1.2	---
Silver	<0.60	---

ST-14		
10/10/2019		
Depth	0-6"	1-2'
Mercury	0.28	<0.023

Hole 8		
4/19/2021		
Depth	**0-0.5**	**1-1.5**
Mercury	**27.5**	**<0.022**

AG-4		
4/19/2021		
Depth	**0-0.5**	**2-2.5**
Arsenic	---	---
Mercury	**0.035**	**0.026**

AG-3		
4/19/2021		
Depth	**0-0.5**	**2-2.5**
Arsenic	**3.0**	**4.3**
Mercury	**0.064**	**0.044**

ST-4		
10/10/2019		
Depth	0-6"	1-2'
Mercury	0.048	0.026

AGSW-1	
Static Water Level	**Surface**
MDA List 1 Pesticides (µg/L)	ND
Nitrate (as Nitrogen) - mg/L	<0.1

AGSW-2	
Static Water Level	**Surface**
MDA List 1 Pesticides (µg/L)	ND
Nitrate (as Nitrogen) - mg/L	**1**

ST-7		
Depth	**0-0.5'**	**1-2'**
Total Mercury	**1.0**	**0.03**

NOTES

Minnesota Pollution Control Agency (MPCA) SRVs updated in May 2021 and SLVs updated in June 2013.
mg/kg = Milligrams per kilogram.
< = Not detected at or above the laboratory reporting limit indicated.
--- = Not analyzed or calculated for this parameter or not applicable.
RL = Reporting limits for other parameters that are not listed individually in this table because their concentrations were below reporting limits provided in the laboratory report.
NE = Regulatory limit not established for this parameter.
[g] = The soil cleanup goal for total Kjeldahl nitrogen (TKN) from 0 to 2.5 feet bgs is 5,000 mg/kg and below 2.5 feet bgs is 1,000 mg/kg.
DWC = Drinking Water Criteria
ND = Not detected at or above the laboratory reporting limit indicated.
Mercury Residential SRV = 3.1 mg/kg

Exceeds Residential SRV
Exceeds Screening SLV
Exceeds 100 mg/kg for DRO

SOIL BORING LOCATION
HAND AUGER SOIL BORING LOCATION
SOIL SAMPLE LOCATION
GOLF GREEN
SURFACE WATER SAMPLE LOCATION

150' 0 300'
SCALE: 1" = 300'

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Date Drawn: 10/4/19
Checked By: MK
Last Modified: 5/27/21

Project Information

Hollydale Golf Course

4710 Holly Lane N.

Plymouth, Minnesota

Soil and Water Analytical Results

Figure 4

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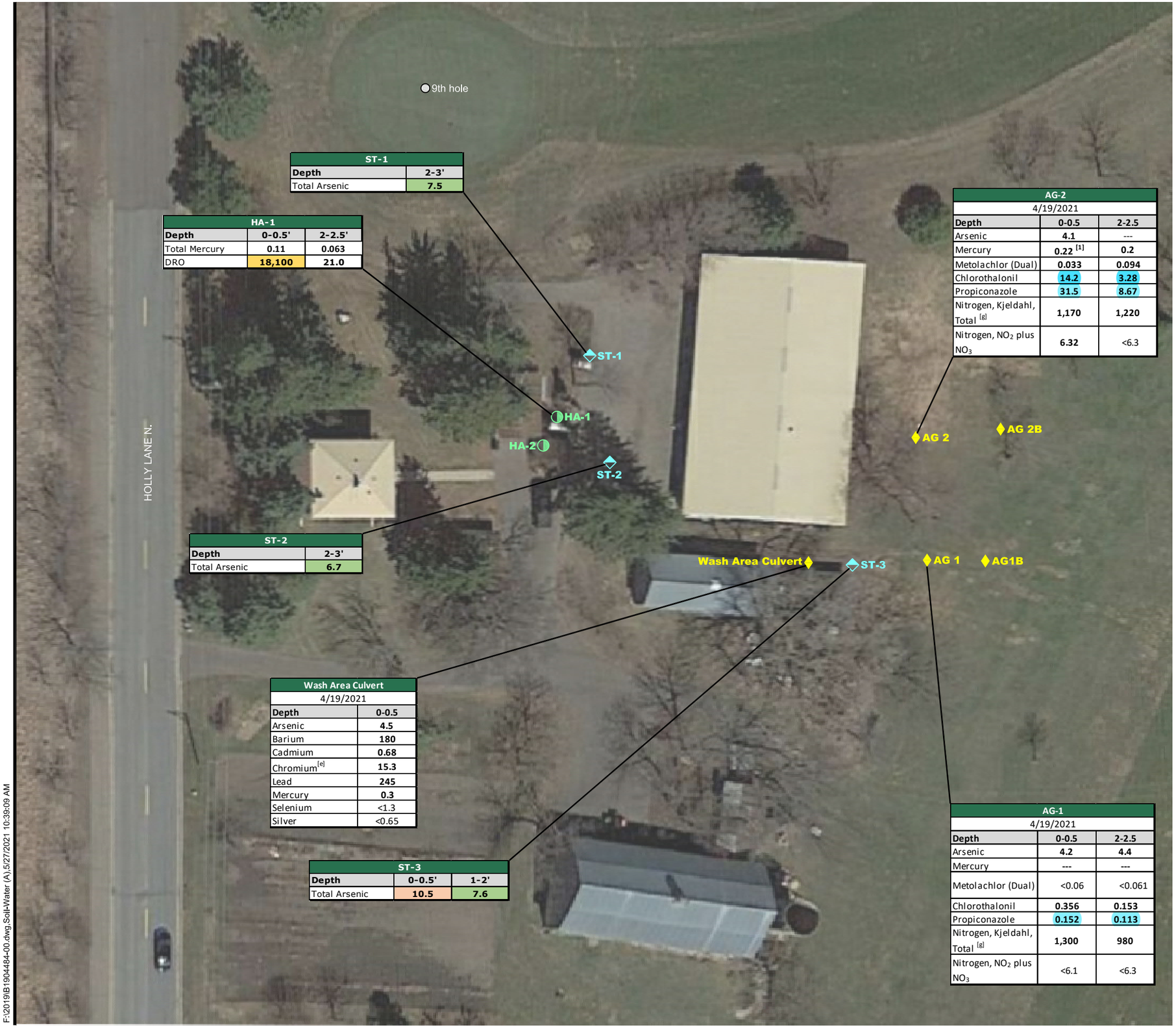

ST-1	
Depth	**2-3'**
Total Arsenic	**7.5**

HA-1		
Depth	**0-0.5'**	**2-2.5'**
Total Mercury	**0.11**	**0.063**
DRO	**18,100**	**21.0**

ST-2	
Depth	**2-3'**
Total Arsenic	**6.7**

Wash Area Culvert	
4/19/2021	
Depth	**0-0.5**
Arsenic	**4.5**
Barium	**180**
Cadmium	**0.68**
Chromium[e]	**15.3**
Lead	**245**
Mercury	**0.3**
Selenium	<1.3
Silver	<0.65

ST-3		
Depth	**0-0.5'**	**1-2'**
Total Arsenic	**10.5**	**7.6**

AG-2		
4/19/2021		
Depth	**0-0.5**	**2-2.5**
Arsenic	**4.1**	---
Mercury	**0.22** [1]	**0.2**
Metolachlor (Dual)	**0.033**	**0.094**
Chlorothalonil	**14.2**	**3.28**
Propiconazole	**31.5**	**8.67**
Nitrogen, Kjeldahl, Total [g]	**1,170**	**1,220**
Nitrogen, NO_2 plus NO_3	**6.32**	<6.3

AG-1		
4/19/2021		
Depth	**0-0.5**	**2-2.5**
Arsenic	**4.2**	**4.4**
Mercury	---	---
Metolachlor (Dual)	<0.06	<0.061
Chlorothalonil	**0.356**	**0.153**
Propiconazole	**0.152**	**0.113**
Nitrogen, Kjeldahl, Total [g]	**1,300**	**980**
Nitrogen, NO_2 plus NO_3	<6.1	<6.3

NOTES

Minnesota Pollution Control Agency (MPCA) SRVs updated in May 2021 and SLVs updated in June 2013.
mg/kg = Milligrams per kilogram.
< = Not detected at or above the laboratory reporting limit indicated.
--- = Not analyzed or calculated for this parameter or not applicable.
RL = Reporting limits for other parameters that are not listed individually in this table because their concentrations were below reporting limits provided in the laboratory report.
NE = Regulatory limit not established for this parameter.
[g] = The soil cleanup goal for total Kjeldahl nitrogen (TKN) from 0 to 2.5 feet bgs is 5,000 mg/kg and below 2.5 feet bgs is 1,000 mg/kg.
MDA CUG = Minnesota Department of Agricultural Clean Up Goal
ND = Not detected at or above the laboratory reporting limit indicated.
Mercury Residential SRV = 3.1 mg/kg

Exceeds Residential SRV
Exceeds Screening SLV
Exceeds 100 mg/kg for DRO
Exceeds MDA CUG

SOIL BORING LOCATION
HAND AUGER SOIL BORING LOCATION
SOIL SAMPLE LOCATION
GOLF GREEN

20' 0 40'
SCALE: 1" = 40'

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Project Information

Hollydale Golf Course

4710 Holly Lane N.

Plymouth, Minnesota

Soil and Water Analytical Results

Figure 4a

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REMEDIAL EXCAVATION AREAS

SOIL BORING LOCATION

HAND AUGER SOIL BORING LOCATION

SOIL SAMPLE LOCATION

GOLF GREEN

SURFACE WATER SAMPLE LOCATION

150' 0 300'

SCALE: 1" = 300'

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Drawing No: B1904484-00

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Date Drawn:	10/4/19
Checked By:	MK
Last Modified:	5/27/21

Project Information

Hollydale Golf Course

4710 Holly Lane N.

Plymouth, Minnesota

Remedial Excavation Areas

Figure 5

REMEDIAL EXCAVATION AREAS

SOIL BORING LOCATION

HAND AUGER SOIL BORING LOCATION

SOIL SAMPLE LOCATION

GOLF GREEN

20' 0 40'

SCALE: 1" = 40'

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Drawing Information

Project No:	B1904484.00
Drawing No:	B1904484-00
Drawn By:	BJB
Date Drawn:	10/4/19
Checked By:	MK
Last Modified:	5/27/21

Project Information

Hollydale Golf Course

4710 Holly Lane N.

Plymouth, Minnesota

Remedial Excavation Areas Detail

Figure 5a

Attachment 3: Contamination Impacts Survey

Contamination Impacts Survey

Human Exposure

The mercury-impacted soils identified at the Site are readily accessible below the grass and thin topsoil layer at each green and fringe. Currently, the former golf course is open green space and there are no dedicated uses for the area. The area is not open to public use and the grass in the former golf course has been well maintained.

The Corrective Action Plan submitted to the Minnesota Department of Agriculture (MDA) under separate cover will address the removal of mercury-impacted soils. The cleanup goal will be 3.1 mg/kg, which is the current Minnesota Pollution Control Agency (MPCA) Residential soil reference value (SRV). SRVs are allowable risk-based contaminant concentrations derived by MPCA using risk assessment methodology, modeling, and risk management policy to guide investigation and cleanup actions. SRVs relate to direct-contact exposure.

Groundwater Receptors

A search for registered water wells located on-Site and within ¼-mile radius of the Site was conducted using the Minnesota Well Index (MWI), which is a limited database of water well records. The MWI was accessed through the Minnesota Department of Health (MDH) website. Not all private water wells are listed in that database. In Addition the MDA provided Braun Intertec records for one of the private wells at the Site.

Our review of the MWI database reported one water well located at the Site. Unique Well Number 483951 was located on the west-central side of the Site next to the clubhouse. The well casing diameter is listed as 6 inches and depth is listed as 290 feet.

MDA's version of county well index indicates a well (#204208) south of the maintenance building area. The well casing diameter is listed as 12 inches to 333 ft, and depth is listed as 392 feet. Copies of the available well records are attached in Attachment 1.

During the recently completed Phase I ESA performed by Braun Intertec Three wells were observed on the Site. One of the wells on the west side of the Site was used for irrigation according to Mr. Deziel and the other two wells (Clubhouse and east remote restrooms) were used for potable water. The remote well did not appear to have Unique Well Numbers registered.

Based on current soil analytical results, the vertical extent of mercury impacts has been identified at each green and appears limited to the upper 1 foot of soil. The identified petroleum, Chlorothalonil, Propiconazole and arsenic impacts are limited to small area around the maintenance areas and appear to be limited to the top 4 feet of soil. Given the shallow nature of the soil impacts and the depth of the existing wells, there appears to be a low risk for impacts to groundwater and/or the identified groundwater receptors.

A map and a list of nearby water wells are provided in Attachment 2.

Surface Water Receptors

There is a large wetland on the South portion of the Site, in addition, there are some stormwater ponds in the residential developments that surround the Site. Surface drainage at the Site (Phase I Development Area) appears to be toward the low area on the south end of the former golf course.

Surface water samples were collected from the pond located adjacent to the southern wetland (AGSW-1), and from a water feature in the center of the Site (AGSW-2). No impacts were identified in the surface water samples collected at the Site. Based on the significant decrease in mercury concentrations in the samples outside of the greens, and our experience with other golf course sites, it is unlikely that the mercury-containing fungicide migrated into the identified waters through surface runoff.

Minnesota Unique Well Number

483951

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 08/24/1992
Update Date 03/10/2014
Received Date

Well Name	Township	Range	Dir	Section	Subsection
HOLLYDALE	118	22	W	8	DCA

Elevation **Elev. Method**

Address

Contact 4540 HOLLY PLYMOUTH MN 55446
Well 4710 HOLLY LA N PLYMOUTH MN 55446

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY	0	63	YELLOW	SOFT
CLAY	63	84	BLUE	MEDIUM
SAND GRAVEL	84	130	BLK/RED	SOFT
ROCK LEDGE	130	143	BLACK	HARD
CLAY SANDY	143	190	RED	MEDIUM
SAND CLAY	190	230	ORN/RED	MEDIUM
CLAY	230	250	ORN/RED	MEDIUM
SAND CLAY	250	255	ORN/RED	MEDIUM
DOLOMITE LIMEROCK	255	290	ORN/RED	HARD

Remarks
WELL#2

Well Depth 290 ft. **Depth Completed** 290 ft. **Date Well Completed** 05/26/1992
Drill Method Non-specified Rotary **Drill Fluid** Bentonite

Use irrigation **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint** Welded
Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
6 in. To 261 ft.	lbs./ft.	10 in. To 261 ft.
		6 in. To 290 ft.

Open Hole From ft. To ft.
Screen? ☐ **Type** **Make**

Static Water Level
135 ft. land surface Measure 05/26/1992

Pumping Level (below land surface)
200 ft. 2 hrs. Pumping at 300 g.p.m.

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
bentonite		0 ft.	260 ft.

Nearest Known Source of Contamination
feet Direction Type
Well disinfected upon completion? ☒ Yes ☐ No

Pump ☒ Not Installed Date Installed
Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous
First Bedrock Aquifer
Last Strat Depth to Bedrock ft
Located by
Locate Method
System UTM - NAD83, Zone 15, Meters X Y
Unique Number Verification Input Date

Angled Drill Hole

Well Contractor

Licensee Business	Lic. or Reg. No.	Name of Driller
Ingleside Engr.	27355	DEHN, D

E

MINNESOTA DEPARTMENT OF HEALTH
WELL RECORD
Minnesota Statutes Chapter 103I

MINNESOTA UNIQUE WELL NO. 483951

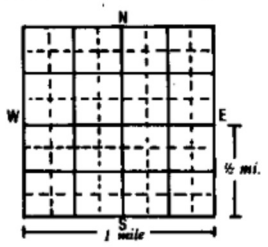
WELL LOCATION

County Name: HENNEPIN

Township Name	Township No.	Range No.	Section No.	Fraction
PLYMOUTH	118	22	08	NE ¼ SW ¼ SE ¼

Numerical Street Address or Fire Number and City of Well Location: 4710 HOLLY LANE NORTH, PLYMOUTH, MN 55446

Show exact location of well in section grid with "X". Sketch map of well location. Showing property lines, roads and buildings.



PROPERTY OWNER'S NAME: HOLLYDALE GOLF INC., William Daniel

Mailing address if different than property address indicated above: 4540 HOLLY, PLYMOUTH, MN 55446 -

FORMATION LOG	COLOR	HARDNESS OF FORMATION	FROM	TO
CLAY	YELLOW	SOFT	0	63
CLAY	BLUE	MEDIUM	63	84
SAND GRAVEL	Black Red	SOFT	84	130
ROCK LEDGE	Black Granite	HARD	130	143
CLAY SANDY	Red	Medium	143	190
SAND CLAY	Orange Red	Medium	190	230
CLAY	Orange Red	Medium	230	250
SAND CLAY	Orange Red	Medium	250	255
Dolomite LIME ROCK	Orange Red	Hard	255	290

Use a second sheet, if needed

REMARKS, ELEVATION, SOURCE OF DATA, etc.

JUN 1992 RECEIVED WELL MGT.

WELL DEPTH (completed): 290 ft. Date of Completion: 5/26/92

DRILLING METHOD: ☐ Cable Tool ☐ Driven ☐ Dug ☐ Auger ☒ Rotary ☐ Jetted ☐ _____

DRILLING FLUID: BENTONITE

USE: ☐ Domestic ☐ Monitoring ☐ Heating/Cooling ☒ Irrigation ☐ Public ☐ Industry/Commercial ☐ Test Well ☐ Dewatering ☐ _____

CASING: ☒ Steel ☐ Plastic — Drive Shoe? ☐ Yes ☐ No — ☐ Threaded ☒ Welded ☐ _____

HOLE DIAM.: 10" 261'

CASING DIAMETER / WEIGHT:
- 6" in. to 261 ft. _____ lbs./ft.
- _____ in. to _____ ft. _____ lbs./ft.
- _____ in. to _____ ft. _____ lbs./ft.

HOLE DIAM.:
- 6" in. to 290 ft.
- _____ in. to _____ ft.
- _____ in. to _____ ft.

SCREEN: None
Make _____
Type _____ Diam. _____
Slot/Gauze _____ Length _____
Set between _____ ft. and _____ ft. FITTINGS: _____

OPEN HOLE from _____ ft. to _____ ft.

STATIC WATER LEVEL: 135 ft. ☒ below ☐ above land surface Date measured 5/26/92

PUMPING LEVEL (below land surface): 200 ft. after 3 hrs. pumping 300 g.p.m.

WELL HEAD COMPLETION
☐ Pitless adapter manufacturer _____ Model _____
☐ Casing Protection _____

GROUTING INFORMATION
Well grouted? ☒ Yes ☐ No
Grout Material ☐ Neat cement ☒ Bentonite from cuttings
from 260 to top ft. _____ ☐ yds. ☐ bags
from _____ to _____ ft. _____ ☐ yds. ☐ bags
from _____ to _____ ft. _____ ☐ yds. ☐ bags

NEAREST SOURCE OF POSSIBLE CONTAMINATION
_____ feet _____ direction _____ type
Well disinfected upon completion? ☒ Yes ☐ No

PUMP
☒ Not installed Date installed _____
Manufacturer's name _____
Model number _____ HP _____ Volts _____
Length of drop pipe _____ ft. Capacity _____ g.p.m.
Pressure Tank Capacity _____
Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐ _____

ABANDONED WELLS
Not in use and not sealed well on property? ☐ Yes ☐ No

WELL CONTRACTOR CERTIFICATION

This well was drilled under my jurisdiction and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

INGLESIDE ENGINEERING & CONST. INC. 27355
Licensee Business Name *Lic. or Reg. No.*

Brian V Reuschel 5/27/92
Authorized Representative Signature *Date*

DAVID DEHN 5/26/92
Name of Driller *Date*

MINN. DEPT. OF HEALTH COPY 483951

HE-01205-03 (Rev. 9/91)

Minnesota Unique Well Number

204208

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 08/24/1991
Update Date 05/04/2015
Received Date

Well Name	Township	Range	Dir	Section	Subsection
HOLLYDALE	118	22	W	8	CCDADD

Elevation 1001 **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

C/W 4540 HOLLY LA N PLYMOUTH MN

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY-SOME GRAVEL	0	75		
CEMENTED SAND AND	75	100		
SAND AND GRAVEL	100	124		
GRAVELY CLAY	124	165		
BROWN SANDY CLAY	165	190	BROWN	
GREY CLAY	190	200	GRAY	
SHALE	200	245		
SAND AND GRAVEL	245	297		
SHALE	297	331		
JORDAN SANDSTONE	331	392		

Remarks

5 IN. BLACK STEEL PIPE OVERLAPPING INTO 12 IN. CASING 30'.

Well Depth	Depth Completed	Date Well Completed
392 ft.	392 ft.	09/30/1964

Drill Method Cable Tool **Drill Fluid**

Use public supply/non-community **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter		Weight	
12	in. To 333 ft.		lbs./ft.
5	in. To ft.		lbs./ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** galvanized **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set	
in.	10	ft.	ft.	ft.

Static Water Level

134. ft. land surface Measure 09/30/1964

Pumping Level (below land surface)

199 ft. 3 hrs. Pumping at 500 g.p.m.

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
pearock		ft.	ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name JACUZZI

Model Number 10 IN. L. S. HP 60 Volt 220

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock Jordan Sandstone Aquifer Jordan
Last Strat Jordan Sandstone Depth to Bedrock 331 ft
Located by Minnesota Geological Survey
Locate Method Digitized - scale 1:24,000 or larger (Digitizing Table)
System UTM - NAD83, Zone 15, Meters X 460875 Y 4987221
Unique Number Verification Information from Input Date 01/01/1990

Angled Drill Hole

Well Contractor

Tri-state Well Co. 27118 BERTHIEUME, M
Licensee Business Lic. or Reg. No. Name of Driller

F:\2019\B1904484.dwg,Phase I,6/14/2019 9:10:41 AM

N

250' 0 500'

SCALE: 1" = 500'

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11001 Hampshire Avenue S
Minneapolis, MN 55438
952.995.2000
braunintertec.com

Project No: B1904484

Drawing No: B1904484

Drawn By:	LAO
Date Drawn:	5/31/19
Checked By:	MPE
Last Modified:	6/14/19

Hollydale Golf Course

4710 Holly Lane N.

Plymouth, Minnesota

Site Sketch

Figure 2

Attachment 4: Geologic logs

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-1**

LOCATION: See attached sketch. Benchmark: Elevations were obtained using GPS and the State of Minnesota's permanent base station network.

NORTHING: 190415	EASTING: 470744		
DRILLER: M. Barber	LOGGED BY: H. Vloo	START DATE: 10/10/19	END DATE: 10/10/19
SURFACE ELEVATION: 1011.7 ft	RIG: GP-3	METHOD: 3 1/4" HSA	SURFACING: Grass	WEATHER: Cloudy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1011.0							
0.7		SILTY SAND (SM), fine to medium-grained Sand, highly organic, black, moist (TOPSOIL)					
		LEAN CLAY with SAND (CL), brown, moist, medium (GLACIAL TILL)		3-4-3 (7) 12"	1.25	19	
1007.7							
4.0	▽	SILTY SAND (SM), fine-grained Sand, contains lenses of Lean Clay, brown, wet, loose (GLACIAL TILL)	5	1-2-3 (5) 18"		25	
1004.7							
7.0		SANDY LEAN CLAY (CL), trace Gravel, grayish brown to brown, moist, medium to stiff (GLACIAL TILL)		2-3-4 (7) 18"	1.25		
			10	1-2-4 (6) 18"	1.5		
		With layer of Silty Sand at 12 feet		3-4-5 (9) 18"			
	▼		15	4-6-7 (13) 18"			
			20	4-5-7 (12) 12"			
988.7							
23.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, very stiff to stiff (GLACIAL TILL)	25	6-7-9 (16) 15"			
			30	4-6-7 (13) 18"			
980.7							
31.0		END OF BORING					Water observed at 5.0 feet while drilling.
		Boring immediately backfilled with bentonite grout	35				Water observed at 16.0 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-2**

LOCATION: See attached sketch

NORTHING: 190371 EASTING: 470752

DRILLER: M. Barber LOGGED BY: H. Vloo START DATE: 10/10/19 END DATE: 10/10/19

SURFACE ELEVATION: 1010.5 ft RIG: GP-3 METHOD: 3 1/4" HSA SURFACING: Bituminous WEATHER: Cloudy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1006.5		FILL: LEAN CLAY (CL), organic, black and dark brown, moist		7-2-2-2 (4) 16"			
				1-1-2-2 (3) 10"			
4.0		SANDY LEAN CLAY (CL), trace Gravel, grayish brown to brown, moist, very soft to very stiff (GLACIAL TILL)	5	1-1-2-2 (3) 24"	0.75	26	
	▽			2-2-3-3 (5) 18"	1		
			10	0-0-0-1 24"	0.25	28	
996.5				2-4-6 (10) 18"			
14.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, medium to stiff (GLACIAL TILL)	15	2-5-7 (12) 18"			
			20	2-3-5 (8) 18"			
			25	1-4-5 (9) 18"			
979.5			30	3-4-6 (10) 18"			Water observed at 9.0 feet while drilling.
31.0		END OF BORING Boring immediately backfilled with bentonite grout	35				Water not observed with 29.5 feet of tooling in the ground at end of drilling.

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-3**

LOCATION: See attached sketch

NORTHING: 190330 EASTING: 470851

DRILLER: M. Barber LOGGED BY: H. Vloo START DATE: 10/10/19 END DATE: 10/10/19

SURFACE ELEVATION: 1009.2 ft RIG: GP-3 METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Cloudy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1007.2		FILL: SANDY LEAN CLAY (CL), organic, contains lenses of Silty Sand, black and dark brown, moist		0-2-2-2 (4) 24"			
2.0		LEAN CLAY (CL), brown, moist, soft (ALLUVIUM)		0-1-2-2 (3) 24"	0.5	32	
1005.2		SANDY LEAN CLAY (CL), trace Gravel, brown, moist, soft to stiff (GLACIAL TILL)		0-0-2-2 (2) 24"	1	21	
4.0			5	2-3-3-5 (6) 24"	1		
				3-4-6-6 (10) 24"			
			10	4-5-7 (12) 18"			
				3-4-7 (11) 18"			
	▼		15				
				2-3-4 (7) 18"			
			20				
				3-3-6 (9) 18"			
			25				
	▽			3-5-7 (12) 18"			Water observed at 30.0 feet while drilling.
978.2			30				
31.0		END OF BORING					Water observed at 18.0 feet immediately after withdrawal of auger.
		Boring immediately backfilled with bentonite grout	35				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-4**

LOCATION: See attached sketch

NORTHING: 189845 EASTING: 470881

DRILLER: M. Barber | LOGGED BY: H. Vloo | START DATE: 10/10/19 | END DATE: 10/10/19

SURFACE ELEVATION: 988.2 ft | RIG: GP-3 | METHOD: 3 1/4" HSA | SURFACING: Grass | WEATHER: Cloudy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
987.2		ORGANIC CLAY (OL), black, moist (TOPSOIL)					
1.0		SILTY SAND (SM), fine to medium-grained Sand, brown and dark brown, moist to wet, very loose (ALLUVIUM)		0-1-2 (3) 15"			
	▽		5	1-2-2 (4) 14"		27	P200=13%
981.2							
7.0		LEAN CLAY (CL), contains seams of Silty Sand, brown, moist, stiff (GLACIAL TILL)		6-3-6 (9) 15"		24	
979.2							
9.0		SILTY SAND (SM), fine to medium-grained Sand, contains seams of Lean Clay, brown, moist, loose (GLACIAL TILL)	10	2-6-3 (9) 8"			
975.2							
13.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, medium (GLACIAL TILL)		1-2-4 (6) 18"			
973.7							Water observed at 5.0 feet while drilling.
14.5		END OF BORING	15				
		Boring immediately backfilled					
			20				
			25				
			30				
			35				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-5**

LOCATION: See attached sketch

NORTHING: 190001 EASTING: 471693

DRILLER: Haugo GeoTechnical Services | LOGGED BY: H. Vloo | START DATE: 10/09/19 | END DATE: 10/09/19

SURFACE ELEVATION: 969.8 ft | RIG: Subcontractor | METHOD: 3 1/4" HSA | SURFACING: | WEATHER: Cloudy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
967.8		ORGANIC CLAY (OL), black, moist (TOPSOIL)					
2.0 965.8		LEAN CLAY with SAND (CL), grayish brown, moist, soft (ALLUVIUM)		1-1-1 (2)	0.5	28	
4.0	▼	SANDY LEAN CLAY (CL), trace Gravel, brown, moist, stiff (GLACIAL TILL)	5	1-4-5 (9)	2.5		
	▽			4-5-5 (10)	1.5	21	
960.8							
9.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, medium to stiff (GLACIAL TILL)	10	2-3-4 (7)	1		
		With lenses of brown Silty Sand at 13 feet		4-5-4 (9)			
			15	2-3-4 (7)			
			20	1-9-3 (12)			
948.8							
21.0		END OF BORING Boring immediately backfilled with bentonite grout	25				Water observed at 7.0 feet while drilling. Water observed at 5.0 feet immediately after withdrawal of auger.
			30				
			35				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-6**

LOCATION: See attached sketch

NORTHING: 190428 EASTING: 472348

DRILLER: Haugo GeoTechnical Services | LOGGED BY: H. Vloo | START DATE: 10/09/19 | END DATE: 10/09/19

SURFACE ELEVATION: 966.4 ft | RIG: Subcontractor | METHOD: 3 1/4" HSA | SURFACING: | WEATHER:

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
964.4		ORGANIC CLAY (OL), black, moist (TOPSOIL)					
2.0 962.4		LEAN CLAY (CL), gray, moist, soft (ALLUVIUM)		0-1-3 (4)	1.25	24	
4.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, medium to stiff (GLACIAL TILL)	5	2-4-5 (9)	2	18	
				2-3-5 (8)			
			10	2-3-4 (7)			
				2-4-5 (9)			
			15	2-4-5 (9)			
945.4			20	3-4-5 (9)			
21.0		END OF BORING Boring immediately backfilled with bentonite grout	25 30 35				Water not observed while drilling.

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-7**

LOCATION: See attached sketch

NORTHING: 195072 EASTING: 473099

DRILLER: M. Barber | LOGGED BY: H. Vloo | START DATE: 10/14/19 | END DATE: 10/14/19

SURFACE ELEVATION: 974.8 ft | RIG: GP-3 | METHOD: 3 1/4" HSA | SURFACING: Grass | WEATHER: Cool

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
973.8		CLAYEY SAND (SC), organic, dark brown, moist (TOPSOIL)					
1.0		LEAN CLAY (CL), grayish brown, moist, soft (ALLUVIUM)		2-2-2 (4) 20"	0.75	30	
970.8							
4.0		SANDY LEAN CLAY (CL), trace Gravel, brown, moist, medium to stiff (GLACIAL TILL)	5	1-3-4 (7) 18"	2	22	
				3-4-5 (9) 24"			
			10	4-6-8 (14) 24"			
962.8							
12.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, stiff (GLACIAL TILL)		3-4-6 (10) 20"			
960.3							
14.5		END OF BORING	15				Water not observed while drilling.
		Boring immediately backfilled	20				
			25				
			30				
			35				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-8**

LOCATION: See attached sketch

NORTHING: 1960661 EASTING: 471805

DRILLER: M. Barber LOGGED BY: H. Vloo START DATE: 10/11/19 END DATE: 10/11/19

SURFACE ELEVATION: 969.3 ft RIG: GP-3 METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Cloudy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
965.3	▽	ORGANIC CLAY (OL), black, moist (TOPSOIL)		0-0-0 WOH/18" 11"			Water observed at surface while drilling
4.0		LEAN CLAY (CL), gray, moist, very soft (ALLUVIUM)	5	0-0-0 WOH/18" 18"	0.5	30	
960.3		*Wood fragments at 8 feet*		0-0-0 WOH/18" 17"			
9.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, very soft to stiff (GLACIAL TILL)	10	0-0-0 WOH/18" 18"	0.25	23	
			15	1-3-4 (7) 18"			
951.3				2-4-5 (9) 18"			
18.0		END OF BORING Boring immediately backfilled	20				Water observed at 0.0 feet while drilling.
			25				
			30				
			35				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-9**

LOCATION: See attached sketch

NORTHING: 190199 EASTING: 471789

DRILLER: M. Barber | LOGGED BY: H. Vloo | START DATE: 10/10/19 | END DATE: 10/10/19

SURFACE ELEVATION: 973.8 ft | RIG: GP-3 | METHOD: 3 1/4" HSA | SURFACING: Grass | WEATHER: Rain & Clouds

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
972.8		ORGANIC CLAY (OL), black, moist, Possible Fill (TOPSOIL FILL)					
1.0		LEAN CLAY (CL), brown with trace black, moist, stiff to very stiff (POSSIBLE FILL)		0-0-2 (2) 18"			
970.3							
3.5		SANDY LEAN CLAY (CL), trace Gravel, brown, moist, stiff to very stiff, rust staining (GLACIAL TILL)		2-4-5 (9) 12"	1.75	20	
				3-4-6 (10) 18"	2	20	
				4-6-9 (15) 17"			
959.3				5-7-9 (16) 18"			
14.5		END OF BORING Boring immediately backfilled					Water not observed while drilling.

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-10**

LOCATION: See attached sketch

NORTHING: 190775 EASTING: 470932

DRILLER: M. Barber LOGGED BY: H. Vloo START DATE: 10/11/19 END DATE: 10/11/19

SURFACE ELEVATION: 998.4 ft RIG: GP-3 METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Snow & Clouds

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
997.7		ORGANIC CLAY (OL), black, moist (TOPSOIL)					
0.7		LEAN CLAY (CL), grayish brown, moist, medium (GLACIAL TILL)		1-2-3 (5) 16"	1	28	
994.4							
4.0	▽	SILTY SAND (SM), fine to medium-grained Sand, brown, moist, medium dense (GLACIAL TILL)	5	6-8-10 (18) 15"		23	P200=23%
		With lenses of Lean Clay at 8 feet		10-10-12 (22) 15"			
989.4							
9.0		SANDY LEAN CLAY (CL), trace Gravel, brown, moist, very stiff (GLACIAL TILL)	10	10-9-7 (16) 18"			
983.9				10-9-9 (18) 18"			
14.5		END OF BORING Boring immediately backfilled	15				Water observed at 5.0 feet while drilling.
			20				
			25				
			30				
			35				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-11**

LOCATION: See attached sketch

NORTHING: 190926 EASTING: 471706

DRILLER: M. Barber LOGGED BY: H. Vloo START DATE: 10/11/19 END DATE: 10/11/19

SURFACE ELEVATION: 976.8 ft RIG: GP-3 METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Cloudy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
975.8		ORGANIC CLAY (OL), black, moist (TOPSOIL)					
1.0		SILTY SAND (SM), fine to medium-grained Sand, dark brown, moist, loose (POSSIBLE FILL)		3-4-4 (8) 18"		19	P200=16%
972.8							
4.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, stiff (GLACIAL TILL)	5	3-4-5 (9) 16"	1.75	21	
				4-6-8 (14) 18"			
967.8							
9.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, stiff (GLACIAL TILL)	10	5-6-6 (12) 17"			
962.3				2-4-5 (9) 18"			
14.5		END OF BORING Boring immediately backfilled	15				Water not observed while drilling.
			20				
			25				
			30				
			35				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-12**

LOCATION: See attached sketch

NORTHING: 190966 EASTING: 472378

DRILLER: M. Barber LOGGED BY: H. Vloo START DATE: 10/11/19 END DATE: 10/11/19

SURFACE ELEVATION: 995.5 ft RIG: GP-3 METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Cloudy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
994.5		LEAN CLAY (CL), organic, dark brown, moist (TOPSOIL)					
1.0		SANDY LEAN CLAY (CL), trace Gravel, brown, moist, soft to stiff (GLACIAL TILL)		1-2-2 (4) 18"	0.5	21	
			5	3-4-5 (9) 18"	2	19	
				4-5-7 (12) 18"			
			10	3-5-6 (11) 18"			
981.0				4-5-7 (12) 18"			
14.5		END OF BORING Boring immediately backfilled	15				Water not observed while drilling.
			20				
			25				
			30				
			35				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-13**

LOCATION: See attached sketch

NORTHING: 190622 EASTING: 742731

DRILLER: M. Barber LOGGED BY: H. Vloo START DATE: 10/14/19 END DATE: 10/14/19

SURFACE ELEVATION: 971.6 ft RIG: GP-3 METHOD: 3 1/4" HSA SURFACING: Grass WEATHER: Cool

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
970.6		CLAYEY SAND (SC), with roots, brown, moist (SLOPEWASH)					
1.0		ORGANIC CLAY (OL), black, moist (BURIED TOPSOIL)		0-0-0 WOH/18" 9"			
968.1							
3.5	▽	POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained Sand, brown and dark brown, moist (GLACIAL OUTWASH)	5	5-5-4 (9) 17"		14	P200=10%
965.6							
6.0		LEAN CLAY (CL), contains seams of Silty Sand, gray, moist, very soft to soft (GLACIAL TILL)		0-0-0 WOH/18" 24"			
			10	1-2-2 (4) 19"			
959.6							
12.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, medium (GLACIAL TILL)		1-3-3 (6) 21"			
957.1							
14.5		END OF BORING	15				Water observed at 4.5 feet while drilling.
		Boring immediately backfilled					
			20				
			25				
			30				
			35				

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Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-14**

LOCATION: See attached sketch

NORTHING: 191173 EASTING: 470883

DRILLER: Haugo GeoTechnical Services | LOGGED BY: H. Vloo | START DATE: 10/09/19 | END DATE: 10/09/19

SURFACE ELEVATION: 988.0 ft | RIG: Subcontractor | METHOD: 3 1/4" HSA | SURFACING: | WEATHER:

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
986.0		ORGANIC CLAY (OL), black, moist (TOPSOIL)					
2.0 984.0		LEAN CLAY (CL), light gray, moist, soft (ALLUVIUM)		2-2-2 (4)	1	45	
4.0 981.0		SILT (ML), grayish brown, moist, loose (ALLUVIUM)	5	2-2-3 (5)		33	
7.0 976.0	▽	SANDY LEAN CLAY (CL), trace Gravel, brown, moist, medium to stiff (GLACIAL TILL)		2-3-3 (6)	1.5		
			10	2-4-5 (9)			
12.0 967.0	▼	SANDY LEAN CLAY (CL), trace Gravel, gray, moist, soft to medium (GLACIAL TILL)		0-0-2 (2)	1		
			15	2-3-4 (7)	1.25		
			20	2-3-3 (6)	1.25		
21.0		END OF BORING Boring immediately backfilled with bentonite grout	25 30 35				Water observed at 7.0 feet while drilling. Water observed at 18.0 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-15**

LOCATION: See attached sketch

NORTHING: 191463	EASTING: 472056		
DRILLER: M. Barber	LOGGED BY: H. Vloo	START DATE: 10/11/19	END DATE: 10/11/19
SURFACE ELEVATION: 982.5 ft	RIG: GP-3	METHOD: 3 1/4" HSA	SURFACING: Grass	WEATHER: Cloudy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
978.5		ORGANIC CLAY (OL), black, moist (TOPSOIL)		0-1-2 (3) 14"			
4.0 975.5	▽	SILTY SAND (SM), fine to medium-grained Sand, gray, wet, loose (GLACIAL TILL)	5	0-3-4 (7) 12"		27	P200=41%
7.0 970.5		SANDY LEAN CLAY (CL), gray, moist, medium to soft (GLACIAL TILL)		3-4-4 (8) 17"	1.5		
			10	1-2-2 (4) 17"	1.25	16	
12.0 968.0		POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained Sand, gray, wet, loose (GLACIAL OUTWASH)		2-3-4 (7) 18"			
14.5		END OF BORING	15				Water observed at 5.0 feet while drilling.
		Boring immediately backfilled	20				
			25				
			30				
			35				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-16**

LOCATION: See attached sketch

NORTHING: 191540 EASTING: 473134

DRILLER: M. Barber | LOGGED BY: H. Vloo | START DATE: 10/14/19 | END DATE: 10/14/19

SURFACE ELEVATION: 1022.0 ft | RIG: GP-3 | METHOD: 3 1/4" HSA | SURFACING: Grass | WEATHER: Cool

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1021.0		CLAYEY SAND (SC), organic, dark brown, moist (TOPSOIL)					
1.0		SANDY LEAN CLAY (CL), trace Gravel, brown, moist, soft to stiff (GLACIAL TILL)		0-1-2 (3) 21"	0.75	22	
			5	3-4-4 (8) 21"	1.5		
				3-4-4 (8) 21"	1.5	21	
			10	3-4-5 (9) 22"			
				3-4-5 (9) 23"			
1007.5							
14.5		END OF BORING Boring immediately backfilled	15				Water not observed while drilling.
			20				
			25				
			30				
			35				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-17**

LOCATION: See attached sketch

NORTHING: 191490 EASTING: 472308

DRILLER: M. Barber | LOGGED BY: H. Vloo | START DATE: 10/11/19 | END DATE: 10/11/19

SURFACE ELEVATION: 995.1 ft | RIG: GP-3 | METHOD: 3 1/4" HSA | SURFACING: Grass | WEATHER: Cloudy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
994.4		ORGANIC CLAY (OL), black, moist (TOPSOIL)					
0.7		SANDY LEAN CLAY (CL), trace Gravel, grayish brown to brown, moist, medium to stiff (GLACIAL TILL)		0-3-4 (7) 18"	2	21	
			5	2-5-5 (10) 18"	2.5	20	
				3-4-6 (10) 18"			
			10	2-4-6 (10) 18"			
980.6	▽	*With Silty Sand lenses at 14 feet*		2-6-6 (12) 18"			
14.5		END OF BORING	15				Water observed at 14.0 feet while drilling.
		Boring immediately backfilled	20				
			25				
			30				
			35				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-18**

LOCATION: See attached sketch

NORTHING: 191470 EASTING: 471361

DRILLER: Haugo GeoTechnical Services | LOGGED BY: H. Vloo | START DATE: 10/09/19 | END DATE: 10/09/19

SURFACE ELEVATION: 977.9 ft | RIG: Subcontractor | METHOD: 3 1/4" HSA | SURFACING: | WEATHER: Snow & Clouds

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
	▽	ORGANIC CLAY (OL), black, moist (SWAMP DEPOSIT)		0-0-0 WOH/18"			
			5	0-0-0 WOH/18"			
970.9							
7.0		PEAT (PT), black, moist (SWAMP DEPOSIT)		0-0-0 WOH/18"			
			10	0-0-0 WOH/18"			
965.9							
12.0		ORGANIC CLAY (OL), dark gray, moist (SWAMP DEPOSIT)		0-0-0 WOH/18"			
964.9							
13.0		FAT CLAY (CH), gray, moist, very soft (ALLUVIUM)	15	0-0-0 WOH/18"			
			20	0-0-0 WOH/18"			
953.9							
24.0		LEAN CLAY (CL), gray, moist, very soft to soft (ALLUVIUM)	25	0-0-0 WOH/18"			
			30	0-0-0 WOH/18"			
			35	0-1-1 (2)			
941.9							
36.0		END OF BORING					Water observed at 5.0 feet while drilling.
		Boring immediately backfilled with bentonite grout					

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-19**

LOCATION: See attached sketch

NORTHING: 191097 EASTING: 471262

DRILLER: Haugo GeoTechnical Services | LOGGED BY: H. Vloo | START DATE: 10/09/19 | END DATE: 10/09/19

SURFACE ELEVATION: 979.4 ft | RIG: Subcontractor | METHOD: 3 1/4" HSA | SURFACING: | WEATHER:

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
977.4		ORGANIC CLAY (OL), black, moist (TOPSOIL)					
2.0 975.4	▼	LEAN CLAY (CL), gray, moist, soft (ALLUVIUM)		0-0-2 (2)	1		
4.0 973.4		CLAYEY SAND (SC), gray, moist, very soft (ALLUVIUM)	5	0-0-1 (1)			
6.0 970.4	▽	LEAN CLAY (CL), trace Cobbles, gray, moist, soft to hard (ALLUVIUM)		2-9-50 (59)	0.25	41	LL=25, PL=18, PI=7
9.0 967.4		POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained Sand, gray, wet, very loose (GLACIAL OUTWASH)	10	2-1-2 (3)			
12.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, medium to soft (GLACIAL TILL)		1-2-4 (6)	1		
		With Silty Sand seams at 15 feet	15	1-2-3 (5)	0.75		
958.4			20	1-2-2 (4)	1		
21.0		END OF BORING Boring immediately backfilled with bentonite grout	25 30 35				Water observed at 7.0 feet while drilling. Water observed at 2.5 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-20**

LOCATION: See attached sketch

NORTHING: 191931 EASTING: 471108

DRILLER: Haugo GeoTechnical Services | LOGGED BY: H. Vloo | START DATE: 10/09/19 | END DATE: 10/09/19

SURFACE ELEVATION: 1002.0 ft | RIG: Subcontractor | METHOD: 3 1/4" HSA | SURFACING: | WEATHER:

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1001.0		ORGANIC CLAY (OL), black, moist (TOPSOIL)					
1.0		LEAN CLAY (CL), grayish brown, moist, medium (GLACIAL TILL)		3-3-2 (5)	1	34	
998.0							
4.0	▽	SANDY LEAN CLAY (CL), trace Gravel, brown, moist, stiff to medium (GLACIAL TILL)	5	3-6-5 (11)			
				3-3-5 (8)	2	31	
			10	3-4-6 (10)			
				3-4-5 (9)			
			15	3-3-4 (7)			
984.0							
18.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, medium (GLACIAL TILL)	20	3-3-5 (8)			
981.0							
21.0		END OF BORING Boring immediately backfilled with bentonite grout	25				Water observed at 7.0 feet while drilling.
			30				
			35				

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-21**

LOCATION: See attached sketch

NORTHING: 191862 EASTING: 472287

DRILLER: M. Barber | LOGGED BY: H. Vloo | START DATE: 10/11/19 | END DATE: 10/11/19

SURFACE ELEVATION: 1011.9 ft | RIG: GP-3 | METHOD: 3 1/4" HSA | SURFACING: Grass | WEATHER: Cloudy

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1011.1		CLAYEY SAND (SC), organic, dark brown, moist (TOPSOIL)					
0.8		SANDY LEAN CLAY (CL), trace Gravel, brown, moist, soft to stiff (GLACIAL TILL)		1-2-2 (4) 18"	0.75	21	
				2-4-5 (9) 10"			
				3-4-7 (11) 18"		18	
				4-5-10 (15) 13"			
	▽			7-9-7 (16) 18"			Water observed at 12.0 feet while drilling.
997.4							
14.5		END OF BORING Boring immediately backfilled					

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B1904484.00
Geotechnical Evaluation
Hollydale Golf Course
4710 Holly Lane North
Plymouth, Minnesota

BORING: **ST-22**

LOCATION: See attached sketch

NORTHING: 192052 EASTING: 472583

DRILLER: M. Barber | LOGGED BY: H. Vloo | START DATE: 10/14/19 | END DATE: 10/14/19

SURFACE ELEVATION: 1010.0 ft | RIG: Subcontractor | METHOD: 3 1/4" HSA | SURFACING: Grass | WEATHER: Cool

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1008.5		ORGANIC CLAY (OL), black, moist (TOPSOIL)					
1.5		LEAN CLAY (CL), trace fibers, gray to light gray, moist, medium (ALLUVIUM)		2-3-4 (7) 18"	1.5	32	
			5	1-2-3 (5) 19"	1		
1003.0							
7.0		LEAN CLAY with SAND (CL), trace Gravel, grayish brown to brown, moist, soft (GLACIAL TILL)		2-1-2 (3) 20"	1.25	44	
			10	3-3-4 (7) 20"			
995.5				3-4-5 (9) 20"			
14.5		END OF BORING Boring immediately backfilled	15				Water not observed while drilling.
			20				
			25				
			30				
			35				

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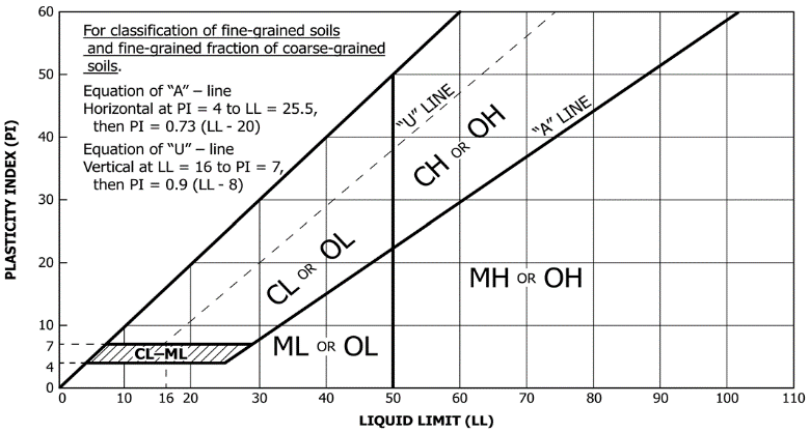
Descriptive Terminology of Soil

Based on Standards ASTM D2487/2488
(Unified Soil Classification System)

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests[A]				Soil Classification	
				Group Symbol	Group Name[B]
Coarse-grained Soils (more than 50% retained on No. 200 sieve)	Gravels (More than 50% of coarse fraction retained on No. 4 sieve)	Clean Gravels (Less than 5% fines[C])	$C_u \geq 4$ and $1 \leq C_c \leq 3$[D]	GW	Well-graded gravel[E]
			$C_u < 4$ and/or ($C_c < 1$ or $C_c > 3$)[D]	GP	Poorly graded gravel[E]
		Gravels with Fines (More than 12% fines[C])	Fines classify as ML or MH	GM	Silty gravel[E F G]
			Fines Classify as CL or CH	GC	Clayey gravel[E F G]
	Sands (50% or more coarse fraction passes No. 4 sieve)	Clean Sands (Less than 5% fines[H])	$C_u \geq 6$ and $1 \leq C_c \leq 3$[D]	SW	Well-graded sand[I]
			$C_u < 6$ and/or ($C_c < 1$ or $C_c > 3$)[D]	SP	Poorly graded sand[J]
		Sands with Fines (More than 12% fines[H])	Fines classify as ML or MH	SM	Silty sand[F G I]
			Fines classify as CL or CH	SC	Clayey sand[F G I]
Fine-grained Soils (50% or more passes the No. 200 sieve)	Silts and Clays (Liquid limit less than 50)	Inorganic	PI > 7 and plots on or above "A" line[J]	CL	Lean clay[K L M]
			PI < 4 or plots below "A" line[J]	ML	Silt[K L M]
		Organic	Liquid Limit – oven dried / Liquid Limit – not dried <0.75	OL	Organic clay[K L M N] / Organic silt[K L M O]
	Silts and Clays (Liquid limit 50 or more)	Inorganic	PI plots on or above "A" line	CH	Fat clay[K L M]
			PI plots below "A" line	MH	Elastic silt[K L M]
		Organic	Liquid Limit – oven dried / Liquid Limit – not dried <0.75	OH	Organic clay[K L M P] / Organic silt[K L M Q]
Highly Organic Soils		Primarily organic matter, dark in color, and organic odor		PT	Peat

A. Based on the material passing the 3-inch (75-mm) sieve.
B. If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
C. Gravels with 5 to 12% fines require dual symbols:
   GW-GM well-graded gravel with silt
   GW-GC well-graded gravel with clay
   GP-GM poorly graded gravel with silt
   GP-GC poorly graded gravel with clay
D. $C_u = D_{60} / D_{10}$ $C_c = (D_{30})^2 / (D_{10} \times D_{60})$
E. If soil contains ≥ 15% sand, add "with sand" to group name.
F. If fines classify as CL-ML, use dual symbol GC-GM or SC-SM.
G. If fines are organic, add "with organic fines" to group name.
H. Sands with 5 to 12% fines require dual symbols:
   SW-SM well-graded sand with silt
   SW-SC well-graded sand with clay
   SP-SM poorly graded sand with silt
   SP-SC poorly graded sand with clay
I. If soil contains ≥ 15% gravel, add "with gravel" to group name.
J. If Atterberg limits plot in hatched area, soil is CL-ML, silty clay.
K. If soil contains 15 to < 30% plus No. 200, add "with sand" or "with gravel", whichever is predominant.
L. If soil contains ≥ 30% plus No. 200, predominantly sand, add "sandy" to group name.
M. If soil contains ≥ 30% plus No. 200 predominantly gravel, add "gravelly" to group name.
N. PI ≥ 4 and plots on or above "A" line.
O. PI < 4 or plots below "A" line.
P. PI plots on or above "A" line.
Q. PI plots below "A" line.



Particle Size Identification

Boulders..... over 12"
Cobbles..... 3" to 12"
Gravel
  Coarse..... 3/4" to 3" (19.00 mm to 75.00 mm)
  Fine..... No. 4 to 3/4" (4.75 mm to 19.00 mm)
Sand
  Coarse..... No. 10 to No. 4 (2.00 mm to 4.75 mm)
  Medium..... No. 40 to No. 10 (0.425 mm to 2.00 mm)
  Fine..... No. 200 to No. 40 (0.075 mm to 0.425 mm)
Silt..... No. 200 (0.075 mm) to .005 mm
Clay..... < .005 mm

Relative Proportions[L, M]

trace..... 0 to 5%
little..... 6 to 14%
with..... ≥ 15%

Inclusion Thicknesses

lens..... 0 to 1/8"
seam..... 1/8" to 1"
layer..... over 1"

Apparent Relative Density of Cohesionless Soils

Very loose ..... 0 to 4 BPF
Loose ..... 5 to 10 BPF
Medium dense..... 11 to 30 BPF
Dense..... 31 to 50 BPF
Very dense..... over 50 BPF

Consistency of Cohesive Soils	Blows Per Foot	Approximate Unconfined Compressive Strength
Very soft	0 to 1 BPF	< 0.25 tsf
Soft	2 to 4 BPF	0.25 to 0.5 tsf
Medium	5 to 8 BPF	0.5 to 1 tsf
Stiff	9 to 15 BPF	1 to 2 tsf
Very Stiff	16 to 30 BPF	2 to 4 tsf
Hard	over 30 BPF	> 4 tsf

Moisture Content:

Dry: Absence of moisture, dusty, dry to the touch.
Moist: Damp but no visible water.
Wet: Visible free water, usually soil is below water table.

Drilling Notes:

Blows/N-value: Blows indicate the driving resistance recorded for each 6-inch interval. The reported N-value is the blows per foot recorded by summing the second and third interval in accordance with the Standard Penetration Test, ASTM D1586.

Partial Penetration: If the sampler could not be driven through a full 6-inch interval, the number of blows for that partial penetration is shown as #/x" (i.e. 50/2"). The N-value is reported as "REF" indicating refusal.

Recovery: Indicates the inches of sample recovered from the sampled interval. For a standard penetration test, full recovery is 18", and is 24" for a thinwall/shelby tube sample.

WOH: Indicates the sampler penetrated soil under weight of hammer and rods alone; driving not required.

WOR: Indicates the sampler penetrated soil under weight of rods alone; hammer weight and driving not required.

Water Level: Indicates the water level measured by the drillers either while drilling (▽), at the end of drilling (▼), or at some time after drilling (▼).

Laboratory Tests

DD	Dry density, pcf	**OC**	Organic content, %	**LL**	Liquid limit
WD	Wet density, pcf	**q_p**	Pocket penetrometer strength, tsf	**PL**	Plastic limit
P200	% Passing #200 sieve	**MC**	Moisture content, %	**PI**	Plasticity index
		q_U	Unconfined compression test, tsf		

Attachment 5: Analytical Laboratory reports

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

May 15, 2019

Mark Keefer
Braun Intertec
11001 Hampshire Ave S
Bloomington, MN 55438

RE: Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

Dear Mark Keefer:
Enclosed are the analytical results for sample(s) received by the laboratory on May 07, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This report was revised on May 15, 2019 to update the project ID.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Bob Michels
bob.michels@pacelabs.com
(612)709-5046
Project Manager

Enclosures

cc: Ken Larsen, Braun Intertec

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10473846001	**Hole 15 (0-0.5)**	Solid	05/06/19 14:00	05/07/19 12:50
10473846002	**Hole 15 (1-1.5)**	Solid	05/06/19 14:10	05/07/19 12:50
10473846003	**Hole 8 (0-0.5)**	Solid	05/06/19 14:15	05/07/19 12:50
10473846004	**Hole 8 (1-1.5)**	Solid	05/06/19 14:20	05/07/19 12:50
10473846005	**WASH AREA CULVERT**	Solid	05/06/19 14:30	05/07/19 12:50

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SAMPLE ANALYTE COUNT

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10473846001	**Hole 15 (0-0.5)**	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10473846002	**Hole 15 (1-1.5)**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10473846003	**Hole 8 (0-0.5)**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10473846004	**Hole 8 (1-1.5)**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10473846005	**WASH AREA CULVERT**	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10473846001	**Hole 15 (0-0.5)**					
EPA 6010D	Arsenic	3.8	mg/kg	1.2	05/10/19 15:06	
EPA 6010D	Barium	64.2	mg/kg	0.60	05/10/19 15:06	
EPA 6010D	Cadmium	1.1	mg/kg	0.18	05/10/19 15:06	
EPA 6010D	Chromium	37.7	mg/kg	0.60	05/10/19 15:06	
EPA 6010D	Lead	6.9	mg/kg	0.60	05/10/19 15:06	
EPA 7471B	Mercury	77.2	mg/kg	4.4	05/14/19 16:17	
ASTM D2974	Percent Moisture	20.0	%	0.10	05/10/19 17:23	
10473846002	**Hole 15 (1-1.5)**					
EPA 7471B	Mercury	0.027	mg/kg	0.024	05/14/19 18:30	
ASTM D2974	Percent Moisture	23.5	%	0.10	05/10/19 17:23	
10473846003	**Hole 8 (0-0.5)**					
EPA 7471B	Mercury	27.5	mg/kg	2.3	05/14/19 18:36	
ASTM D2974	Percent Moisture	19.7	%	0.10	05/10/19 17:23	
10473846004	**Hole 8 (1-1.5)**					
ASTM D2974	Percent Moisture	15.9	%	0.10	05/10/19 17:23	
10473846005	**WASH AREA CULVERT**					
EPA 6010D	Arsenic	4.5	mg/kg	1.3	05/10/19 15:11	
EPA 6010D	Barium	180	mg/kg	0.65	05/10/19 15:11	
EPA 6010D	Cadmium	0.68	mg/kg	0.20	05/10/19 15:11	
EPA 6010D	Chromium	15.3	mg/kg	0.65	05/10/19 15:11	
EPA 6010D	Lead	245	mg/kg	0.65	05/10/19 15:11	
EPA 7471B	Mercury	0.30	mg/kg	0.024	05/14/19 12:23	
ASTM D2974	Percent Moisture	23.9	%	0.10	05/10/19 17:24	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

Method: **EPA 6010D**
Description: 6010D MET ICP
Client: Braun Intertec Corporation
Date: May 15, 2019

General Information:
2 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 604553

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10472838001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3268283)
  - Lead
- MSD (Lab ID: 3268284)
  - Lead

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

Method: **EPA 7471B**
Description: 7471B Mercury
Client: Braun Intertec Corporation
Date: May 15, 2019

General Information:
5 samples were analyzed for EPA 7471B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7471B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 604855

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10473817001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3269928)
  - Mercury

R1: RPD value was outside control limits.

- MSD (Lab ID: 3269929)
  - Mercury

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

Sample: Hole 15 (0-0.5) **Lab ID: 10473846001** Collected: 05/06/19 14:00 Received: 05/07/19 12:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050							
Arsenic	**3.8**	mg/kg	1.2	1	05/09/19 06:21	05/10/19 15:06	7440-38-2	
Barium	**64.2**	mg/kg	0.60	1	05/09/19 06:21	05/10/19 15:06	7440-39-3	
Cadmium	**1.1**	mg/kg	0.18	1	05/09/19 06:21	05/10/19 15:06	7440-43-9	
Chromium	**37.7**	mg/kg	0.60	1	05/09/19 06:21	05/10/19 15:06	7440-47-3	
Lead	**6.9**	mg/kg	0.60	1	05/09/19 06:21	05/10/19 15:06	7439-92-1	
Selenium	ND	mg/kg	1.2	1	05/09/19 06:21	05/10/19 15:06	7782-49-2	
Silver	ND	mg/kg	0.60	1	05/09/19 06:21	05/10/19 15:06	7440-22-4	
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**77.2**	mg/kg	4.4	200	05/10/19 19:03	05/14/19 16:17	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**20.0**	%	0.10	1		05/10/19 17:23		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

Sample: Hole 15 (1-1.5) **Lab ID: 10473846002** Collected: 05/06/19 14:10 Received: 05/07/19 12:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.027**	mg/kg	0.024	1	05/13/19 09:23	05/14/19 18:30	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**23.5**	%	0.10	1		05/10/19 17:23		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

Sample: Hole 8 (0-0.5) **Lab ID: 10473846003** Collected: 05/06/19 14:15 Received: 05/07/19 12:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**27.5**	mg/kg	2.3	100	05/13/19 09:23	05/14/19 18:36	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**19.7**	%	0.10	1		05/10/19 17:23		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

Sample: Hole 8 (1-1.5) **Lab ID: 10473846004** Collected: 05/06/19 14:20 Received: 05/07/19 12:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	ND	mg/kg	0.022	1	05/10/19 19:03	05/14/19 12:21	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**15.9**	%	0.10	1		05/10/19 17:23		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

Sample: WASH AREA CULVERT **Lab ID: 10473846005** Collected: 05/06/19 14:30 Received: 05/07/19 12:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050							
Arsenic	**4.5**	mg/kg	1.3	1	05/09/19 06:21	05/10/19 15:11	7440-38-2	
Barium	**180**	mg/kg	0.65	1	05/09/19 06:21	05/10/19 15:11	7440-39-3	
Cadmium	**0.68**	mg/kg	0.20	1	05/09/19 06:21	05/10/19 15:11	7440-43-9	
Chromium	**15.3**	mg/kg	0.65	1	05/09/19 06:21	05/10/19 15:11	7440-47-3	
Lead	**245**	mg/kg	0.65	1	05/09/19 06:21	05/10/19 15:11	7439-92-1	
Selenium	ND	mg/kg	1.3	1	05/09/19 06:21	05/10/19 15:11	7782-49-2	
Silver	ND	mg/kg	0.65	1	05/09/19 06:21	05/10/19 15:11	7440-22-4	
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.30**	mg/kg	0.024	1	05/10/19 19:03	05/14/19 12:23	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**23.9**	%	0.10	1		05/10/19 17:24		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

QC Batch: 604855 Analysis Method: EPA 7471B
QC Batch Method: EPA 7471B Analysis Description: 7471B Mercury Solids
Associated Lab Samples: 10473846001, 10473846004, 10473846005

METHOD BLANK: 3269926 Matrix: Solid
Associated Lab Samples: 10473846001, 10473846004, 10473846005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.018	05/14/19 11:16	

LABORATORY CONTROL SAMPLE: 3269927

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.45	0.48	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3269928 3269929

Parameter	Units	10473817001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	ND	0.54	0.47	0.70	0.50	130	105	80-120	34	20	M1,R1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

QC Batch: 605313 Analysis Method: EPA 7471B
QC Batch Method: EPA 7471B Analysis Description: 7471B Mercury Solids
Associated Lab Samples: 10473846002, 10473846003

METHOD BLANK: 3272726 Matrix: Solid
Associated Lab Samples: 10473846002, 10473846003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.020	05/14/19 18:26	

LABORATORY CONTROL SAMPLE: 3272727

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.45	0.49	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3272728 3272729

Parameter	Units	10473846002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.027	0.59	0.59	0.65	0.64	105	103	80-120	1	20	

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QUALITY CONTROL DATA

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

QC Batch: 604553 Analysis Method: EPA 6010D
QC Batch Method: EPA 3050 Analysis Description: 6010D Solids
Associated Lab Samples: 10473846001, 10473846005

METHOD BLANK: 3268281 Matrix: Solid
Associated Lab Samples: 10473846001, 10473846005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	05/10/19 14:17	
Barium	mg/kg	ND	0.46	05/10/19 14:17	
Cadmium	mg/kg	ND	0.14	05/10/19 14:17	
Chromium	mg/kg	ND	0.46	05/10/19 14:17	
Lead	mg/kg	ND	0.46	05/10/19 14:17	
Selenium	mg/kg	ND	0.93	05/10/19 14:17	
Silver	mg/kg	ND	0.46	05/10/19 14:17	

LABORATORY CONTROL SAMPLE: 3268282

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	45.9	43.0	94	80-120	
Barium	mg/kg	45.9	47.3	103	80-120	
Cadmium	mg/kg	45.9	46.8	102	80-120	
Chromium	mg/kg	45.9	47.5	104	80-120	
Lead	mg/kg	45.9	47.0	102	80-120	
Selenium	mg/kg	45.9	41.8	91	80-120	
Silver	mg/kg	22.9	23.1	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3268283 3268284

Parameter	Units	10472838001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	2.8	51.3	51.8	47.4	47.2	87	86	75-125	0	20	
Barium	mg/kg	47.0	51.3	51.8	98.2	86.4	100	76	75-125	13	20	
Cadmium	mg/kg	ND	51.3	51.8	45.3	45.3	88	87	75-125	0	20	
Chromium	mg/kg	8.3	51.3	51.8	58.7	61.8	98	103	75-125	5	20	
Lead	mg/kg	28.5	51.3	51.8	66.5	66.5	74	73	75-125	0	20	M1
Selenium	mg/kg	ND	51.3	51.8	43.9	43.5	86	84	75-125	1	20	
Silver	mg/kg	ND	25.6	25.8	25.1	24.8	98	96	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

QC Batch: 605009 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974
Associated Lab Samples: 10473846001, 10473846002, 10473846003, 10473846004, 10473846005

SAMPLE DUPLICATE: 3270883

Parameter	Units	10473817003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	9.3	10.7	14	30	

SAMPLE DUPLICATE: 3270885

Parameter	Units	10473850003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.5	5.0	10	30	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: B1904484 Holly Dale Golf Cours-Revised Report
Pace Project No.: 10473846

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10473846001	**Hole 15 (0-0.5)**	EPA 3050	604553	EPA 6010D	605028
10473846005	**WASH AREA CULVERT**	EPA 3050	604553	EPA 6010D	605028
10473846001	**Hole 15 (0-0.5)**	EPA 7471B	604855	EPA 7471B	605453
10473846002	**Hole 15 (1-1.5)**	EPA 7471B	605313	EPA 7471B	605517
10473846003	**Hole 8 (0-0.5)**	EPA 7471B	605313	EPA 7471B	605517
10473846004	**Hole 8 (1-1.5)**	EPA 7471B	604855	EPA 7471B	605453
10473846005	**WASH AREA CULVERT**	EPA 7471B	604855	EPA 7471B	605453
10473846001	**Hole 15 (0-0.5)**	ASTM D2974	605009		
10473846002	**Hole 15 (1-1.5)**	ASTM D2974	605009		
10473846003	**Hole 8 (0-0.5)**	ASTM D2974	605009		
10473846004	**Hole 8 (1-1.5)**	ASTM D2974	605009		
10473846005	**WASH AREA CULVERT**	ASTM D2974	605009		

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CHAIN-OF-CUSTODY / Analytical Reques

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be c

WO# : 10473846

10473846

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Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Braun Intertec	Report To: Mark Keefer	Attention:
Address: 11001 Hampshire Ave S Bloomington MN 55438	Copy To:	Company Name:
Email To: mkeefer@braunintertec.com	Purchase Order No.:	Address: SAME
Phone: 952-995-2493 Fax:	Project Name:	Pace Quote Reference:
Requested Due Date/TAT: Standard	Project Number: B1904484	Pace Project Manager:
		Pace Profile #: 34125

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: MN

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: RCRA Metals	Mercury	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Hole 15 (0-0.5)	SL	G			5-6-19	1400		1	1								X			001
2	Hole 15 (1-1.5)						1410		1	1									X		002
3	Hole 8 (0-0.5)						1415		1	1									X		003
4	Hole 8 (1-1.5)						1420		1	1									X		004
5	WASH AREA CULVERT						1430		1	1								X			005
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	(5) SAMPLE CONDITIONS			
	Brown	5-6-19	1602	Pace	5/6/19	1602	3-3	Y	N	Y
		5.7.19	1250	Pace	5/7/19	1250	2.4	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Logan Seipel

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5-6-19

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 05Apr2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.27**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt **Client Name:** Braun Intertec **Project #:** WO#: 10473846

PM: BM2 Due Date: 05/14/19

CLIENT: Braun-BLM

Courier: ☐Fed Ex ☐UPS ☐USPS ☐Client ☒Pace ☐SpeeDee ☐Commercial **See Exception** ☐

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☐Yes ☒No **Seals Intact?** ☐Yes ☒No **Biological Tissue Frozen?** ☐Yes ☐No ☒N/A

Packing Material: ☒Bubble Wrap ☒Bubble Bags ☐None ☐Other:_____ **Temp Blank?** ☒Yes ☐No

Thermometer: ☐T1(0461) ☐T2(1336) ☐T3(0459) ☐T4(0254) ☒T5(0048) **Type of Ice:** ☒Wet ☐Blue ☐None ☐Dry ☐Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 2.5 °C **Average Corrected Temp (no temp blank only):** °C **See Exceptions** ☐

Correction Factor: -0.1 **Cooler Temp Corrected w/temp blank :** 2.4 °C

USDA Regulated Soil: (☐ N/A, water sample/Other:_____) **Date/Initials of Person Examining Contents:** CG 5/7/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐Yes ☒No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐Yes ☒No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒Yes	☐No		1.
Chain of Custody Relinquished?	☒Yes	☐No		2.
Sampler Name and/or Signature on COC?	☒Yes	☐No	☐N/A	3.
Samples Arrived within Hold Time?	☒Yes	☐No		4.
Short Hold Time Analysis (<72 hr)?	☐Yes	☒No		5. ☐Fecal Coliform ☐HPC ☐Total Coliform/E coli ☐BOD/cBOD ☐Hex Chrome ☐Turbidity ☐Nitrate ☐Nitrite ☐Orthophos ☐Other_____
Rush Turn Around Time Requested?	☐Yes	☒No		6.
Sufficient Volume?	☒Yes	☐No		7.
Correct Containers Used? -Pace Containers Used?	☒Yes ☒Yes	☐No ☐No		8.
Containers intact?	☒Yes	☐No		9.
Field Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☒N/A	10. Is sediment visible in the dissolved container? ☐Yes ☐No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☐Water ☒Soil ☐Oil ☐Other_____	☒Yes	☐No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
All containers needing acid/base preservation have been checked?	☐Yes	☐No	☒N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☐Yes	☐No	☒N/A	☐NaOH ☐HNO_3 ☐H_2SO_4 ☐Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐Yes	☐No	☒N/A	Positive for Res. Chlorine? ☐Yes ☐No **pH Paper Lot#** **See Exception** ☐
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	☐Yes	☐No	☒N/A	13. **See Exception** ☐
Trip Blank Present?	☐Yes	☐No	☒N/A	14.
Trip Blank Custody Seals Present?	☐Yes	☐No	☒N/A	Pace Trip Blank Lot # (if purchased): N/A

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐Yes ☐No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: BM **Date:** 5/8/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: CS

Pace Analytical®	Document Name: Cooler Transfer Check List	Revised Date: 12Feb2 Page 1 of 1
	Document Number: F-MN-C-205-Rev.01	Issuing Authority: Pace Minnesota Quality

Bloomington Service Center Cooler Transfer Check Lis

Client: Braun

Project Manager: BM2

Received with Custody Seal: Yes (No)

Custody Seal Intact: Yes No (NA)

	Temp Read	Corrected Temp	Correction Factor
Temperature C: IR Gun # B88A0143310092	3.2	3.3	0.1

☐ Samples on Ice, cooling process has begun

Rush/Short Hold: N

Containers Intact: (Yes) No

Re-packed and Re-Iced: Y

Temp Blank Included: (Yes) No

Shipped By/Date: BM 5/6/19

Notes:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

October 21, 2019

Mark Keefer
Braun Intertec
11001 Hampshire Ave S
Bloomington, MN 55438

RE: Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Dear Mark Keefer:
Enclosed are the analytical results for sample(s) received by the laboratory on October 11, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Bob Michels
bob.michels@pacelabs.com
(612)709-5046
Project Manager

Enclosures

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

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SAMPLE SUMMARY

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10495314001	**ST-4 (0-6'')**	Solid	10/10/19 09:30	10/11/19 13:00
10495314002	**ST-4 (1-2')**	Solid	10/10/19 09:30	10/11/19 13:00
10495314004	**ST-7 (0-6'')**	Solid	10/10/19 10:10	10/11/19 13:00
10495314005	**ST-7 (1-2')**	Solid	10/10/19 10:10	10/11/19 13:00
10495314007	**ST-21 (0-6'')**	Solid	10/10/19 11:00	10/11/19 13:00
10495314008	**ST-21 (1-2')**	Solid	10/10/19 11:00	10/11/19 13:00
10495314010	**ST-14 (0-6'')**	Solid	10/10/19 11:30	10/11/19 13:00
10495314011	**ST-14 (1-2')**	Solid	10/10/19 11:30	10/11/19 13:00
10495314013	**ST-1 (2-3)**	Solid	10/10/19 10:00	10/11/19 13:00
10495314015	**ST-2 (2-3)**	Solid	10/10/19 11:30	10/11/19 13:00
10495314017	**ST-3 (0-0.5)**	Solid	10/10/19 12:40	10/11/19 13:00
10495314018	**ST-3 (1-2)**	Solid	10/10/19 12:50	10/11/19 13:00
10495314020	**ST-1 (W)**	Water	10/10/19 12:00	10/11/19 13:00
10495314021	**ST-3 (W)**	Water	10/10/19 14:00	10/11/19 13:00
10495314022	**HCl Trip Blank**	Water	10/10/19 00:00	10/11/19 13:00
10495314023	**MeOH Trip Blank**	Solid	10/10/19 00:00	10/11/19 13:00

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SAMPLE ANALYTE COUNT

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10495314001	**ST-4 (0-6")**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10495314002	**ST-4 (1-2')**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10495314004	**ST-7 (0-6")**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10495314005	**ST-7 (1-2')**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10495314007	**ST-21 (0-6")**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10495314008	**ST-21 (1-2')**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10495314010	**ST-14 (0-6")**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10495314011	**ST-14 (1-2')**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10495314013	**ST-1 (2-3)**	WI MOD DRO	EC2	2	PASI-M
		EPA 6020B	RJS	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	CH3	19	PASI-M
		EPA 8260B	CD2	70	PASI-M
10495314015	**ST-2 (2-3)**	WI MOD DRO	EC2	2	PASI-M
		EPA 6020B	RJS	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	CH3	19	PASI-M
		EPA 8260B	CD2	70	PASI-M
10495314017	**ST-3 (0-0.5)**	EPA 8081B	XV1	24	PASI-M
		EPA 6020B	RJS	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	70	PASI-M
10495314018	**ST-3 (1-2)**	EPA 8081B	XV1	24	PASI-M
		EPA 6020B	RJS	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M

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SAMPLE ANALYTE COUNT

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260B	CD2	70	PASI-M
10495314020	**ST-1 (W)**	WI MOD DRO	EC2	2	PASI-M
		EPA 6010D	IP	7	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
		EPA 8260B	DS2	70	PASI-M
10495314021	**ST-3 (W)**	EPA 6010D	IP	7	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8270D by SIM	SNG	18	PASI-M
		EPA 8260B	DS2	70	PASI-M
10495314022	**HCl Trip Blank**	EPA 8260B	AEZ	70	PASI-M
10495314023	**MeOH Trip Blank**	EPA 8260B	CD2	70	PASI-M

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SUMMARY OF DETECTION

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10495314001	**ST-4 (0-6")**					
EPA 7471B	Mercury	0.048	mg/kg	0.025	10/17/19 15:24	
ASTM D2974	Percent Moisture	28.6	%	0.10	10/15/19 14:06	
10495314002	**ST-4 (1-2')**					
EPA 7471B	Mercury	0.026	mg/kg	0.023	10/17/19 15:31	
ASTM D2974	Percent Moisture	22.5	%	0.10	10/15/19 14:06	
10495314004	**ST-7 (0-6")**					
EPA 7471B	Mercury	1.0	mg/kg	0.022	10/17/19 15:33	
ASTM D2974	Percent Moisture	18.3	%	0.10	10/15/19 14:06	
10495314005	**ST-7 (1-2')**					
EPA 7471B	Mercury	0.030	mg/kg	0.023	10/17/19 15:36	
ASTM D2974	Percent Moisture	19.6	%	0.10	10/15/19 14:06	
10495314007	**ST-21 (0-6")**					
EPA 7471B	Mercury	0.063	mg/kg	0.027	10/17/19 15:43	
ASTM D2974	Percent Moisture	30.1	%	0.10	10/15/19 14:06	
10495314008	**ST-21 (1-2')**					
EPA 7471B	Mercury	0.040	mg/kg	0.021	10/17/19 15:45	
ASTM D2974	Percent Moisture	13.6	%	0.10	10/15/19 14:06	
10495314010	**ST-14 (0-6")**					
EPA 7471B	Mercury	0.28	mg/kg	0.024	10/17/19 15:47	
ASTM D2974	Percent Moisture	25.1	%	0.10	10/15/19 14:07	
10495314011	**ST-14 (1-2')**					
ASTM D2974	Percent Moisture	22.4	%	0.10	10/15/19 14:07	
10495314013	**ST-1 (2-3)**					
EPA 6020B	Arsenic	7.5	mg/kg	0.56	10/21/19 11:54	
EPA 6020B	Barium	124	mg/kg	0.34	10/21/19 11:54	M6
EPA 6020B	Chromium	23.0	mg/kg	0.56	10/21/19 11:54	
EPA 6020B	Lead	11.5	mg/kg	0.22	10/21/19 11:54	
EPA 6020B	Selenium	0.93	mg/kg	0.56	10/21/19 11:54	
EPA 7471B	Mercury	0.095	mg/kg	0.024	10/17/19 15:52	
ASTM D2974	Percent Moisture	16.0	%	0.10	10/15/19 14:07	
10495314015	**ST-2 (2-3)**					
WI MOD DRO	WDRO C10-C28	59.1	mg/kg	48.0	10/15/19 19:01	T6
EPA 6020B	Arsenic	6.7	mg/kg	0.55	10/18/19 05:56	
EPA 6020B	Barium	101	mg/kg	0.33	10/18/19 05:56	
EPA 6020B	Chromium	18.5	mg/kg	0.55	10/18/19 05:56	
EPA 6020B	Lead	13.9	mg/kg	0.22	10/18/19 05:56	
EPA 6020B	Selenium	0.80	mg/kg	0.55	10/18/19 05:56	
EPA 7471B	Mercury	0.022	mg/kg	0.021	10/17/19 15:55	
ASTM D2974	Percent Moisture	14.0	%	0.10	10/15/19 14:07	
EPA 8270D by SIM	Acenaphthene	24.2	ug/kg	11.6	10/16/19 15:23	
EPA 8270D by SIM	Anthracene	54.7	ug/kg	11.6	10/16/19 15:23	
EPA 8270D by SIM	Benzo(a)anthracene	242	ug/kg	11.6	10/16/19 15:23	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10495314015	**ST-2 (2-3)**					
EPA 8270D by SIM	Benzo(a)pyrene	235	ug/kg	11.6	10/16/19 15:23	
EPA 8270D by SIM	Benzo(b)fluoranthene	340	ug/kg	11.6	10/16/19 15:23	
EPA 8270D by SIM	Benzo(g,h,i)perylene	171	ug/kg	11.6	10/16/19 15:23	
EPA 8270D by SIM	Benzo(k)fluoranthene	143	ug/kg	11.6	10/16/19 15:23	
EPA 8270D by SIM	Chrysene	306	ug/kg	11.6	10/16/19 15:23	
EPA 8270D by SIM	Dibenz(a,h)anthracene	47.2	ug/kg	11.6	10/16/19 15:23	
EPA 8270D by SIM	Fluoranthene	676	ug/kg	58.1	10/17/19 12:50	
EPA 8270D by SIM	Fluorene	30.3	ug/kg	11.6	10/16/19 15:23	
EPA 8270D by SIM	Indeno(1,2,3-cd)pyrene	145	ug/kg	11.6	10/16/19 15:23	
EPA 8270D by SIM	Phenanthrene	397	ug/kg	58.1	10/17/19 12:50	
EPA 8270D by SIM	Pyrene	534	ug/kg	58.1	10/17/19 12:50	
EPA 8270D by SIM	Total BaP Eq. MN 2006sh. ND=0	351	ug/kg	11.6	10/16/19 15:23	N2
10495314017	**ST-3 (0-0.5)**					
EPA 6020B	Arsenic	10.5	mg/kg	0.58	10/18/19 06:00	
EPA 6020B	Barium	245	mg/kg	0.35	10/18/19 06:00	
EPA 6020B	Cadmium	0.41	mg/kg	0.093	10/18/19 06:00	
EPA 6020B	Chromium	17.4	mg/kg	0.58	10/18/19 06:00	
EPA 6020B	Lead	46.6	mg/kg	0.23	10/18/19 06:00	
EPA 6020B	Selenium	1.0	mg/kg	0.58	10/18/19 06:00	
EPA 7471B	Mercury	0.27	mg/kg	0.024	10/17/19 15:57	
ASTM D2974	Percent Moisture	17.6	%	0.10	10/15/19 14:07	
10495314018	**ST-3 (1-2)**					
EPA 6020B	Arsenic	7.6	mg/kg	0.57	10/18/19 06:05	
EPA 6020B	Barium	122	mg/kg	0.34	10/18/19 06:05	
EPA 6020B	Cadmium	0.094	mg/kg	0.092	10/18/19 06:05	
EPA 6020B	Chromium	28.0	mg/kg	0.57	10/18/19 06:05	
EPA 6020B	Lead	10.8	mg/kg	0.23	10/18/19 06:05	
EPA 6020B	Selenium	0.63	mg/kg	0.57	10/18/19 06:05	
EPA 7471B	Mercury	0.035	mg/kg	0.023	10/17/19 15:59	
ASTM D2974	Percent Moisture	16.9	%	0.10	10/15/19 14:07	
10495314020	**ST-1 (W)**					
EPA 6010D	Barium, Dissolved	124	ug/L	10.0	10/16/19 15:22	
10495314021	**ST-3 (W)**					
EPA 6010D	Barium, Dissolved	229	ug/L	10.0	10/16/19 15:37	

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 8081B**
Description: 8081B GCS Pesticides
Client: Braun Intertec Corporation
Date: October 21, 2019

General Information:
2 samples were analyzed for EPA 8081B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3550 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: 638189

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

- LCS (Lab ID: 3439974)
  - Methoxychlor
- MS (Lab ID: 3439975)
  - Methoxychlor
- MSD (Lab ID: 3439976)
  - Methoxychlor

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 638189

2M: Sample was yellow in color.

- MS (Lab ID: 3439975)
  - Tetrachloro-m-xylene (S)

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 8081B**
Description: 8081B GCS Pesticides
Client: Braun Intertec Corporation
Date: October 21, 2019

Analyte Comments:

QC Batch: 638189

2M: Sample was yellow in color.

- MSD (Lab ID: 3439976)
  - Tetrachloro-m-xylene (S)
- ST-3 (0-0.5) (Lab ID: 10495314017)
  - Tetrachloro-m-xylene (S)

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- MS (Lab ID: 3439975)
  - Tetrachloro-m-xylene (S)
- MSD (Lab ID: 3439976)
  - Tetrachloro-m-xylene (S)
- ST-3 (0-0.5) (Lab ID: 10495314017)
  - Tetrachloro-m-xylene (S)

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **WI MOD DRO**
Description: WIDRO GCS Silica Gel
Client: Braun Intertec Corporation
Date: October 21, 2019

General Information:
2 samples were analyzed for WI MOD DRO. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with WI MOD DRO with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 638190

T6: High boiling point hydrocarbons are present in the sample.

- ST-2 (2-3) (Lab ID: 10495314015)
  - WDRO C10-C28

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **WI MOD DRO**
Description: WIDRO LV GCS Silica Gel
Client: Braun Intertec Corporation
Date: October 21, 2019

General Information:
1 sample was analyzed for WI MOD DRO. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

P4: Sample field preservation does not meet EPA or method recommendations for this analysis.
- ST-1 (W) (Lab ID: 10495314020)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with WI MOD DRO with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 638078

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10495327007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 3439657)
  - WDRO C10-C28

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 6010D**
Description: 6010D MET ICP, Lab Filtered
Client: Braun Intertec Corporation
Date: October 21, 2019

General Information:
2 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 6020B**
Description: 6020B MET ICPMS
Client: Braun Intertec Corporation
Date: October 21, 2019

General Information:
4 samples were analyzed for EPA 6020B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 638332

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10495314013

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 3440393)
  - Barium
- MSD (Lab ID: 3440394)
  - Barium

Additional Comments:

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 7470A**
Description: 7470A Mercury, Lab Filtered
Client: Braun Intertec Corporation
Date: October 21, 2019

General Information:
2 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 7471B**
Description: 7471B Mercury
Client: Braun Intertec Corporation
Date: October 21, 2019

General Information:
12 samples were analyzed for EPA 7471B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7471B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 8270D by SIM**
Description: 8270D MSSV PAH by SIM
Client: Braun Intertec Corporation
Date: October 21, 2019

General Information:
4 samples were analyzed for EPA 8270D by SIM. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3550 with any exceptions noted below.

The samples were prepared in accordance with EPA Mod. 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 638138

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10495312006

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 3439827)
  - Fluoranthene

R1: RPD value was outside control limits.

- MSD (Lab ID: 3439827)
  - Fluoranthene
  - Phenanthrene
  - Pyrene

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 8270D by SIM**
Description: 8270D MSSV PAH by SIM
Client: Braun Intertec Corporation
Date: October 21, 2019

QC Batch: 638207

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

Analyte Comments:

QC Batch: 638138

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- ST-1 (2-3) (Lab ID: 10495314013)
  - Total BaP Eq. MN 2006sh. ND=0
- ST-2 (2-3) (Lab ID: 10495314015)
  - Total BaP Eq. MN 2006sh. ND=0

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 8260B**
Description: 8260B MSV 5030 Med Level
Client: Braun Intertec Corporation
Date: October 21, 2019

General Information:
5 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 5035/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

QC Batch: 638775

SS: This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

- LCS (Lab ID: 3442180)
  - Chloroethane
- MS (Lab ID: 3442181)
  - Chloroethane
- MSD (Lab ID: 3442182)
  - Chloroethane

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 8260B**
Description: 8260B MSV 5030 Med Level
Client: Braun Intertec Corporation
Date: October 21, 2019

QC Batch: 638775

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10495306002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3442181)
  - 1,1,1,2-Tetrachloroethane
  - 1,1,1-Trichloroethane
  - 1,1,2,2-Tetrachloroethane
  - 1,1,2-Trichloroethane
  - 1,1,2-Trichlorotrifluoroethane
  - 1,1-Dichloroethane
  - 1,1-Dichloroethene
  - 1,1-Dichloropropene
  - 1,2,3-Trichlorobenzene
  - 1,2,3-Trichloropropane
  - 1,2,4-Trichlorobenzene
  - 1,2,4-Trimethylbenzene
  - 1,2-Dibromo-3-chloropropane
  - 1,2-Dibromoethane (EDB)
  - 1,2-Dichlorobenzene
  - 1,2-Dichloroethane
  - 1,2-Dichloropropane
  - 1,3,5-Trimethylbenzene
  - 1,3-Dichlorobenzene
  - 1,3-Dichloropropane
  - 1,4-Dichlorobenzene
  - 2,2-Dichloropropane
  - 2-Butanone (MEK)
  - 2-Chlorotoluene
  - 4-Chlorotoluene
  - 4-Methyl-2-pentanone (MIBK)
  - Acetone
  - Allyl chloride
  - Benzene
  - Bromobenzene
  - Bromochloromethane
  - Bromodichloromethane
  - Bromoform
  - Carbon tetrachloride
  - Chlorobenzene
  - Chloroform
  - Dibromochloromethane
  - Dibromomethane
  - Diethyl ether (Ethyl ether)
  - Ethylbenzene
  - Hexachloro-1,3-butadiene
  - Isopropylbenzene (Cumene)

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 8260B**
Description: 8260B MSV 5030 Med Level
Client: Braun Intertec Corporation
Date: October 21, 2019

QC Batch: 638775

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10495306002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Methyl-tert-butyl ether
- Methylene Chloride
- Naphthalene
- Styrene
- Tetrachloroethene
- Tetrahydrofuran
- Toluene
- Trichloroethene
- cis-1,2-Dichloroethene
- cis-1,3-Dichloropropene
- n-Butylbenzene
- n-Propylbenzene
- p-Isopropyltoluene
- sec-Butylbenzene
- tert-Butylbenzene
- trans-1,2-Dichloroethene
- trans-1,3-Dichloropropene

• MSD (Lab ID: 3442182)

- 1,1-Dichloropropene
- Carbon tetrachloride
- trans-1,2-Dichloroethene

R1: RPD value was outside control limits.

• MSD (Lab ID: 3442182)

- 1,1,1,2-Tetrachloroethane
- 1,1,1-Trichloroethane
- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- 1,1,2-Trichlorotrifluoroethane
- 1,1-Dichloroethane
- 1,1-Dichloroethene
- 1,1-Dichloropropene
- 1,2,3-Trichlorobenzene
- 1,2,3-Trichloropropane
- 1,2,4-Trichlorobenzene
- 1,2,4-Trimethylbenzene
- 1,2-Dibromo-3-chloropropane
- 1,2-Dibromoethane (EDB)
- 1,2-Dichlorobenzene
- 1,2-Dichloroethane
- 1,2-Dichloropropane
- 1,3,5-Trimethylbenzene
- 1,3-Dichlorobenzene
- 1,3-Dichloropropane

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 8260B**
Description: 8260B MSV 5030 Med Level
Client: Braun Intertec Corporation
Date: October 21, 2019

QC Batch: 638775

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10495306002

R1: RPD value was outside control limits.

- 1,4-Dichlorobenzene
- 2,2-Dichloropropane
- 2-Butanone (MEK)
- 2-Chlorotoluene
- 4-Chlorotoluene
- 4-Methyl-2-pentanone (MIBK)
- Allyl chloride
- Benzene
- Bromobenzene
- Bromochloromethane
- Bromodichloromethane
- Bromoform
- Carbon tetrachloride
- Chlorobenzene
- Chloroform
- Dibromochloromethane
- Dibromomethane
- Diethyl ether (Ethyl ether)
- Ethylbenzene
- Hexachloro-1,3-butadiene
- Isopropylbenzene (Cumene)
- Methyl-tert-butyl ether
- Methylene Chloride
- Naphthalene
- Styrene
- Tetrachloroethene
- Tetrahydrofuran
- Toluene
- Trichloroethene
- cis-1,2-Dichloroethene
- cis-1,3-Dichloropropene
- n-Butylbenzene
- n-Propylbenzene
- p-Isopropyltoluene
- sec-Butylbenzene
- tert-Butylbenzene
- trans-1,2-Dichloroethene
- trans-1,3-Dichloropropene

Additional Comments:

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 8260B**
Description: 8260B MSV 5030 Med Level
Client: Braun Intertec Corporation
Date: October 21, 2019

Analyte Comments:

QC Batch: 638775

- BLANK (Lab ID: 3442179)
  - Dichlorofluoromethane
- LCS (Lab ID: 3442180)
  - Dichlorofluoromethane
- MS (Lab ID: 3442181)
  - Dichlorofluoromethane
- MSD (Lab ID: 3442182)
  - Dichlorofluoromethane
- MeOH Trip Blank (Lab ID: 10495314023)
  - Dichlorofluoromethane
- ST-1 (2-3) (Lab ID: 10495314013)
  - Dichlorofluoromethane
- ST-2 (2-3) (Lab ID: 10495314015)
  - Dichlorofluoromethane
- ST-3 (0-0.5) (Lab ID: 10495314017)
  - Dichlorofluoromethane
- ST-3 (1-2) (Lab ID: 10495314018)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 8260B**
Description: 8260B VOC
Client: Braun Intertec Corporation
Date: October 21, 2019

General Information:
3 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

QC Batch: 639045

SS: This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

- LCS (Lab ID: 3443502)
  - Bromomethane
- MS (Lab ID: 3445200)
  - Bromomethane
- MSD (Lab ID: 3445201)
  - Bromomethane

QC Batch: 639198

SS: This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

- LCS (Lab ID: 3444302)
  - Bromomethane
- MS (Lab ID: 3445116)
  - Bromomethane
- MSD (Lab ID: 3445117)
  - Bromomethane

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

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PROJECT NARRATIVE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Method: **EPA 8260B**
Description: 8260B VOC
Client: Braun Intertec Corporation
Date: October 21, 2019

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 639045

- BLANK (Lab ID: 3443501)
  - Dichlorofluoromethane
- LCS (Lab ID: 3443502)
  - Dichlorofluoromethane
- MS (Lab ID: 3445200)
  - Dichlorofluoromethane
- MSD (Lab ID: 3445201)
  - Dichlorofluoromethane
- ST-1 (W) (Lab ID: 10495314020)
  - Dichlorofluoromethane
- ST-3 (W) (Lab ID: 10495314021)
  - Dichlorofluoromethane

QC Batch: 639198

1M: Post-analysis pH measurement indicates insufficient VOA sample preservation. Therefore, analysis was conducted outside the recognized method holding time.

- MS (Lab ID: 3445116)
  - 1,2-Dichloroethane-d4 (S)
- MSD (Lab ID: 3445117)
  - 1,2-Dichloroethane-d4 (S)

- BLANK (Lab ID: 3444301)
  - Dichlorofluoromethane
- HCl Trip Blank (Lab ID: 10495314022)
  - Dichlorofluoromethane
- LCS (Lab ID: 3444302)
  - Dichlorofluoromethane
- MS (Lab ID: 3445116)
  - Dichlorofluoromethane
- MSD (Lab ID: 3445117)
  - Dichlorofluoromethane

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-4 (0-6'') **Lab ID: 10495314001** Collected: 10/10/19 09:30 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.048**	mg/kg	0.025	1	10/15/19 15:57	10/17/19 15:24	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**28.6**	%	0.10	1		10/15/19 14:06		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-4 (1-2') **Lab ID: 10495314002** Collected: 10/10/19 09:30 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.026**	mg/kg	0.023	1	10/15/19 15:57	10/17/19 15:31	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**22.5**	%	0.10	1		10/15/19 14:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-7 (0-6") **Lab ID: 10495314004** Collected: 10/10/19 10:10 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**1.0**	mg/kg	0.022	1	10/15/19 15:57	10/17/19 15:33	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**18.3**	%	0.10	1		10/15/19 14:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-7 (1-2') **Lab ID: 10495314005** Collected: 10/10/19 10:10 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.030**	mg/kg	0.023	1	10/15/19 15:57	10/17/19 15:36	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**19.6**	%	0.10	1		10/15/19 14:06		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-21 (0-6") **Lab ID: 10495314007** Collected: 10/10/19 11:00 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.063**	mg/kg	0.027	1	10/15/19 15:57	10/17/19 15:43	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**30.1**	%	0.10	1		10/15/19 14:06		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-21 (1-2') **Lab ID: 10495314008** Collected: 10/10/19 11:00 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.040**	mg/kg	0.021	1	10/15/19 15:57	10/17/19 15:45	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**13.6**	%	0.10	1		10/15/19 14:06		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-14 (0-6") **Lab ID: 10495314010** Collected: 10/10/19 11:30 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.28**	mg/kg	0.024	1	10/15/19 15:57	10/17/19 15:47	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**25.1**	%	0.10	1		10/15/19 14:07		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-14 (1-2') **Lab ID: 10495314011** Collected: 10/10/19 11:30 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	ND	mg/kg	0.023	1	10/15/19 15:57	10/17/19 15:50	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**22.4**	%	0.10	1		10/15/19 14:07		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-1 (2-3) **Lab ID: 10495314013** Collected: 10/10/19 10:00 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	ND	mg/kg	9.7	1	10/14/19 14:13	10/15/19 20:11		
Surrogates								
n-Triacontane (S)	82	%.	44-143	1	10/14/19 14:13	10/15/19 20:11	638-68-6	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3050							
Arsenic	**7.5**	mg/kg	0.56	20	10/15/19 15:25	10/21/19 11:54	7440-38-2	
Barium	**124**	mg/kg	0.34	20	10/15/19 15:25	10/21/19 11:54	7440-39-3	M6
Cadmium	ND	mg/kg	0.090	20	10/15/19 15:25	10/21/19 11:54	7440-43-9	
Chromium	**23.0**	mg/kg	0.56	20	10/15/19 15:25	10/21/19 11:54	7440-47-3	
Lead	**11.5**	mg/kg	0.22	20	10/15/19 15:25	10/21/19 11:54	7439-92-1	
Selenium	**0.93**	mg/kg	0.56	20	10/15/19 15:25	10/21/19 11:54	7782-49-2	
Silver	ND	mg/kg	0.56	20	10/15/19 15:25	10/21/19 11:54	7440-22-4	
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.095**	mg/kg	0.024	1	10/15/19 15:57	10/17/19 15:52	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**16.0**	%	0.10	1		10/15/19 14:07		
8270D MSSV PAH by SIM	Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550							
Acenaphthene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	83-32-9	
Acenaphthylene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	208-96-8	
Anthracene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	120-12-7	
Benzo(a)anthracene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	56-55-3	
Benzo(a)pyrene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	207-08-9	
Chrysene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	53-70-3	
Fluoranthene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	206-44-0	
Fluorene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	193-39-5	
Naphthalene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	91-20-3	
Phenanthrene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	85-01-8	
Pyrene	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	ND	ug/kg	11.9	1	10/14/19 13:56	10/16/19 15:02		N2
Surrogates								
2-Fluorobiphenyl (S)	84	%.	30-125	1	10/14/19 13:56	10/16/19 15:02	321-60-8	
p-Terphenyl-d14 (S)	90	%.	30-125	1	10/14/19 13:56	10/16/19 15:02	1718-51-0	
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Acetone	ND	ug/kg	1300	1	10/16/19 14:58	10/17/19 02:28	67-64-1	
Allyl chloride	ND	ug/kg	259	1	10/16/19 14:58	10/17/19 02:28	107-05-1	
Benzene	ND	ug/kg	25.9	1	10/16/19 14:58	10/17/19 02:28	71-43-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-1 (2-3) **Lab ID: 10495314013** Collected: 10/10/19 10:00 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Bromobenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	108-86-1	
Bromochloromethane	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	74-97-5	
Bromodichloromethane	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	75-27-4	
Bromoform	ND	ug/kg	259	1	10/16/19 14:58	10/17/19 02:28	75-25-2	
Bromomethane	ND	ug/kg	648	1	10/16/19 14:58	10/17/19 02:28	74-83-9	
2-Butanone (MEK)	ND	ug/kg	324	1	10/16/19 14:58	10/17/19 02:28	78-93-3	
n-Butylbenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	104-51-8	
sec-Butylbenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	135-98-8	
tert-Butylbenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	98-06-6	
Carbon tetrachloride	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	56-23-5	
Chlorobenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	108-90-7	
Chloroethane	ND	ug/kg	648	1	10/16/19 14:58	10/17/19 02:28	75-00-3	
Chloroform	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	67-66-3	
Chloromethane	ND	ug/kg	259	1	10/16/19 14:58	10/17/19 02:28	74-87-3	
2-Chlorotoluene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	95-49-8	
4-Chlorotoluene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	648	1	10/16/19 14:58	10/17/19 02:28	96-12-8	
Dibromochloromethane	ND	ug/kg	259	1	10/16/19 14:58	10/17/19 02:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	106-93-4	
Dibromomethane	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	259	1	10/16/19 14:58	10/17/19 02:28	75-71-8	
1,1-Dichloroethane	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	75-34-3	
1,2-Dichloroethane	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	107-06-2	
1,1-Dichloroethene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	156-60-5	
Dichlorofluoromethane	ND	ug/kg	648	1	10/16/19 14:58	10/17/19 02:28	75-43-4	
1,2-Dichloropropane	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	78-87-5	
1,3-Dichloropropane	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	142-28-9	
2,2-Dichloropropane	ND	ug/kg	259	1	10/16/19 14:58	10/17/19 02:28	594-20-7	
1,1-Dichloropropene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	259	1	10/16/19 14:58	10/17/19 02:28	60-29-7	
Ethylbenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	324	1	10/16/19 14:58	10/17/19 02:28	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	98-82-8	
p-Isopropyltoluene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	99-87-6	
Methylene Chloride	ND	ug/kg	259	1	10/16/19 14:58	10/17/19 02:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	324	1	10/16/19 14:58	10/17/19 02:28	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	1634-04-4	
Naphthalene	ND	ug/kg	259	1	10/16/19 14:58	10/17/19 02:28	91-20-3	
n-Propylbenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	103-65-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-1 (2-3) **Lab ID: 10495314013** Collected: 10/10/19 10:00 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Styrene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	79-34-5	
Tetrachloroethene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	127-18-4	
Tetrahydrofuran	ND	ug/kg	2590	1	10/16/19 14:58	10/17/19 02:28	109-99-9	
Toluene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	79-00-5	
Trichloroethene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	79-01-6	
Trichlorofluoromethane	ND	ug/kg	259	1	10/16/19 14:58	10/17/19 02:28	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	259	1	10/16/19 14:58	10/17/19 02:28	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	259	1	10/16/19 14:58	10/17/19 02:28	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	64.8	1	10/16/19 14:58	10/17/19 02:28	108-67-8	
Vinyl chloride	ND	ug/kg	25.9	1	10/16/19 14:58	10/17/19 02:28	75-01-4	
Xylene (Total)	ND	ug/kg	194	1	10/16/19 14:58	10/17/19 02:28	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%.	75-125	1	10/16/19 14:58	10/17/19 02:28	17060-07-0	
Toluene-d8 (S)	97	%.	75-125	1	10/16/19 14:58	10/17/19 02:28	2037-26-5	
4-Bromofluorobenzene (S)	93	%.	75-125	1	10/16/19 14:58	10/17/19 02:28	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-2 (2-3) **Lab ID: 10495314015** Collected: 10/10/19 11:30 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Silica Gel	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	**59.1**	mg/kg	48.0	5	10/14/19 14:13	10/15/19 19:01		T6
Surrogates								
n-Triacontane (S)	105	%.	44-143	5	10/14/19 14:13	10/15/19 19:01	638-68-6	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3050							
Arsenic	**6.7**	mg/kg	0.55	20	10/15/19 15:25	10/18/19 05:56	7440-38-2	
Barium	**101**	mg/kg	0.33	20	10/15/19 15:25	10/18/19 05:56	7440-39-3	
Cadmium	ND	mg/kg	0.088	20	10/15/19 15:25	10/18/19 05:56	7440-43-9	
Chromium	**18.5**	mg/kg	0.55	20	10/15/19 15:25	10/18/19 05:56	7440-47-3	
Lead	**13.9**	mg/kg	0.22	20	10/15/19 15:25	10/18/19 05:56	7439-92-1	
Selenium	**0.80**	mg/kg	0.55	20	10/15/19 15:25	10/18/19 05:56	7782-49-2	
Silver	ND	mg/kg	0.55	20	10/15/19 15:25	10/18/19 05:56	7440-22-4	
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.022**	mg/kg	0.021	1	10/15/19 15:57	10/17/19 15:55	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**14.0**	%	0.10	1		10/15/19 14:07		
8270D MSSV PAH by SIM	Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550							
Acenaphthene	**24.2**	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23	83-32-9	
Acenaphthylene	ND	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23	208-96-8	
Anthracene	**54.7**	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23	120-12-7	
Benzo(a)anthracene	**242**	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23	56-55-3	
Benzo(a)pyrene	**235**	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23	50-32-8	
Benzo(b)fluoranthene	**340**	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23	205-99-2	
Benzo(g,h,i)perylene	**171**	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23	191-24-2	
Benzo(k)fluoranthene	**143**	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23	207-08-9	
Chrysene	**306**	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23	218-01-9	
Dibenz(a,h)anthracene	**47.2**	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23	53-70-3	
Fluoranthene	**676**	ug/kg	58.1	5	10/14/19 13:56	10/17/19 12:50	206-44-0	
Fluorene	**30.3**	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23	86-73-7	
Indeno(1,2,3-cd)pyrene	**145**	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23	193-39-5	
Naphthalene	ND	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23	91-20-3	
Phenanthrene	**397**	ug/kg	58.1	5	10/14/19 13:56	10/17/19 12:50	85-01-8	
Pyrene	**534**	ug/kg	58.1	5	10/14/19 13:56	10/17/19 12:50	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	**351**	ug/kg	11.6	1	10/14/19 13:56	10/16/19 15:23		N2
Surrogates								
2-Fluorobiphenyl (S)	83	%.	30-125	1	10/14/19 13:56	10/16/19 15:23	321-60-8	
p-Terphenyl-d14 (S)	83	%.	30-125	1	10/14/19 13:56	10/16/19 15:23	1718-51-0	
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Acetone	ND	ug/kg	1160	1	10/16/19 14:58	10/17/19 02:46	67-64-1	
Allyl chloride	ND	ug/kg	233	1	10/16/19 14:58	10/17/19 02:46	107-05-1	
Benzene	ND	ug/kg	23.3	1	10/16/19 14:58	10/17/19 02:46	71-43-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-2 (2-3) **Lab ID: 10495314015** Collected: 10/10/19 11:30 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Bromobenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	108-86-1	
Bromochloromethane	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	74-97-5	
Bromodichloromethane	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	75-27-4	
Bromoform	ND	ug/kg	233	1	10/16/19 14:58	10/17/19 02:46	75-25-2	
Bromomethane	ND	ug/kg	582	1	10/16/19 14:58	10/17/19 02:46	74-83-9	
2-Butanone (MEK)	ND	ug/kg	291	1	10/16/19 14:58	10/17/19 02:46	78-93-3	
n-Butylbenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	104-51-8	
sec-Butylbenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	135-98-8	
tert-Butylbenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	98-06-6	
Carbon tetrachloride	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	56-23-5	
Chlorobenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	108-90-7	
Chloroethane	ND	ug/kg	582	1	10/16/19 14:58	10/17/19 02:46	75-00-3	
Chloroform	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	67-66-3	
Chloromethane	ND	ug/kg	233	1	10/16/19 14:58	10/17/19 02:46	74-87-3	
2-Chlorotoluene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	95-49-8	
4-Chlorotoluene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	582	1	10/16/19 14:58	10/17/19 02:46	96-12-8	
Dibromochloromethane	ND	ug/kg	233	1	10/16/19 14:58	10/17/19 02:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	106-93-4	
Dibromomethane	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	233	1	10/16/19 14:58	10/17/19 02:46	75-71-8	
1,1-Dichloroethane	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	75-34-3	
1,2-Dichloroethane	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	107-06-2	
1,1-Dichloroethene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	156-60-5	
Dichlorofluoromethane	ND	ug/kg	582	1	10/16/19 14:58	10/17/19 02:46	75-43-4	
1,2-Dichloropropane	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	78-87-5	
1,3-Dichloropropane	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	142-28-9	
2,2-Dichloropropane	ND	ug/kg	233	1	10/16/19 14:58	10/17/19 02:46	594-20-7	
1,1-Dichloropropene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	233	1	10/16/19 14:58	10/17/19 02:46	60-29-7	
Ethylbenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	291	1	10/16/19 14:58	10/17/19 02:46	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	98-82-8	
p-Isopropyltoluene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	99-87-6	
Methylene Chloride	ND	ug/kg	233	1	10/16/19 14:58	10/17/19 02:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	291	1	10/16/19 14:58	10/17/19 02:46	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	1634-04-4	
Naphthalene	ND	ug/kg	233	1	10/16/19 14:58	10/17/19 02:46	91-20-3	
n-Propylbenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	103-65-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-2 (2-3) **Lab ID: 10495314015** Collected: 10/10/19 11:30 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Styrene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	79-34-5	
Tetrachloroethene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	127-18-4	
Tetrahydrofuran	ND	ug/kg	2330	1	10/16/19 14:58	10/17/19 02:46	109-99-9	
Toluene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	79-00-5	
Trichloroethene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	79-01-6	
Trichlorofluoromethane	ND	ug/kg	233	1	10/16/19 14:58	10/17/19 02:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	233	1	10/16/19 14:58	10/17/19 02:46	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	233	1	10/16/19 14:58	10/17/19 02:46	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	58.2	1	10/16/19 14:58	10/17/19 02:46	108-67-8	
Vinyl chloride	ND	ug/kg	23.3	1	10/16/19 14:58	10/17/19 02:46	75-01-4	
Xylene (Total)	ND	ug/kg	175	1	10/16/19 14:58	10/17/19 02:46	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%.	75-125	1	10/16/19 14:58	10/17/19 02:46	17060-07-0	
Toluene-d8 (S)	101	%.	75-125	1	10/16/19 14:58	10/17/19 02:46	2037-26-5	
4-Bromofluorobenzene (S)	95	%.	75-125	1	10/16/19 14:58	10/17/19 02:46	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-3 (0-0.5) **Lab ID: 10495314017** Collected: 10/10/19 12:40 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8081B GCS Pesticides	Analytical Method: EPA 8081B Preparation Method: EPA 3550							
Aldrin	ND	ug/kg	10.1	5	10/14/19 15:48	10/16/19 23:57	309-00-2	
alpha-BHC	ND	ug/kg	10.1	5	10/14/19 15:48	10/16/19 23:57	319-84-6	
beta-BHC	ND	ug/kg	10.1	5	10/14/19 15:48	10/16/19 23:57	319-85-7	
delta-BHC	ND	ug/kg	10.1	5	10/14/19 15:48	10/16/19 23:57	319-86-8	
gamma-BHC (Lindane)	ND	ug/kg	10.1	5	10/14/19 15:48	10/16/19 23:57	58-89-9	
Chlordane (Technical)	ND	ug/kg	101	5	10/14/19 15:48	10/16/19 23:57	57-74-9	
alpha-Chlordane	ND	ug/kg	10.1	5	10/14/19 15:48	10/16/19 23:57	5103-71-9	
gamma-Chlordane	ND	ug/kg	10.1	5	10/14/19 15:48	10/16/19 23:57	5103-74-2	
4,4'-DDD	ND	ug/kg	20.2	5	10/14/19 15:48	10/16/19 23:57	72-54-8	
4,4'-DDE	ND	ug/kg	20.2	5	10/14/19 15:48	10/16/19 23:57	72-55-9	
4,4'-DDT	ND	ug/kg	20.2	5	10/14/19 15:48	10/16/19 23:57	50-29-3	
Dieldrin	ND	ug/kg	20.2	5	10/14/19 15:48	10/16/19 23:57	60-57-1	
Endosulfan I	ND	ug/kg	10.1	5	10/14/19 15:48	10/16/19 23:57	959-98-8	
Endosulfan II	ND	ug/kg	20.2	5	10/14/19 15:48	10/16/19 23:57	33213-65-9	
Endosulfan sulfate	ND	ug/kg	20.2	5	10/14/19 15:48	10/16/19 23:57	1031-07-8	
Endrin	ND	ug/kg	20.2	5	10/14/19 15:48	10/16/19 23:57	72-20-8	
Endrin aldehyde	ND	ug/kg	20.2	5	10/14/19 15:48	10/16/19 23:57	7421-93-4	
Endrin ketone	ND	ug/kg	20.2	5	10/14/19 15:48	10/16/19 23:57	53494-70-5	
Heptachlor	ND	ug/kg	10.1	5	10/14/19 15:48	10/16/19 23:57	76-44-8	
Heptachlor epoxide	ND	ug/kg	10.1	5	10/14/19 15:48	10/16/19 23:57	1024-57-3	
Methoxychlor	ND	ug/kg	101	5	10/14/19 15:48	10/16/19 23:57	72-43-5	
Toxaphene	ND	ug/kg	303	5	10/14/19 15:48	10/16/19 23:57	8001-35-2	
Surrogates								
Tetrachloro-m-xylene (S)	98	%.	30-150	5	10/14/19 15:48	10/16/19 23:57	877-09-8	2M,D3
Decachlorobiphenyl (S)	96	%.	30-150	5	10/14/19 15:48	10/16/19 23:57	2051-24-3	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3050							
Arsenic	**10.5**	mg/kg	0.58	20	10/15/19 15:25	10/18/19 06:00	7440-38-2	
Barium	**245**	mg/kg	0.35	20	10/15/19 15:25	10/18/19 06:00	7440-39-3	
Cadmium	**0.41**	mg/kg	0.093	20	10/15/19 15:25	10/18/19 06:00	7440-43-9	
Chromium	**17.4**	mg/kg	0.58	20	10/15/19 15:25	10/18/19 06:00	7440-47-3	
Lead	**46.6**	mg/kg	0.23	20	10/15/19 15:25	10/18/19 06:00	7439-92-1	
Selenium	**1.0**	mg/kg	0.58	20	10/15/19 15:25	10/18/19 06:00	7782-49-2	
Silver	ND	mg/kg	0.58	20	10/15/19 15:25	10/18/19 06:00	7440-22-4	
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.27**	mg/kg	0.024	1	10/15/19 15:57	10/17/19 15:57	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**17.6**	%	0.10	1		10/15/19 14:07		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Acetone	ND	ug/kg	1320	1	10/16/19 14:58	10/17/19 03:04	67-64-1	
Allyl chloride	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:04	107-05-1	
Benzene	ND	ug/kg	26.3	1	10/16/19 14:58	10/17/19 03:04	71-43-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-3 (0-0.5) **Lab ID: 10495314017** Collected: 10/10/19 12:40 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Bromobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	108-86-1	
Bromochloromethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	74-97-5	
Bromodichloromethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	75-27-4	
Bromoform	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:04	75-25-2	
Bromomethane	ND	ug/kg	658	1	10/16/19 14:58	10/17/19 03:04	74-83-9	
2-Butanone (MEK)	ND	ug/kg	329	1	10/16/19 14:58	10/17/19 03:04	78-93-3	
n-Butylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	104-51-8	
sec-Butylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	135-98-8	
tert-Butylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	98-06-6	
Carbon tetrachloride	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	56-23-5	
Chlorobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	108-90-7	
Chloroethane	ND	ug/kg	658	1	10/16/19 14:58	10/17/19 03:04	75-00-3	
Chloroform	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	67-66-3	
Chloromethane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:04	74-87-3	
2-Chlorotoluene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	95-49-8	
4-Chlorotoluene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	658	1	10/16/19 14:58	10/17/19 03:04	96-12-8	
Dibromochloromethane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	106-93-4	
Dibromomethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:04	75-71-8	
1,1-Dichloroethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	75-34-3	
1,2-Dichloroethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	107-06-2	
1,1-Dichloroethene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	156-60-5	
Dichlorofluoromethane	ND	ug/kg	658	1	10/16/19 14:58	10/17/19 03:04	75-43-4	
1,2-Dichloropropane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	78-87-5	
1,3-Dichloropropane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	142-28-9	
2,2-Dichloropropane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:04	594-20-7	
1,1-Dichloropropene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:04	60-29-7	
Ethylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	329	1	10/16/19 14:58	10/17/19 03:04	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	98-82-8	
p-Isopropyltoluene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	99-87-6	
Methylene Chloride	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	329	1	10/16/19 14:58	10/17/19 03:04	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	1634-04-4	
Naphthalene	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:04	91-20-3	
n-Propylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	103-65-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-3 (0-0.5) **Lab ID: 10495314017** Collected: 10/10/19 12:40 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Styrene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	79-34-5	
Tetrachloroethene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	127-18-4	
Tetrahydrofuran	ND	ug/kg	2630	1	10/16/19 14:58	10/17/19 03:04	109-99-9	
Toluene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	79-00-5	
Trichloroethene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	79-01-6	
Trichlorofluoromethane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:04	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:04	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:04	108-67-8	
Vinyl chloride	ND	ug/kg	26.3	1	10/16/19 14:58	10/17/19 03:04	75-01-4	
Xylene (Total)	ND	ug/kg	197	1	10/16/19 14:58	10/17/19 03:04	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	105	%.	75-125	1	10/16/19 14:58	10/17/19 03:04	17060-07-0	
Toluene-d8 (S)	97	%.	75-125	1	10/16/19 14:58	10/17/19 03:04	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125	1	10/16/19 14:58	10/17/19 03:04	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-3 (1-2) **Lab ID: 10495314018** Collected: 10/10/19 12:50 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8081B GCS Pesticides	Analytical Method: EPA 8081B Preparation Method: EPA 3550							
Aldrin	ND	ug/kg	2.0	1	10/14/19 15:48	10/17/19 00:52	309-00-2	
alpha-BHC	ND	ug/kg	2.0	1	10/14/19 15:48	10/17/19 00:52	319-84-6	
beta-BHC	ND	ug/kg	2.0	1	10/14/19 15:48	10/17/19 00:52	319-85-7	
delta-BHC	ND	ug/kg	2.0	1	10/14/19 15:48	10/17/19 00:52	319-86-8	
gamma-BHC (Lindane)	ND	ug/kg	2.0	1	10/14/19 15:48	10/17/19 00:52	58-89-9	
Chlordane (Technical)	ND	ug/kg	20.1	1	10/14/19 15:48	10/17/19 00:52	57-74-9	
alpha-Chlordane	ND	ug/kg	2.0	1	10/14/19 15:48	10/17/19 00:52	5103-71-9	
gamma-Chlordane	ND	ug/kg	2.0	1	10/14/19 15:48	10/17/19 00:52	5103-74-2	
4,4'-DDD	ND	ug/kg	4.0	1	10/14/19 15:48	10/17/19 00:52	72-54-8	
4,4'-DDE	ND	ug/kg	4.0	1	10/14/19 15:48	10/17/19 00:52	72-55-9	
4,4'-DDT	ND	ug/kg	4.0	1	10/14/19 15:48	10/17/19 00:52	50-29-3	
Dieldrin	ND	ug/kg	4.0	1	10/14/19 15:48	10/17/19 00:52	60-57-1	
Endosulfan I	ND	ug/kg	2.0	1	10/14/19 15:48	10/17/19 00:52	959-98-8	
Endosulfan II	ND	ug/kg	4.0	1	10/14/19 15:48	10/17/19 00:52	33213-65-9	
Endosulfan sulfate	ND	ug/kg	4.0	1	10/14/19 15:48	10/17/19 00:52	1031-07-8	
Endrin	ND	ug/kg	4.0	1	10/14/19 15:48	10/17/19 00:52	72-20-8	
Endrin aldehyde	ND	ug/kg	4.0	1	10/14/19 15:48	10/17/19 00:52	7421-93-4	
Endrin ketone	ND	ug/kg	4.0	1	10/14/19 15:48	10/17/19 00:52	53494-70-5	
Heptachlor	ND	ug/kg	2.0	1	10/14/19 15:48	10/17/19 00:52	76-44-8	
Heptachlor epoxide	ND	ug/kg	2.0	1	10/14/19 15:48	10/17/19 00:52	1024-57-3	
Methoxychlor	ND	ug/kg	20.1	1	10/14/19 15:48	10/17/19 00:52	72-43-5	
Toxaphene	ND	ug/kg	60.2	1	10/14/19 15:48	10/17/19 00:52	8001-35-2	
Surrogates								
Tetrachloro-m-xylene (S)	101	%.	30-150	1	10/14/19 15:48	10/17/19 00:52	877-09-8	
Decachlorobiphenyl (S)	96	%.	30-150	1	10/14/19 15:48	10/17/19 00:52	2051-24-3	
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3050							
Arsenic	**7.6**	mg/kg	0.57	20	10/15/19 15:25	10/18/19 06:05	7440-38-2	
Barium	**122**	mg/kg	0.34	20	10/15/19 15:25	10/18/19 06:05	7440-39-3	
Cadmium	**0.094**	mg/kg	0.092	20	10/15/19 15:25	10/18/19 06:05	7440-43-9	
Chromium	**28.0**	mg/kg	0.57	20	10/15/19 15:25	10/18/19 06:05	7440-47-3	
Lead	**10.8**	mg/kg	0.23	20	10/15/19 15:25	10/18/19 06:05	7439-92-1	
Selenium	**0.63**	mg/kg	0.57	20	10/15/19 15:25	10/18/19 06:05	7782-49-2	
Silver	ND	mg/kg	0.57	20	10/15/19 15:25	10/18/19 06:05	7440-22-4	
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.035**	mg/kg	0.023	1	10/15/19 15:57	10/17/19 15:59	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**16.9**	%	0.10	1		10/15/19 14:07		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Acetone	ND	ug/kg	1320	1	10/16/19 14:58	10/17/19 03:22	67-64-1	
Allyl chloride	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:22	107-05-1	
Benzene	ND	ug/kg	26.3	1	10/16/19 14:58	10/17/19 03:22	71-43-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-3 (1-2) **Lab ID: 10495314018** Collected: 10/10/19 12:50 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Bromobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	108-86-1	
Bromochloromethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	74-97-5	
Bromodichloromethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	75-27-4	
Bromoform	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:22	75-25-2	
Bromomethane	ND	ug/kg	658	1	10/16/19 14:58	10/17/19 03:22	74-83-9	
2-Butanone (MEK)	ND	ug/kg	329	1	10/16/19 14:58	10/17/19 03:22	78-93-3	
n-Butylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	104-51-8	
sec-Butylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	135-98-8	
tert-Butylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	98-06-6	
Carbon tetrachloride	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	56-23-5	
Chlorobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	108-90-7	
Chloroethane	ND	ug/kg	658	1	10/16/19 14:58	10/17/19 03:22	75-00-3	
Chloroform	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	67-66-3	
Chloromethane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:22	74-87-3	
2-Chlorotoluene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	95-49-8	
4-Chlorotoluene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	658	1	10/16/19 14:58	10/17/19 03:22	96-12-8	
Dibromochloromethane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:22	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	106-93-4	
Dibromomethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:22	75-71-8	
1,1-Dichloroethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	75-34-3	
1,2-Dichloroethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	107-06-2	
1,1-Dichloroethene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	156-60-5	
Dichlorofluoromethane	ND	ug/kg	658	1	10/16/19 14:58	10/17/19 03:22	75-43-4	
1,2-Dichloropropane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	78-87-5	
1,3-Dichloropropane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	142-28-9	
2,2-Dichloropropane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:22	594-20-7	
1,1-Dichloropropene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:22	60-29-7	
Ethylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	329	1	10/16/19 14:58	10/17/19 03:22	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	98-82-8	
p-Isopropyltoluene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	99-87-6	
Methylene Chloride	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	329	1	10/16/19 14:58	10/17/19 03:22	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	1634-04-4	
Naphthalene	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:22	91-20-3	
n-Propylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	103-65-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-3 (1-2) **Lab ID: 10495314018** Collected: 10/10/19 12:50 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Styrene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	79-34-5	
Tetrachloroethene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	127-18-4	
Tetrahydrofuran	ND	ug/kg	2630	1	10/16/19 14:58	10/17/19 03:22	109-99-9	
Toluene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	79-00-5	
Trichloroethene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	79-01-6	
Trichlorofluoromethane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:22	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:22	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	263	1	10/16/19 14:58	10/17/19 03:22	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	65.8	1	10/16/19 14:58	10/17/19 03:22	108-67-8	
Vinyl chloride	ND	ug/kg	26.3	1	10/16/19 14:58	10/17/19 03:22	75-01-4	
Xylene (Total)	ND	ug/kg	197	1	10/16/19 14:58	10/17/19 03:22	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	108	%.	75-125	1	10/16/19 14:58	10/17/19 03:22	17060-07-0	
Toluene-d8 (S)	96	%.	75-125	1	10/16/19 14:58	10/17/19 03:22	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125	1	10/16/19 14:58	10/17/19 03:22	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-1 (W) **Lab ID: 10495314020** Collected: 10/10/19 12:00 Received: 10/11/19 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO LV GCS Silica Gel	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	ND	mg/L	0.12	1	10/14/19 10:01	10/15/19 18:06		
Surrogates								
n-Triacontane (S)	94	%.	48-125	1	10/14/19 10:01	10/15/19 18:06	638-68-6	P4
6010D MET ICP, Lab Filtered	Analytical Method: EPA 6010D Preparation Method: EPA 3010							
Arsenic, Dissolved	ND	ug/L	20.0	1	10/16/19 04:16	10/16/19 15:22	7440-38-2	
Barium, Dissolved	**124**	ug/L	10.0	1	10/16/19 04:16	10/16/19 15:22	7440-39-3	
Cadmium, Dissolved	ND	ug/L	3.0	1	10/16/19 04:16	10/16/19 15:22	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	10/16/19 04:16	10/16/19 15:22	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	10/16/19 04:16	10/16/19 15:22	7439-92-1	
Selenium, Dissolved	ND	ug/L	20.0	1	10/16/19 04:16	10/16/19 15:22	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	10/16/19 04:16	10/16/19 15:22	7440-22-4	
7470A Mercury, Lab Filtered	Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury, Dissolved	ND	ug/L	0.20	1	10/16/19 06:32	10/16/19 17:46	7439-97-6	
8270D MSSV PAH by SIM	Analytical Method: EPA 8270D by SIM Preparation Method: EPA Mod. 3510C							
Acenaphthene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	83-32-9	
Acenaphthylene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	208-96-8	
Anthracene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	207-08-9	
Chrysene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	53-70-3	
Fluoranthene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	206-44-0	
Fluorene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	193-39-5	
Naphthalene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	91-20-3	
Phenanthrene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	85-01-8	
Pyrene	ND	ug/L	0.059	1	10/14/19 17:22	10/15/19 16:12	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	84	%.	47-125	1	10/14/19 17:22	10/15/19 16:12	321-60-8	
p-Terphenyl-d14 (S)	96	%.	62-125	1	10/14/19 17:22	10/15/19 16:12	1718-51-0	
8260B VOC	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	20.0	1		10/17/19 11:24	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		10/17/19 11:24	107-05-1	
Benzene	ND	ug/L	1.0	1		10/17/19 11:24	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/17/19 11:24	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/17/19 11:24	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/17/19 11:24	75-27-4	
Bromoform	ND	ug/L	4.0	1		10/17/19 11:24	75-25-2	
Bromomethane	ND	ug/L	4.0	1		10/17/19 11:24	74-83-9	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-1 (W) **Lab ID: 10495314020** Collected: 10/10/19 12:00 Received: 10/11/19 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC	Analytical Method: EPA 8260B							
2-Butanone (MEK)	ND	ug/L	5.0	1		10/17/19 11:24	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		10/17/19 11:24	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		10/17/19 11:24	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		10/17/19 11:24	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		10/17/19 11:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/17/19 11:24	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/17/19 11:24	75-00-3	
Chloroform	ND	ug/L	4.0	1		10/17/19 11:24	67-66-3	
Chloromethane	ND	ug/L	4.0	1		10/17/19 11:24	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/17/19 11:24	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/17/19 11:24	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		10/17/19 11:24	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		10/17/19 11:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/17/19 11:24	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		10/17/19 11:24	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/17/19 11:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/17/19 11:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/17/19 11:24	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/17/19 11:24	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/17/19 11:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/17/19 11:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/17/19 11:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/17/19 11:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/17/19 11:24	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		10/17/19 11:24	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		10/17/19 11:24	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/17/19 11:24	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		10/17/19 11:24	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/17/19 11:24	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		10/17/19 11:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		10/17/19 11:24	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		10/17/19 11:24	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		10/17/19 11:24	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/17/19 11:24	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/17/19 11:24	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/17/19 11:24	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		10/17/19 11:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/17/19 11:24	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/17/19 11:24	1634-04-4	
Naphthalene	ND	ug/L	4.0	1		10/17/19 11:24	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/17/19 11:24	103-65-1	
Styrene	ND	ug/L	1.0	1		10/17/19 11:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		10/17/19 11:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/17/19 11:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/17/19 11:24	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		10/17/19 11:24	109-99-9	
Toluene	ND	ug/L	1.0	1		10/17/19 11:24	108-88-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-1 (W) **Lab ID: 10495314020** Collected: 10/10/19 12:00 Received: 10/11/19 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC	Analytical Method: EPA 8260B							
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/17/19 11:24	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/17/19 11:24	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/17/19 11:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/17/19 11:24	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		10/17/19 11:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/17/19 11:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		10/17/19 11:24	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		10/17/19 11:24	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/17/19 11:24	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/17/19 11:24	108-67-8	
Vinyl chloride	ND	ug/L	0.20	1		10/17/19 11:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/17/19 11:24	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	95	%.	75-125	1		10/17/19 11:24	17060-07-0	
Toluene-d8 (S)	98	%.	75-125	1		10/17/19 11:24	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125	1		10/17/19 11:24	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-3 (W) **Lab ID: 10495314021** Collected: 10/10/19 14:00 Received: 10/11/19 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, Lab Filtered	Analytical Method: EPA 6010D Preparation Method: EPA 3010							
Arsenic, Dissolved	ND	ug/L	20.0	1	10/16/19 04:16	10/16/19 15:37	7440-38-2	
Barium, Dissolved	**229**	ug/L	10.0	1	10/16/19 04:16	10/16/19 15:37	7440-39-3	
Cadmium, Dissolved	ND	ug/L	3.0	1	10/16/19 04:16	10/16/19 15:37	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	10/16/19 04:16	10/16/19 15:37	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	10/16/19 04:16	10/16/19 15:37	7439-92-1	
Selenium, Dissolved	ND	ug/L	20.0	1	10/16/19 04:16	10/16/19 15:37	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	10/16/19 04:16	10/16/19 15:37	7440-22-4	
7470A Mercury, Lab Filtered	Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury, Dissolved	ND	ug/L	0.20	1	10/16/19 06:32	10/16/19 17:48	7439-97-6	
8270D MSSV PAH by SIM	Analytical Method: EPA 8270D by SIM Preparation Method: EPA Mod. 3510C							
Acenaphthene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	83-32-9	
Acenaphthylene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	208-96-8	
Anthracene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	207-08-9	
Chrysene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	53-70-3	
Fluoranthene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	206-44-0	
Fluorene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	193-39-5	
Naphthalene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	91-20-3	
Phenanthrene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	85-01-8	
Pyrene	ND	ug/L	0.051	1	10/14/19 17:22	10/15/19 16:33	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	84	%.	47-125	1	10/14/19 17:22	10/15/19 16:33	321-60-8	
p-Terphenyl-d14 (S)	90	%.	62-125	1	10/14/19 17:22	10/15/19 16:33	1718-51-0	
8260B VOC	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	20.0	1		10/17/19 11:41	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		10/17/19 11:41	107-05-1	
Benzene	ND	ug/L	1.0	1		10/17/19 11:41	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/17/19 11:41	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/17/19 11:41	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/17/19 11:41	75-27-4	
Bromoform	ND	ug/L	4.0	1		10/17/19 11:41	75-25-2	
Bromomethane	ND	ug/L	4.0	1		10/17/19 11:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/17/19 11:41	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		10/17/19 11:41	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		10/17/19 11:41	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		10/17/19 11:41	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		10/17/19 11:41	56-23-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-3 (W) **Lab ID: 10495314021** Collected: 10/10/19 14:00 Received: 10/11/19 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC	Analytical Method: EPA 8260B							
Chlorobenzene	ND	ug/L	1.0	1		10/17/19 11:41	108-90-7	
Chloroethane	ND	ug/L	1.0	1		10/17/19 11:41	75-00-3	
Chloroform	ND	ug/L	4.0	1		10/17/19 11:41	67-66-3	
Chloromethane	ND	ug/L	4.0	1		10/17/19 11:41	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/17/19 11:41	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/17/19 11:41	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		10/17/19 11:41	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		10/17/19 11:41	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/17/19 11:41	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		10/17/19 11:41	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/17/19 11:41	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/17/19 11:41	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/17/19 11:41	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/17/19 11:41	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/17/19 11:41	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/17/19 11:41	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/17/19 11:41	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/17/19 11:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/17/19 11:41	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		10/17/19 11:41	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		10/17/19 11:41	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/17/19 11:41	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		10/17/19 11:41	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/17/19 11:41	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		10/17/19 11:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		10/17/19 11:41	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		10/17/19 11:41	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		10/17/19 11:41	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/17/19 11:41	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/17/19 11:41	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/17/19 11:41	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		10/17/19 11:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/17/19 11:41	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/17/19 11:41	1634-04-4	
Naphthalene	ND	ug/L	4.0	1		10/17/19 11:41	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/17/19 11:41	103-65-1	
Styrene	ND	ug/L	1.0	1		10/17/19 11:41	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		10/17/19 11:41	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/17/19 11:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/17/19 11:41	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		10/17/19 11:41	109-99-9	
Toluene	ND	ug/L	1.0	1		10/17/19 11:41	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/17/19 11:41	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/17/19 11:41	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/17/19 11:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/17/19 11:41	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		10/17/19 11:41	79-01-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: ST-3 (W) **Lab ID: 10495314021** Collected: 10/10/19 14:00 Received: 10/11/19 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC	Analytical Method: EPA 8260B							
Trichlorofluoromethane	ND	ug/L	1.0	1		10/17/19 11:41	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		10/17/19 11:41	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		10/17/19 11:41	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/17/19 11:41	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/17/19 11:41	108-67-8	
Vinyl chloride	ND	ug/L	0.20	1		10/17/19 11:41	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/17/19 11:41	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	95	%.	75-125	1		10/17/19 11:41	17060-07-0	
Toluene-d8 (S)	98	%.	75-125	1		10/17/19 11:41	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125	1		10/17/19 11:41	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: HCl Trip Blank **Lab ID: 10495314022** Collected: 10/10/19 00:00 Received: 10/11/19 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	20.0	1		10/18/19 01:57	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		10/18/19 01:57	107-05-1	
Benzene	ND	ug/L	1.0	1		10/18/19 01:57	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/18/19 01:57	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/18/19 01:57	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/18/19 01:57	75-27-4	
Bromoform	ND	ug/L	4.0	1		10/18/19 01:57	75-25-2	
Bromomethane	ND	ug/L	4.0	1		10/18/19 01:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		10/18/19 01:57	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		10/18/19 01:57	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		10/18/19 01:57	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		10/18/19 01:57	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	1		10/18/19 01:57	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/18/19 01:57	108-90-7	
Chloroethane	ND	ug/L	4.0	1		10/18/19 01:57	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/18/19 01:57	67-66-3	
Chloromethane	ND	ug/L	4.0	1		10/18/19 01:57	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/18/19 01:57	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/18/19 01:57	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		10/18/19 01:57	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/18/19 01:57	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/18/19 01:57	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		10/18/19 01:57	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/18/19 01:57	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/18/19 01:57	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/18/19 01:57	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/18/19 01:57	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/18/19 01:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/18/19 01:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/18/19 01:57	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/18/19 01:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/18/19 01:57	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		10/18/19 01:57	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		10/18/19 01:57	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/18/19 01:57	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		10/18/19 01:57	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/18/19 01:57	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		10/18/19 01:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		10/18/19 01:57	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		10/18/19 01:57	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		10/18/19 01:57	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/18/19 01:57	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/18/19 01:57	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		10/18/19 01:57	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		10/18/19 01:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		10/18/19 01:57	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/18/19 01:57	1634-04-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: HCl Trip Blank **Lab ID: 10495314022** Collected: 10/10/19 00:00 Received: 10/11/19 13:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC	Analytical Method: EPA 8260B							
Naphthalene	ND	ug/L	4.0	1		10/18/19 01:57	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/18/19 01:57	103-65-1	
Styrene	ND	ug/L	1.0	1		10/18/19 01:57	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/18/19 01:57	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/18/19 01:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/18/19 01:57	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		10/18/19 01:57	109-99-9	
Toluene	ND	ug/L	1.0	1		10/18/19 01:57	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/18/19 01:57	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/18/19 01:57	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/18/19 01:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/18/19 01:57	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		10/18/19 01:57	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/18/19 01:57	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		10/18/19 01:57	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		10/18/19 01:57	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/18/19 01:57	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/18/19 01:57	108-67-8	
Vinyl chloride	ND	ug/L	0.20	1		10/18/19 01:57	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/18/19 01:57	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%.	75-125	1		10/18/19 01:57	17060-07-0	
Toluene-d8 (S)	96	%.	75-125	1		10/18/19 01:57	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125	1		10/18/19 01:57	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: MeOH Trip Blank **Lab ID: 10495314023** Collected: 10/10/19 00:00 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Acetone	ND	ug/kg	1000	1	10/16/19 14:58	10/16/19 23:46	67-64-1	
Allyl chloride	ND	ug/kg	200	1	10/16/19 14:58	10/16/19 23:46	107-05-1	
Benzene	ND	ug/kg	20.0	1	10/16/19 14:58	10/16/19 23:46	71-43-2	
Bromobenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	108-86-1	
Bromochloromethane	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	74-97-5	
Bromodichloromethane	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	75-27-4	
Bromoform	ND	ug/kg	200	1	10/16/19 14:58	10/16/19 23:46	75-25-2	
Bromomethane	ND	ug/kg	500	1	10/16/19 14:58	10/16/19 23:46	74-83-9	
2-Butanone (MEK)	ND	ug/kg	250	1	10/16/19 14:58	10/16/19 23:46	78-93-3	
n-Butylbenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	104-51-8	
sec-Butylbenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	135-98-8	
tert-Butylbenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	98-06-6	
Carbon tetrachloride	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	56-23-5	
Chlorobenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	108-90-7	
Chloroethane	ND	ug/kg	500	1	10/16/19 14:58	10/16/19 23:46	75-00-3	
Chloroform	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	67-66-3	
Chloromethane	ND	ug/kg	200	1	10/16/19 14:58	10/16/19 23:46	74-87-3	
2-Chlorotoluene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	95-49-8	
4-Chlorotoluene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	500	1	10/16/19 14:58	10/16/19 23:46	96-12-8	
Dibromochloromethane	ND	ug/kg	200	1	10/16/19 14:58	10/16/19 23:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	106-93-4	
Dibromomethane	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	200	1	10/16/19 14:58	10/16/19 23:46	75-71-8	
1,1-Dichloroethane	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	75-34-3	
1,2-Dichloroethane	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	107-06-2	
1,1-Dichloroethene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	156-60-5	
Dichlorofluoromethane	ND	ug/kg	500	1	10/16/19 14:58	10/16/19 23:46	75-43-4	
1,2-Dichloropropane	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	78-87-5	
1,3-Dichloropropane	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	142-28-9	
2,2-Dichloropropane	ND	ug/kg	200	1	10/16/19 14:58	10/16/19 23:46	594-20-7	
1,1-Dichloropropene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	200	1	10/16/19 14:58	10/16/19 23:46	60-29-7	
Ethylbenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	250	1	10/16/19 14:58	10/16/19 23:46	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	98-82-8	
p-Isopropyltoluene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	99-87-6	
Methylene Chloride	ND	ug/kg	200	1	10/16/19 14:58	10/16/19 23:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	250	1	10/16/19 14:58	10/16/19 23:46	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Sample: MeOH Trip Blank **Lab ID: 10495314023** Collected: 10/10/19 00:00 Received: 10/11/19 13:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Methyl-tert-butyl ether	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	1634-04-4	
Naphthalene	ND	ug/kg	200	1	10/16/19 14:58	10/16/19 23:46	91-20-3	
n-Propylbenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	103-65-1	
Styrene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	79-34-5	
Tetrachloroethene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	127-18-4	
Tetrahydrofuran	ND	ug/kg	2000	1	10/16/19 14:58	10/16/19 23:46	109-99-9	
Toluene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	79-00-5	
Trichloroethene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	79-01-6	
Trichlorofluoromethane	ND	ug/kg	200	1	10/16/19 14:58	10/16/19 23:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	200	1	10/16/19 14:58	10/16/19 23:46	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	200	1	10/16/19 14:58	10/16/19 23:46	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	50.0	1	10/16/19 14:58	10/16/19 23:46	108-67-8	
Vinyl chloride	ND	ug/kg	20.0	1	10/16/19 14:58	10/16/19 23:46	75-01-4	
Xylene (Total)	ND	ug/kg	150	1	10/16/19 14:58	10/16/19 23:46	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%.	75-125	1	10/16/19 14:58	10/16/19 23:46	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1	10/16/19 14:58	10/16/19 23:46	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125	1	10/16/19 14:58	10/16/19 23:46	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

QC Batch: 638403 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10495314020, 10495314021

METHOD BLANK: 3440646 Matrix: Water
Associated Lab Samples: 10495314020, 10495314021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	10/16/19 17:41	

LABORATORY CONTROL SAMPLE: 3440647

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.6	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3440648 3440649

Parameter	Units	10495314021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	5.8	5.8	116	116	80-120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

QC Batch: 638127 Analysis Method: EPA 7471B
QC Batch Method: EPA 7471B Analysis Description: 7471B Mercury Solids
Associated Lab Samples: 10495314001, 10495314002, 10495314004, 10495314005, 10495314007, 10495314008, 10495314010, 10495314011, 10495314013, 10495314015, 10495314017, 10495314018

METHOD BLANK: 3439768 Matrix: Solid
Associated Lab Samples: 10495314001, 10495314002, 10495314004, 10495314005, 10495314007, 10495314008, 10495314010, 10495314011, 10495314013, 10495314015, 10495314017, 10495314018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.019	10/17/19 15:19	

LABORATORY CONTROL SAMPLE: 3439769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.45	0.50	110	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3439770 3439771

Parameter	Units	10495314001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.048	0.63	0.67	0.68	0.71	100	98	80-120	4	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

QC Batch: 638402 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10495314020, 10495314021

METHOD BLANK: 3440642 Matrix: Water
Associated Lab Samples: 10495314020, 10495314021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	ND	20.0	10/16/19 15:13	
Barium, Dissolved	ug/L	ND	10.0	10/16/19 15:13	
Cadmium, Dissolved	ug/L	ND	3.0	10/16/19 15:13	
Chromium, Dissolved	ug/L	ND	10.0	10/16/19 15:13	
Lead, Dissolved	ug/L	ND	10.0	10/16/19 15:13	
Selenium, Dissolved	ug/L	ND	20.0	10/16/19 15:13	
Silver, Dissolved	ug/L	ND	10.0	10/16/19 15:13	

LABORATORY CONTROL SAMPLE: 3440643

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	1000	968	97	80-120	
Barium, Dissolved	ug/L	1000	990	99	80-120	
Cadmium, Dissolved	ug/L	1000	975	98	80-120	
Chromium, Dissolved	ug/L	1000	970	97	80-120	
Lead, Dissolved	ug/L	1000	972	97	80-120	
Selenium, Dissolved	ug/L	1000	967	97	80-120	
Silver, Dissolved	ug/L	500	474	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3440644 3440645

Parameter	Units	10495314020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic, Dissolved	ug/L	ND	1000	1000	1020	1020	102	102	75-125	1	20	
Barium, Dissolved	ug/L	124	1000	1000	1130	1130	100	100	75-125	0	20	
Cadmium, Dissolved	ug/L	ND	1000	1000	995	995	99	99	75-125	0	20	
Chromium, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	75-125	0	20	
Lead, Dissolved	ug/L	ND	1000	1000	988	986	99	99	75-125	0	20	
Selenium, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	75-125	0	20	
Silver, Dissolved	ug/L	ND	500	500	493	492	99	98	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

QC Batch: 638332 Analysis Method: EPA 6020B
QC Batch Method: EPA 3050 Analysis Description: 6020B Solids UPD5
Associated Lab Samples: 10495314013, 10495314015, 10495314017, 10495314018

METHOD BLANK: 3440391 Matrix: Solid
Associated Lab Samples: 10495314013, 10495314015, 10495314017, 10495314018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.50	10/18/19 05:24	
Barium	mg/kg	ND	0.30	10/18/19 05:24	
Cadmium	mg/kg	ND	0.079	10/18/19 05:24	
Chromium	mg/kg	ND	0.50	10/18/19 05:24	
Lead	mg/kg	ND	0.20	10/18/19 05:24	
Selenium	mg/kg	ND	0.50	10/18/19 05:24	
Silver	mg/kg	ND	0.50	10/18/19 05:24	

LABORATORY CONTROL SAMPLE: 3440392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	49	53.2	109	80-120	
Barium	mg/kg	49	53.1	108	80-120	
Cadmium	mg/kg	49	53.7	110	80-120	
Chromium	mg/kg	49	57.7	118	80-120	
Lead	mg/kg	49	54.9	112	80-120	
Selenium	mg/kg	49	55.1	112	80-120	
Silver	mg/kg	24.5	26.9	110	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3440393 3440394

Parameter	Units	10495314013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	7.5	58.9	58.9	69.2	68.9	105	104	75-125	0	20	
Barium	mg/kg	124	58.9	58.9	221	218	165	160	75-125	2	20	M6
Cadmium	mg/kg	ND	58.9	58.9	63.7	63.9	108	108	75-125	0	20	
Chromium	mg/kg	23.0	58.9	58.9	94.0	91.1	121	115	75-125	3	20	
Lead	mg/kg	11.5	58.9	58.9	77.3	76.9	112	111	75-125	1	20	
Selenium	mg/kg	0.93	58.9	58.9	61.4	60.2	103	101	75-125	2	20	
Silver	mg/kg	ND	29.5	29.5	33.0	33.0	112	111	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

QC Batch: 638337 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974
Associated Lab Samples: 10495314001, 10495314002, 10495314004, 10495314005, 10495314007, 10495314008, 10495314010, 10495314011, 10495314013, 10495314015, 10495314017, 10495314018

SAMPLE DUPLICATE: 3440409

Parameter	Units	10495314001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	28.6	28.5	1	30	

SAMPLE DUPLICATE: 3440410

Parameter	Units	10495362001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	28.8	30.1	4	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

QC Batch: 638775 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV 5030 Med Level
Associated Lab Samples: 10495314013, 10495314015, 10495314017, 10495314018, 10495314023

METHOD BLANK: 3442179 Matrix: Solid
Associated Lab Samples: 10495314013, 10495314015, 10495314017, 10495314018, 10495314023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	50.0	10/16/19 22:34	
1,1,1-Trichloroethane	ug/kg	ND	50.0	10/16/19 22:34	
1,1,2,2-Tetrachloroethane	ug/kg	ND	50.0	10/16/19 22:34	
1,1,2-Trichloroethane	ug/kg	ND	50.0	10/16/19 22:34	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	200	10/16/19 22:34	
1,1-Dichloroethane	ug/kg	ND	50.0	10/16/19 22:34	
1,1-Dichloroethene	ug/kg	ND	50.0	10/16/19 22:34	
1,1-Dichloropropene	ug/kg	ND	50.0	10/16/19 22:34	
1,2,3-Trichlorobenzene	ug/kg	ND	50.0	10/16/19 22:34	
1,2,3-Trichloropropane	ug/kg	ND	200	10/16/19 22:34	
1,2,4-Trichlorobenzene	ug/kg	ND	50.0	10/16/19 22:34	
1,2,4-Trimethylbenzene	ug/kg	ND	50.0	10/16/19 22:34	
1,2-Dibromo-3-chloropropane	ug/kg	ND	500	10/16/19 22:34	
1,2-Dibromoethane (EDB)	ug/kg	ND	50.0	10/16/19 22:34	
1,2-Dichlorobenzene	ug/kg	ND	50.0	10/16/19 22:34	
1,2-Dichloroethane	ug/kg	ND	50.0	10/16/19 22:34	
1,2-Dichloropropane	ug/kg	ND	50.0	10/16/19 22:34	
1,3,5-Trimethylbenzene	ug/kg	ND	50.0	10/16/19 22:34	
1,3-Dichlorobenzene	ug/kg	ND	50.0	10/16/19 22:34	
1,3-Dichloropropane	ug/kg	ND	50.0	10/16/19 22:34	
1,4-Dichlorobenzene	ug/kg	ND	50.0	10/16/19 22:34	
2,2-Dichloropropane	ug/kg	ND	200	10/16/19 22:34	
2-Butanone (MEK)	ug/kg	ND	250	10/16/19 22:34	
2-Chlorotoluene	ug/kg	ND	50.0	10/16/19 22:34	
4-Chlorotoluene	ug/kg	ND	50.0	10/16/19 22:34	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	250	10/16/19 22:34	
Acetone	ug/kg	ND	1000	10/16/19 22:34	
Allyl chloride	ug/kg	ND	200	10/16/19 22:34	
Benzene	ug/kg	ND	20.0	10/16/19 22:34	
Bromobenzene	ug/kg	ND	50.0	10/16/19 22:34	
Bromochloromethane	ug/kg	ND	50.0	10/16/19 22:34	
Bromodichloromethane	ug/kg	ND	50.0	10/16/19 22:34	
Bromoform	ug/kg	ND	200	10/16/19 22:34	
Bromomethane	ug/kg	ND	500	10/16/19 22:34	
Carbon tetrachloride	ug/kg	ND	50.0	10/16/19 22:34	
Chlorobenzene	ug/kg	ND	50.0	10/16/19 22:34	
Chloroethane	ug/kg	ND	500	10/16/19 22:34	
Chloroform	ug/kg	ND	50.0	10/16/19 22:34	
Chloromethane	ug/kg	ND	200	10/16/19 22:34	
cis-1,2-Dichloroethene	ug/kg	ND	50.0	10/16/19 22:34	
cis-1,3-Dichloropropene	ug/kg	ND	50.0	10/16/19 22:34	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

METHOD BLANK: 3442179 Matrix: Solid
Associated Lab Samples: 10495314013, 10495314015, 10495314017, 10495314018, 10495314023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/kg	ND	200	10/16/19 22:34	
Dibromomethane	ug/kg	ND	50.0	10/16/19 22:34	
Dichlorodifluoromethane	ug/kg	ND	200	10/16/19 22:34	
Dichlorofluoromethane	ug/kg	ND	500	10/16/19 22:34	
Diethyl ether (Ethyl ether)	ug/kg	ND	200	10/16/19 22:34	
Ethylbenzene	ug/kg	ND	50.0	10/16/19 22:34	
Hexachloro-1,3-butadiene	ug/kg	ND	250	10/16/19 22:34	
Isopropylbenzene (Cumene)	ug/kg	ND	50.0	10/16/19 22:34	
Methyl-tert-butyl ether	ug/kg	ND	50.0	10/16/19 22:34	
Methylene Chloride	ug/kg	ND	200	10/16/19 22:34	
n-Butylbenzene	ug/kg	ND	50.0	10/16/19 22:34	
n-Propylbenzene	ug/kg	ND	50.0	10/16/19 22:34	
Naphthalene	ug/kg	ND	200	10/16/19 22:34	
p-Isopropyltoluene	ug/kg	ND	50.0	10/16/19 22:34	
sec-Butylbenzene	ug/kg	ND	50.0	10/16/19 22:34	
Styrene	ug/kg	ND	50.0	10/16/19 22:34	
tert-Butylbenzene	ug/kg	ND	50.0	10/16/19 22:34	
Tetrachloroethene	ug/kg	ND	50.0	10/16/19 22:34	
Tetrahydrofuran	ug/kg	ND	2000	10/16/19 22:34	
Toluene	ug/kg	ND	50.0	10/16/19 22:34	
trans-1,2-Dichloroethene	ug/kg	ND	50.0	10/16/19 22:34	
trans-1,3-Dichloropropene	ug/kg	ND	50.0	10/16/19 22:34	
Trichloroethene	ug/kg	ND	50.0	10/16/19 22:34	
Trichlorofluoromethane	ug/kg	ND	200	10/16/19 22:34	
Vinyl chloride	ug/kg	ND	20.0	10/16/19 22:34	
Xylene (Total)	ug/kg	ND	150	10/16/19 22:34	
1,2-Dichloroethane-d4 (S)	%.	102	75-125	10/16/19 22:34	
4-Bromofluorobenzene (S)	%.	98	75-125	10/16/19 22:34	
Toluene-d8 (S)	%.	98	75-125	10/16/19 22:34	

LABORATORY CONTROL SAMPLE: 3442180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	1000	835	83	53-125	
1,1,1-Trichloroethane	ug/kg	1000	990	99	53-146	
1,1,2,2-Tetrachloroethane	ug/kg	1000	811	81	51-125	
1,1,2-Trichloroethane	ug/kg	1000	802	80	55-125	
1,1,2-Trichlorotrifluoroethane	ug/kg	1000	1010	101	49-150	
1,1-Dichloroethane	ug/kg	1000	858	86	56-125	
1,1-Dichloroethene	ug/kg	1000	924	92	48-148	
1,1-Dichloropropene	ug/kg	1000	1010	101	55-142	
1,2,3-Trichlorobenzene	ug/kg	1000	838	84	47-125	
1,2,3-Trichloropropane	ug/kg	1000	796	80	52-125	
1,2,4-Trichlorobenzene	ug/kg	1000	799	80	48-125	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

LABORATORY CONTROL SAMPLE: 3442180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	927	93	51-126	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1990	80	50-125	
1,2-Dibromoethane (EDB)	ug/kg	1000	877	88	52-125	
1,2-Dichlorobenzene	ug/kg	1000	799	80	50-125	
1,2-Dichloroethane	ug/kg	1000	856	86	51-125	
1,2-Dichloropropane	ug/kg	1000	845	85	57-125	
1,3,5-Trimethylbenzene	ug/kg	1000	960	96	52-127	
1,3-Dichlorobenzene	ug/kg	1000	795	79	50-128	
1,3-Dichloropropane	ug/kg	1000	858	86	55-125	
1,4-Dichlorobenzene	ug/kg	1000	845	85	51-125	
2,2-Dichloropropane	ug/kg	1000	864	86	41-136	
2-Butanone (MEK)	ug/kg	5000	4080	82	43-125	
2-Chlorotoluene	ug/kg	1000	848	85	52-126	
4-Chlorotoluene	ug/kg	1000	844	84	53-126	
4-Methyl-2-pentanone (MIBK)	ug/kg	5000	3950	79	39-125	
Acetone	ug/kg	5000	4350	87	46-136	
Allyl chloride	ug/kg	1000	927	93	48-130	
Benzene	ug/kg	1000	940	94	48-125	
Bromobenzene	ug/kg	1000	785	79	51-125	
Bromochloromethane	ug/kg	1000	890	89	52-125	
Bromodichloromethane	ug/kg	1000	851	85	51-131	
Bromoform	ug/kg	1000	834	83	52-125	
Bromomethane	ug/kg	1000	1050	105	30-150	
Carbon tetrachloride	ug/kg	1000	1000	100	59-129	
Chlorobenzene	ug/kg	1000	856	86	54-125	
Chloroethane	ug/kg	1000	939	94	61-132	SS
Chloroform	ug/kg	1000	901	90	52-125	
Chloromethane	ug/kg	1000	807	81	46-125	
cis-1,2-Dichloroethene	ug/kg	1000	891	89	54-127	
cis-1,3-Dichloropropene	ug/kg	1000	885	88	50-134	
Dibromochloromethane	ug/kg	1000	803	80	54-125	
Dibromomethane	ug/kg	1000	867	87	51-125	
Dichlorodifluoromethane	ug/kg	1000	804	80	42-125	
Dichlorofluoromethane	ug/kg	1000	885	89	30-150	
Diethyl ether (Ethyl ether)	ug/kg	1000	857	86	50-127	
Ethylbenzene	ug/kg	1000	880	88	51-125	
Hexachloro-1,3-butadiene	ug/kg	1000	881	88	41-133	
Isopropylbenzene (Cumene)	ug/kg	1000	907	91	54-134	
Methyl-tert-butyl ether	ug/kg	1000	825	83	53-125	
Methylene Chloride	ug/kg	1000	861	86	48-125	
n-Butylbenzene	ug/kg	1000	888	89	49-135	
n-Propylbenzene	ug/kg	1000	903	90	55-129	
Naphthalene	ug/kg	1000	796	80	51-125	
p-Isopropyltoluene	ug/kg	1000	925	93	53-134	
sec-Butylbenzene	ug/kg	1000	935	93	52-134	
Styrene	ug/kg	1000	892	89	53-128	
tert-Butylbenzene	ug/kg	1000	931	93	51-133	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

LABORATORY CONTROL SAMPLE: 3442180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/kg	1000	996	100	54-131	
Tetrahydrofuran	ug/kg	10000	8480	85	42-145	
Toluene	ug/kg	1000	923	92	51-125	
trans-1,2-Dichloroethene	ug/kg	1000	1000	100	50-130	
trans-1,3-Dichloropropene	ug/kg	1000	844	84	52-125	
Trichloroethene	ug/kg	1000	964	96	55-131	
Trichlorofluoromethane	ug/kg	1000	972	97	30-150	
Vinyl chloride	ug/kg	1000	831	83	58-125	
Xylene (Total)	ug/kg	3000	2720	91	52-125	
1,2-Dichloroethane-d4 (S)	%.			98	75-125	
4-Bromofluorobenzene (S)	%.			98	75-125	
Toluene-d8 (S)	%.			101	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3442181 3442182

Parameter	Units	10495306002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/kg	ND	1130	1120	2070	1390	184	124	68-150	39	30	M1,R1
1,1,1-Trichloroethane	ug/kg	ND	1130	1120	2380	1620	211	145	63-150	38	30	M1,R1
1,1,2,2-Tetrachloroethane	ug/kg	ND	1130	1120	1970	1380	175	123	60-146	35	30	M1,R1
1,1,2-Trichloroethane	ug/kg	ND	1130	1120	1840	1300	164	116	63-143	34	30	M1,R1
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	1130	1120	2320	1570	207	141	30-150	38	30	M1,R1
1,1-Dichloroethane	ug/kg	ND	1130	1120	2050	1410	182	126	63-144	37	30	M1,R1
1,1-Dichloroethene	ug/kg	ND	1130	1120	2270	1490	202	133	30-150	41	30	M1,R1
1,1-Dichloropropene	ug/kg	ND	1130	1120	2510	1740	223	155	54-150	37	30	M1,R1
1,2,3-Trichlorobenzene	ug/kg	ND	1130	1120	2010	1380	179	123	63-142	37	30	M1,R1
1,2,3-Trichloropropane	ug/kg	ND	1130	1120	1940	1370	172	123	59-147	34	30	M1,R1
1,2,4-Trichlorobenzene	ug/kg	ND	1130	1120	1950	1360	174	122	66-142	36	30	M1,R1
1,2,4-Trimethylbenzene	ug/kg	ND	1130	1120	2260	1510	200	135	65-145	40	30	M1,R1
1,2-Dibromo-3-chloropropane	ug/kg	ND	2810	2800	5030	3400	179	121	60-142	39	30	M1,R1
1,2-Dibromoethane (EDB)	ug/kg	ND	1130	1120	2060	1420	183	127	67-135	37	30	M1,R1
1,2-Dichlorobenzene	ug/kg	ND	1130	1120	1910	1290	169	115	68-141	39	30	M1,R1
1,2-Dichloroethane	ug/kg	ND	1130	1120	1920	1380	171	123	56-132	33	30	M1,R1
1,2-Dichloropropane	ug/kg	ND	1130	1120	1950	1360	173	121	58-150	36	30	M1,R1
1,3,5-Trimethylbenzene	ug/kg	ND	1130	1120	2290	1560	204	139	66-148	38	30	M1,R1
1,3-Dichlorobenzene	ug/kg	ND	1130	1120	1990	1320	177	118	63-148	41	30	M1,R1
1,3-Dichloropropane	ug/kg	ND	1130	1120	2100	1370	186	123	63-142	42	30	M1,R1
1,4-Dichlorobenzene	ug/kg	ND	1130	1120	2000	1360	177	122	68-140	38	30	M1,R1
2,2-Dichloropropane	ug/kg	ND	1130	1120	2070	1420	184	127	62-143	37	30	M1,R1
2-Butanone (MEK)	ug/kg	ND	5630	5600	10500	7070	187	126	53-138	39	30	M1,R1
2-Chlorotoluene	ug/kg	ND	1130	1120	1990	1380	177	123	64-145	36	30	M1,R1
4-Chlorotoluene	ug/kg	ND	1130	1120	2040	1380	181	123	63-149	39	30	M1,R1
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	5630	5600	9380	6530	167	117	47-150	36	30	M1,R1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3442181 3442182

Parameter	Units	10495306002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Acetone	ug/kg	ND	5630	5600	9670	7470	172	133	64-150	26	30	M1
Allyl chloride	ug/kg	ND	1130	1120	2120	1500	189	134	49-146	34	30	M1,R1
Benzene	ug/kg	ND	1130	1120	2220	1530	197	136	63-136	37	30	M1,R1
Bromobenzene	ug/kg	ND	1130	1120	1970	1370	175	122	63-142	36	30	M1,R1
Bromochloromethane	ug/kg	ND	1130	1120	1980	1380	176	123	61-139	35	30	M1,R1
Bromodichloromethane	ug/kg	ND	1130	1120	2020	1370	179	122	63-150	38	30	M1,R1
Bromoform	ug/kg	ND	1130	1120	2040	1350	181	121	64-140	40	30	M1,R1
Bromomethane	ug/kg	ND	1130	1120	1560	1330	138	118	56-148	16	30	
Carbon tetrachloride	ug/kg	ND	1130	1120	2400	1680	213	150	75-148	35	30	M1,R1
Chlorobenzene	ug/kg	ND	1130	1120	2030	1400	180	125	62-147	37	30	M1,R1
Chloroethane	ug/kg	ND	1130	1120	1290	1110	115	99	37-150	16	30	SS
Chloroform	ug/kg	ND	1130	1120	2160	1450	192	130	66-130	39	30	M1,R1
Chloromethane	ug/kg	ND	1130	1120	1150	1050	102	94	35-131	9	30	
cis-1,2-Dichloroethene	ug/kg	ND	1130	1120	2080	1470	185	131	63-143	34	30	M1,R1
cis-1,3-Dichloropropene	ug/kg	ND	1130	1120	2080	1420	185	127	60-150	38	30	M1,R1
Dibromochloromethane	ug/kg	ND	1130	1120	2070	1340	184	119	64-144	43	30	M1,R1
Dibromomethane	ug/kg	ND	1130	1120	2030	1350	180	121	59-148	40	30	M1,R1
Dichlorodifluoromethane	ug/kg	ND	1130	1120	1030	812	91	72	30-125	23	30	
Dichlorofluoromethane	ug/kg	ND	1130	1120	1290	1190	114	106	39-150	8	30	
Diethyl ether (Ethyl ether)	ug/kg	ND	1130	1120	2040	1380	182	123	59-149	39	30	M1,R1
Ethylbenzene	ug/kg	ND	1130	1120	2130	1450	189	129	64-142	38	30	M1,R1
Hexachloro-1,3-butadiene	ug/kg	ND	1130	1120	2340	1610	208	144	58-150	37	30	M1,R1
Isopropylbenzene (Cumene)	ug/kg	ND	1130	1120	2220	1520	197	136	67-150	37	30	M1,R1
Methyl-tert-butyl ether	ug/kg	ND	1130	1120	2040	1370	181	122	69-134	39	30	M1,R1
Methylene Chloride	ug/kg	ND	1130	1120	2030	1390	181	124	56-134	38	30	M1,R1
n-Butylbenzene	ug/kg	ND	1130	1120	2190	1460	195	131	64-150	40	30	M1,R1
n-Propylbenzene	ug/kg	ND	1130	1120	2170	1470	192	131	65-150	38	30	M1,R1
Naphthalene	ug/kg	ND	1130	1120	1960	1330	172	117	63-148	38	30	M1,R1
p-Isopropyltoluene	ug/kg	ND	1130	1120	2270	1530	202	137	69-150	39	30	M1,R1
sec-Butylbenzene	ug/kg	ND	1130	1120	2310	1530	205	136	69-150	41	30	M1,R1
Styrene	ug/kg	ND	1130	1120	2110	1450	188	129	63-150	38	30	M1,R1
tert-Butylbenzene	ug/kg	ND	1130	1120	2320	1560	206	139	67-150	39	30	M1,R1
Tetrachloroethene	ug/kg	ND	1130	1120	2400	1620	211	143	62-150	39	30	M1,R1
Tetrahydrofuran	ug/kg	ND	11300	11200	21400	14300	191	128	53-150	40	30	M1,R1
Toluene	ug/kg	ND	1130	1120	2190	1490	194	132	61-141	38	30	M1,R1
trans-1,2-Dichloroethene	ug/kg	ND	1130	1120	2350	1670	209	149	52-148	34	30	M1,R1
trans-1,3-Dichloropropene	ug/kg	ND	1130	1120	2050	1380	182	123	62-142	39	30	M1,R1
Trichloroethene	ug/kg	ND	1130	1120	2240	1490	199	133	59-150	40	30	M1,R1
Trichlorofluoromethane	ug/kg	ND	1130	1120	1400	1280	124	114	30-150	9	30	
Vinyl chloride	ug/kg	ND	1130	1120	1210	1050	107	94	44-144	14	30	
Xylene (Total)	ug/kg	ND	3370	3360	6410	4420	190	131	67-145	37	30	MS,RS
1,2-Dichloroethane-d4 (S)	%.						98	100	75-125			
4-Bromofluorobenzene (S)	%.						100	99	75-125			
Toluene-d8 (S)	%.						101	102	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

QC Batch: 639045 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV 465 W
Associated Lab Samples: 10495314020, 10495314021

METHOD BLANK: 3443501 Matrix: Water
Associated Lab Samples: 10495314020, 10495314021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	4.0	10/17/19 09:24	MN
1,1,1-Trichloroethane	ug/L	ND	1.0	10/17/19 09:24	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/17/19 09:24	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/17/19 09:24	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	10/17/19 09:24	
1,1-Dichloroethane	ug/L	ND	1.0	10/17/19 09:24	
1,1-Dichloroethene	ug/L	ND	1.0	10/17/19 09:24	
1,1-Dichloropropene	ug/L	ND	1.0	10/17/19 09:24	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	10/17/19 09:24	
1,2,3-Trichloropropane	ug/L	ND	4.0	10/17/19 09:24	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	10/17/19 09:24	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	10/17/19 09:24	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	10/17/19 09:24	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/17/19 09:24	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/17/19 09:24	
1,2-Dichloroethane	ug/L	ND	1.0	10/17/19 09:24	
1,2-Dichloropropane	ug/L	ND	4.0	10/17/19 09:24	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	10/17/19 09:24	
1,3-Dichlorobenzene	ug/L	ND	1.0	10/17/19 09:24	
1,3-Dichloropropane	ug/L	ND	1.0	10/17/19 09:24	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/17/19 09:24	
2,2-Dichloropropane	ug/L	ND	4.0	10/17/19 09:24	
2-Butanone (MEK)	ug/L	ND	5.0	10/17/19 09:24	
2-Chlorotoluene	ug/L	ND	1.0	10/17/19 09:24	
4-Chlorotoluene	ug/L	ND	1.0	10/17/19 09:24	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	10/17/19 09:24	
Acetone	ug/L	ND	20.0	10/17/19 09:24	
Allyl chloride	ug/L	ND	4.0	10/17/19 09:24	
Benzene	ug/L	ND	1.0	10/17/19 09:24	
Bromobenzene	ug/L	ND	1.0	10/17/19 09:24	
Bromochloromethane	ug/L	ND	1.0	10/17/19 09:24	
Bromodichloromethane	ug/L	ND	1.0	10/17/19 09:24	
Bromoform	ug/L	ND	4.0	10/17/19 09:24	
Bromomethane	ug/L	ND	4.0	10/17/19 09:24	
Carbon tetrachloride	ug/L	ND	4.0	10/17/19 09:24	MN
Chlorobenzene	ug/L	ND	1.0	10/17/19 09:24	
Chloroethane	ug/L	ND	1.0	10/17/19 09:24	
Chloroform	ug/L	ND	4.0	10/17/19 09:24	MN
Chloromethane	ug/L	ND	4.0	10/17/19 09:24	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/17/19 09:24	
cis-1,3-Dichloropropene	ug/L	ND	4.0	10/17/19 09:24	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

METHOD BLANK: 3443501 Matrix: Water
Associated Lab Samples: 10495314020, 10495314021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	4.0	10/17/19 09:24	MN
Dibromomethane	ug/L	ND	4.0	10/17/19 09:24	
Dichlorodifluoromethane	ug/L	ND	1.0	10/17/19 09:24	
Dichlorofluoromethane	ug/L	ND	1.0	10/17/19 09:24	
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	10/17/19 09:24	
Ethylbenzene	ug/L	ND	1.0	10/17/19 09:24	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	10/17/19 09:24	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	10/17/19 09:24	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/17/19 09:24	
Methylene Chloride	ug/L	ND	4.0	10/17/19 09:24	
n-Butylbenzene	ug/L	ND	1.0	10/17/19 09:24	
n-Propylbenzene	ug/L	ND	1.0	10/17/19 09:24	
Naphthalene	ug/L	ND	4.0	10/17/19 09:24	
p-Isopropyltoluene	ug/L	ND	1.0	10/17/19 09:24	
sec-Butylbenzene	ug/L	ND	1.0	10/17/19 09:24	
Styrene	ug/L	ND	1.0	10/17/19 09:24	
tert-Butylbenzene	ug/L	ND	1.0	10/17/19 09:24	
Tetrachloroethene	ug/L	ND	1.0	10/17/19 09:24	
Tetrahydrofuran	ug/L	ND	10.0	10/17/19 09:24	
Toluene	ug/L	ND	1.0	10/17/19 09:24	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/17/19 09:24	
trans-1,3-Dichloropropene	ug/L	ND	4.0	10/17/19 09:24	
Trichloroethene	ug/L	ND	0.40	10/17/19 09:24	
Trichlorofluoromethane	ug/L	ND	1.0	10/17/19 09:24	
Vinyl chloride	ug/L	ND	0.20	10/17/19 09:24	
Xylene (Total)	ug/L	ND	3.0	10/17/19 09:24	
1,2-Dichloroethane-d4 (S)	%.	95	75-125	10/17/19 09:24	
4-Bromofluorobenzene (S)	%.	103	75-125	10/17/19 09:24	
Toluene-d8 (S)	%.	97	75-125	10/17/19 09:24	

LABORATORY CONTROL SAMPLE: 3443502

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.1	96	75-125	
1,1,1-Trichloroethane	ug/L	20	20.3	102	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	18.5	92	71-128	
1,1,2-Trichloroethane	ug/L	20	19.9	100	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	20	18.2	91	73-125	
1,1-Dichloroethane	ug/L	20	18.8	94	75-125	
1,1-Dichloroethene	ug/L	20	17.1	86	69-125	
1,1-Dichloropropene	ug/L	20	19.2	96	73-125	
1,2,3-Trichlorobenzene	ug/L	20	20.2	101	70-129	
1,2,3-Trichloropropane	ug/L	20	18.3	92	75-125	
1,2,4-Trichlorobenzene	ug/L	20	19.9	99	71-126	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

LABORATORY CONTROL SAMPLE: 3443502

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	19.4	97	73-127	
1,2-Dibromo-3-chloropropane	ug/L	50	41.5	83	66-127	
1,2-Dibromoethane (EDB)	ug/L	20	20.0	100	75-125	
1,2-Dichlorobenzene	ug/L	20	19.1	96	75-125	
1,2-Dichloroethane	ug/L	20	19.6	98	71-125	
1,2-Dichloropropane	ug/L	20	20.4	102	72-125	
1,3,5-Trimethylbenzene	ug/L	20	19.3	97	75-125	
1,3-Dichlorobenzene	ug/L	20	19.2	96	75-125	
1,3-Dichloropropane	ug/L	20	20.5	102	75-125	
1,4-Dichlorobenzene	ug/L	20	18.6	93	75-125	
2,2-Dichloropropane	ug/L	20	20.5	102	65-127	
2-Butanone (MEK)	ug/L	100	94.9	95	74-125	
2-Chlorotoluene	ug/L	20	18.9	94	74-125	
4-Chlorotoluene	ug/L	20	19.9	99	75-125	
4-Methyl-2-pentanone (MIBK)	ug/L	100	95.1	95	75-132	
Acetone	ug/L	100	123	123	30-150	
Allyl chloride	ug/L	20	17.8	89	75-125	
Benzene	ug/L	20	18.5	93	75-125	
Bromobenzene	ug/L	20	19.4	97	75-125	
Bromochloromethane	ug/L	20	19.5	98	74-126	
Bromodichloromethane	ug/L	20	19.4	97	75-125	
Bromoform	ug/L	20	19.5	97	74-125	
Bromomethane	ug/L	20	13.2	66	30-150	SS
Carbon tetrachloride	ug/L	20	19.3	97	70-125	
Chlorobenzene	ug/L	20	19.5	97	75-125	
Chloroethane	ug/L	20	18.1	91	64-129	
Chloroform	ug/L	20	21.0	105	75-125	
Chloromethane	ug/L	20	18.7	93	67-125	
cis-1,2-Dichloroethene	ug/L	20	19.9	100	73-125	
cis-1,3-Dichloropropene	ug/L	20	19.0	95	75-125	
Dibromochloromethane	ug/L	20	18.8	94	75-125	
Dibromomethane	ug/L	20	20.2	101	75-125	
Dichlorodifluoromethane	ug/L	20	19.5	98	65-129	
Dichlorofluoromethane	ug/L	20	17.6	88	75-125	
Diethyl ether (Ethyl ether)	ug/L	20	17.6	88	74-125	
Ethylbenzene	ug/L	20	19.6	98	75-125	
Hexachloro-1,3-butadiene	ug/L	20	21.6	108	66-137	
Isopropylbenzene (Cumene)	ug/L	20	20.2	101	75-125	
Methyl-tert-butyl ether	ug/L	20	17.3	86	75-125	
Methylene Chloride	ug/L	20	17.3	87	72-125	
n-Butylbenzene	ug/L	20	19.7	99	69-132	
n-Propylbenzene	ug/L	20	19.2	96	74-125	
Naphthalene	ug/L	20	18.5	93	63-125	
p-Isopropyltoluene	ug/L	20	19.2	96	75-125	
sec-Butylbenzene	ug/L	20	19.7	98	75-125	
Styrene	ug/L	20	20.1	100	75-125	
tert-Butylbenzene	ug/L	20	19.8	99	75-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

LABORATORY CONTROL SAMPLE: 3443502

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/L	20	19.5	97	75-125	
Tetrahydrofuran	ug/L	200	224	112	30-150	
Toluene	ug/L	20	18.7	94	75-125	
trans-1,2-Dichloroethene	ug/L	20	17.4	87	70-125	
trans-1,3-Dichloropropene	ug/L	20	19.1	96	75-125	
Trichloroethene	ug/L	20	20.2	101	74-125	
Trichlorofluoromethane	ug/L	20	19.5	97	74-125	
Vinyl chloride	ug/L	20	17.7	88	71-125	
Xylene (Total)	ug/L	60	58.7	98	75-125	
1,2-Dichloroethane-d4 (S)	%.			94	75-125	
4-Bromofluorobenzene (S)	%.			102	75-125	
Toluene-d8 (S)	%.			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3445200 3445201

Parameter	Units	10494352001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	17.2	18.2	86	91	30-150	6	30	
1,1,1-Trichloroethane	ug/L	ND	20	20	18.6	19.2	93	96	30-150	3	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.4	17.3	82	87	30-150	6	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.1	19.0	90	95	30-150	5	30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	20	17.7	18.5	88	92	30-150	4	30	
1,1-Dichloroethane	ug/L	ND	20	20	16.4	17.3	82	86	30-150	5	30	
1,1-Dichloroethene	ug/L	ND	20	20	15.8	15.8	79	79	30-150	0	30	
1,1-Dichloropropene	ug/L	ND	20	20	17.3	17.2	86	86	30-150	1	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	17.7	20.1	88	100	30-150	13	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	16.3	18.1	82	91	30-150	10	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	18.3	20.0	91	100	30-150	9	30	
1,2,4-Trimethylbenzene	ug/L	ND	20	20	17.0	18.7	85	93	30-150	9	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	37.7	41.7	75	83	30-150	10	30	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	17.2	17.8	86	89	30-150	3	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	16.1	17.7	81	89	30-150	9	30	
1,2-Dichloroethane	ug/L	ND	20	20	16.8	17.3	84	87	30-150	3	30	
1,2-Dichloropropane	ug/L	ND	20	20	18.5	18.9	93	94	30-150	2	30	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	16.7	18.5	84	92	30-150	10	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	16.7	18.1	84	90	30-150	8	30	
1,3-Dichloropropane	ug/L	ND	20	20	17.4	18.0	87	90	30-150	4	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	16.3	17.5	82	88	30-150	7	30	
2,2-Dichloropropane	ug/L	ND	20	20	19.9	20.4	100	102	30-150	2	30	
2-Butanone (MEK)	ug/L	ND	100	100	70.5	73.5	71	74	30-150	4	30	
2-Chlorotoluene	ug/L	ND	20	20	16.8	18.2	84	91	30-150	8	30	
4-Chlorotoluene	ug/L	ND	20	20	17.1	19.1	86	96	30-150	11	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	84.5	91.5	85	92	30-150	8	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3445200 3445201

Parameter	Units	10494352001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Acetone	ug/L	ND	100	100	70.6	75.3	71	75	30-150	6	30	
Allyl chloride	ug/L	ND	20	20	14.8	15.3	74	77	30-147	3	30	
Benzene	ug/L	ND	20	20	16.6	16.9	82	84	30-150	1	30	
Bromobenzene	ug/L	ND	20	20	17.1	18.0	85	90	30-150	5	30	
Bromochloromethane	ug/L	ND	20	20	17.1	17.1	85	85	30-150	0	30	
Bromodichloromethane	ug/L	ND	20	20	17.8	18.8	89	94	30-150	6	30	
Bromoform	ug/L	ND	20	20	17.2	18.3	86	92	30-150	7	30	
Bromomethane	ug/L	ND	20	20	14.7	17.1	73	86	30-150	16	30	SS
Carbon tetrachloride	ug/L	ND	20	20	18.2	19.3	91	96	30-150	5	30	
Chlorobenzene	ug/L	ND	20	20	17.0	17.7	85	89	30-150	4	30	
Chloroethane	ug/L	ND	20	20	18.4	18.5	92	92	30-150	0	30	
Chloroform	ug/L	ND	20	20	18.3	18.8	92	94	30-150	3	30	
Chloromethane	ug/L	ND	20	20	21.2	21.1	106	105	30-150	1	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	17.2	17.7	86	88	30-150	3	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	16.5	17.1	83	86	30-145	4	30	
Dibromochloromethane	ug/L	ND	20	20	15.9	16.8	80	84	30-150	6	30	
Dibromomethane	ug/L	ND	20	20	17.5	18.4	87	92	30-150	5	30	
Dichlorodifluoromethane	ug/L	ND	20	20	22.9	22.6	115	113	30-150	1	30	
Dichlorofluoromethane	ug/L	ND	20	20	17.2	17.4	86	87	30-150	1	30	
Diethyl ether (Ethyl ether)	ug/L	ND	20	20	14.8	15.7	74	79	30-150	6	30	
Ethylbenzene	ug/L	ND	20	20	17.4	18.5	86	92	30-150	6	30	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	23.4	21.7	117	108	30-150	7	30	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	17.7	19.3	88	97	30-150	9	30	
Methyl-tert-butyl ether	ug/L	ND	20	20	15.1	16.1	75	80	30-150	6	30	
Methylene Chloride	ug/L	ND	20	20	14.7	15.0	74	75	30-146	2	30	
n-Butylbenzene	ug/L	ND	20	20	18.4	19.7	92	98	30-150	7	30	
n-Propylbenzene	ug/L	ND	20	20	17.1	19.0	85	95	30-150	10	30	
Naphthalene	ug/L	ND	20	20	16.2	18.7	81	93	30-150	14	30	
p-Isopropyltoluene	ug/L	ND	20	20	17.9	19.5	89	98	30-150	9	30	
sec-Butylbenzene	ug/L	ND	20	20	18.0	19.8	90	99	30-150	9	30	
Styrene	ug/L	ND	20	20	17.4	18.2	87	91	30-150	5	30	
tert-Butylbenzene	ug/L	ND	20	20	17.9	20.2	90	101	30-150	12	30	
Tetrachloroethene	ug/L	ND	20	20	16.9	18.2	84	91	30-150	7	30	
Tetrahydrofuran	ug/L	ND	200	200	182	197	91	98	30-150	8	30	
Toluene	ug/L	ND	20	20	16.6	17.2	82	85	30-150	4	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	15.0	15.0	75	75	30-150	1	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	16.5	17.3	82	87	30-150	5	30	
Trichloroethene	ug/L	ND	20	20	18.3	19.0	91	95	30-150	4	30	
Trichlorofluoromethane	ug/L	ND	20	20	20.1	20.5	100	102	30-150	2	30	
Vinyl chloride	ug/L	ND	20	20	20.5	20.3	102	101	30-150	1	30	
Xylene (Total)	ug/L	ND	60	60	52.0	55.7	87	93	30-150	7	30	
1,2-Dichloroethane-d4 (S)	%.						97	96	75-125			
4-Bromofluorobenzene (S)	%.						102	103	75-125			
Toluene-d8 (S)	%.						99	98	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

QC Batch: 639198 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV 465 W
Associated Lab Samples: 10495314022

METHOD BLANK: 3444301 Matrix: Water
Associated Lab Samples: 10495314022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	10/18/19 01:40	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/18/19 01:40	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/18/19 01:40	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/18/19 01:40	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	10/18/19 01:40	
1,1-Dichloroethane	ug/L	ND	1.0	10/18/19 01:40	
1,1-Dichloroethene	ug/L	ND	1.0	10/18/19 01:40	
1,1-Dichloropropene	ug/L	ND	1.0	10/18/19 01:40	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	10/18/19 01:40	
1,2,3-Trichloropropane	ug/L	ND	4.0	10/18/19 01:40	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	10/18/19 01:40	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	10/18/19 01:40	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	10/18/19 01:40	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/18/19 01:40	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/18/19 01:40	
1,2-Dichloroethane	ug/L	ND	1.0	10/18/19 01:40	
1,2-Dichloropropane	ug/L	ND	4.0	10/18/19 01:40	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	10/18/19 01:40	
1,3-Dichlorobenzene	ug/L	ND	1.0	10/18/19 01:40	
1,3-Dichloropropane	ug/L	ND	1.0	10/18/19 01:40	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/18/19 01:40	
2,2-Dichloropropane	ug/L	ND	4.0	10/18/19 01:40	
2-Butanone (MEK)	ug/L	ND	5.0	10/18/19 01:40	
2-Chlorotoluene	ug/L	ND	1.0	10/18/19 01:40	
4-Chlorotoluene	ug/L	ND	1.0	10/18/19 01:40	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	10/18/19 01:40	
Acetone	ug/L	ND	20.0	10/18/19 01:40	
Allyl chloride	ug/L	ND	4.0	10/18/19 01:40	
Benzene	ug/L	ND	1.0	10/18/19 01:40	
Bromobenzene	ug/L	ND	1.0	10/18/19 01:40	
Bromochloromethane	ug/L	ND	1.0	10/18/19 01:40	
Bromodichloromethane	ug/L	ND	1.0	10/18/19 01:40	
Bromoform	ug/L	ND	4.0	10/18/19 01:40	
Bromomethane	ug/L	ND	4.0	10/18/19 01:40	
Carbon tetrachloride	ug/L	ND	1.0	10/18/19 01:40	
Chlorobenzene	ug/L	ND	1.0	10/18/19 01:40	
Chloroethane	ug/L	ND	4.0	10/18/19 01:40	MN
Chloroform	ug/L	ND	1.0	10/18/19 01:40	
Chloromethane	ug/L	ND	4.0	10/18/19 01:40	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/18/19 01:40	
cis-1,3-Dichloropropene	ug/L	ND	4.0	10/18/19 01:40	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

METHOD BLANK: 3444301 Matrix: Water
Associated Lab Samples: 10495314022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	1.0	10/18/19 01:40	
Dibromomethane	ug/L	ND	4.0	10/18/19 01:40	
Dichlorodifluoromethane	ug/L	ND	1.0	10/18/19 01:40	
Dichlorofluoromethane	ug/L	ND	1.0	10/18/19 01:40	
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	10/18/19 01:40	
Ethylbenzene	ug/L	ND	1.0	10/18/19 01:40	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	10/18/19 01:40	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	10/18/19 01:40	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/18/19 01:40	
Methylene Chloride	ug/L	ND	4.0	10/18/19 01:40	
n-Butylbenzene	ug/L	ND	1.0	10/18/19 01:40	
n-Propylbenzene	ug/L	ND	1.0	10/18/19 01:40	
Naphthalene	ug/L	ND	4.0	10/18/19 01:40	
p-Isopropyltoluene	ug/L	ND	1.0	10/18/19 01:40	
sec-Butylbenzene	ug/L	ND	1.0	10/18/19 01:40	
Styrene	ug/L	ND	1.0	10/18/19 01:40	
tert-Butylbenzene	ug/L	ND	1.0	10/18/19 01:40	
Tetrachloroethene	ug/L	ND	1.0	10/18/19 01:40	
Tetrahydrofuran	ug/L	ND	10.0	10/18/19 01:40	
Toluene	ug/L	ND	1.0	10/18/19 01:40	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/18/19 01:40	
trans-1,3-Dichloropropene	ug/L	ND	4.0	10/18/19 01:40	
Trichloroethene	ug/L	ND	0.40	10/18/19 01:40	
Trichlorofluoromethane	ug/L	ND	1.0	10/18/19 01:40	
Vinyl chloride	ug/L	ND	0.20	10/18/19 01:40	
Xylene (Total)	ug/L	ND	3.0	10/18/19 01:40	
1,2-Dichloroethane-d4 (S)	%.	101	75-125	10/18/19 01:40	
4-Bromofluorobenzene (S)	%.	101	75-125	10/18/19 01:40	
Toluene-d8 (S)	%.	98	75-125	10/18/19 01:40	

LABORATORY CONTROL SAMPLE: 3444302

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	22.7	114	75-125	
1,1,1-Trichloroethane	ug/L	20	23.8	119	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	18.8	94	71-128	
1,1,2-Trichloroethane	ug/L	20	20.6	103	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	20	21.9	109	73-125	
1,1-Dichloroethane	ug/L	20	19.8	99	75-125	
1,1-Dichloroethene	ug/L	20	22.2	111	69-125	
1,1-Dichloropropene	ug/L	20	24.3	122	73-125	
1,2,3-Trichlorobenzene	ug/L	20	20.3	102	70-129	
1,2,3-Trichloropropane	ug/L	20	20.1	100	75-125	
1,2,4-Trichlorobenzene	ug/L	20	22.7	114	71-126	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

LABORATORY CONTROL SAMPLE: 3444302

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.1	105	73-127	
1,2-Dibromo-3-chloropropane	ug/L	50	50.9	102	66-127	
1,2-Dibromoethane (EDB)	ug/L	20	22.8	114	75-125	
1,2-Dichlorobenzene	ug/L	20	20.6	103	75-125	
1,2-Dichloroethane	ug/L	20	20.5	102	71-125	
1,2-Dichloropropane	ug/L	20	19.6	98	72-125	
1,3,5-Trimethylbenzene	ug/L	20	21.1	105	75-125	
1,3-Dichlorobenzene	ug/L	20	20.0	100	75-125	
1,3-Dichloropropane	ug/L	20	21.8	109	75-125	
1,4-Dichlorobenzene	ug/L	20	20.2	101	75-125	
2,2-Dichloropropane	ug/L	20	22.8	114	65-127	
2-Butanone (MEK)	ug/L	100	91.7	92	74-125	
2-Chlorotoluene	ug/L	20	20.3	102	74-125	
4-Chlorotoluene	ug/L	20	20.4	102	75-125	
4-Methyl-2-pentanone (MIBK)	ug/L	100	97.6	98	75-132	
Acetone	ug/L	100	118	118	30-150	
Allyl chloride	ug/L	20	20.7	104	75-125	
Benzene	ug/L	20	21.6	108	75-125	
Bromobenzene	ug/L	20	20.1	100	75-125	
Bromochloromethane	ug/L	20	23.0	115	74-126	
Bromodichloromethane	ug/L	20	21.3	106	75-125	
Bromoform	ug/L	20	21.4	107	74-125	
Bromomethane	ug/L	20	18.3	91	30-150	SS
Carbon tetrachloride	ug/L	20	21.9	109	70-125	
Chlorobenzene	ug/L	20	21.2	106	75-125	
Chloroethane	ug/L	20	21.9	109	64-129	
Chloroform	ug/L	20	22.0	110	75-125	
Chloromethane	ug/L	20	17.6	88	67-125	
cis-1,2-Dichloroethene	ug/L	20	22.2	111	73-125	
cis-1,3-Dichloropropene	ug/L	20	21.6	108	75-125	
Dibromochloromethane	ug/L	20	21.7	108	75-125	
Dibromomethane	ug/L	20	21.2	106	75-125	
Dichlorodifluoromethane	ug/L	20	19.4	97	65-129	
Dichlorofluoromethane	ug/L	20	20.1	101	75-125	
Diethyl ether (Ethyl ether)	ug/L	20	20.5	102	74-125	
Ethylbenzene	ug/L	20	21.3	107	75-125	
Hexachloro-1,3-butadiene	ug/L	20	20.6	103	66-137	
Isopropylbenzene (Cumene)	ug/L	20	23.2	116	75-125	
Methyl-tert-butyl ether	ug/L	20	19.6	98	75-125	
Methylene Chloride	ug/L	20	20.7	103	72-125	
n-Butylbenzene	ug/L	20	22.4	112	69-132	
n-Propylbenzene	ug/L	20	21.8	109	74-125	
Naphthalene	ug/L	20	19.5	98	63-125	
p-Isopropyltoluene	ug/L	20	21.7	109	75-125	
sec-Butylbenzene	ug/L	20	22.7	114	75-125	
Styrene	ug/L	20	21.7	109	75-125	
tert-Butylbenzene	ug/L	20	21.6	108	75-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

LABORATORY CONTROL SAMPLE: 3444302

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/L	20	22.7	113	75-125	
Tetrahydrofuran	ug/L	200	228	114	30-150	
Toluene	ug/L	20	21.3	107	75-125	
trans-1,2-Dichloroethene	ug/L	20	23.2	116	70-125	
trans-1,3-Dichloropropene	ug/L	20	22.1	110	75-125	
Trichloroethene	ug/L	20	23.0	115	74-125	
Trichlorofluoromethane	ug/L	20	22.4	112	74-125	
Vinyl chloride	ug/L	20	19.2	96	71-125	
Xylene (Total)	ug/L	60	64.0	107	75-125	
1,2-Dichloroethane-d4 (S)	%.			100	75-125	
4-Bromofluorobenzene (S)	%.			98	75-125	
Toluene-d8 (S)	%.			104	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3445116 3445117

Parameter	Units	10494457012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	20.5	19.9	103	100	30-150	3	30	
1,1,1-Trichloroethane	ug/L	ND	20	20	22.0	22.7	110	113	30-150	3	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	18.3	18.0	92	90	30-150	2	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.2	17.9	91	89	30-150	2	30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	20	21.6	20.7	108	103	30-150	4	30	
1,1-Dichloroethane	ug/L	ND	20	20	18.7	18.5	94	92	30-150	1	30	
1,1-Dichloroethene	ug/L	ND	20	20	21.1	21.1	105	106	30-150	0	30	
1,1-Dichloropropene	ug/L	ND	20	20	23.0	22.6	115	113	30-150	2	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	17.2	19.0	86	95	30-150	10	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	19.2	19.8	96	99	30-150	3	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	18.1	19.4	91	97	30-150	7	30	
1,2,4-Trimethylbenzene	ug/L	ND	20	20	19.1	19.4	95	97	30-150	2	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	50.4	51.3	101	103	30-150	2	30	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	19.9	19.4	99	97	30-150	3	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	18.0	18.2	90	91	30-150	2	30	
1,2-Dichloroethane	ug/L	ND	20	20	18.0	18.1	90	90	30-150	0	30	
1,2-Dichloropropane	ug/L	ND	20	20	18.1	17.7	90	88	30-150	2	30	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	19.9	20.2	99	101	30-150	2	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	17.9	17.9	90	89	30-150	0	30	
1,3-Dichloropropane	ug/L	ND	20	20	19.4	18.9	97	94	30-150	3	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	18.5	18.1	93	91	30-150	2	30	
2,2-Dichloropropane	ug/L	ND	20	20	20.6	19.8	103	99	30-150	4	30	
2-Butanone (MEK)	ug/L	ND	100	100	80.2	84.6	80	85	30-150	5	30	
2-Chlorotoluene	ug/L	ND	20	20	18.6	18.8	93	94	30-150	1	30	
4-Chlorotoluene	ug/L	ND	20	20	18.5	18.6	93	93	30-150	1	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	93.1	93.8	93	94	30-150	1	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3445116 3445117

Parameter	Units	10494457012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Acetone	ug/L	ND	100	100	85.5	84.7	86	85	30-150	1	30	
Allyl chloride	ug/L	ND	20	20	19.8	19.1	99	95	30-147	4	30	
Benzene	ug/L	ND	20	20	19.8	19.8	99	99	30-150	0	30	
Bromobenzene	ug/L	ND	20	20	18.6	18.0	93	90	30-150	3	30	
Bromochloromethane	ug/L	ND	20	20	20.5	20.1	102	100	30-150	2	30	
Bromodichloromethane	ug/L	ND	20	20	19.9	19.4	100	97	30-150	3	30	
Bromoform	ug/L	ND	20	20	19.6	20.2	98	101	30-150	3	30	
Bromomethane	ug/L	ND	20	20	19.1	20.8	95	104	30-150	9	30	SS
Carbon tetrachloride	ug/L	ND	20	20	20.7	21.2	104	106	30-150	2	30	
Chlorobenzene	ug/L	ND	20	20	19.3	18.9	97	95	30-150	2	30	
Chloroethane	ug/L	ND	20	20	21.9	20.8	110	104	30-150	5	30	
Chloroform	ug/L	ND	20	20	19.4	19.4	97	97	30-150	0	30	
Chloromethane	ug/L	ND	20	20	17.6	17.6	88	88	30-150	0	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	20.2	19.3	101	96	30-150	5	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	20.0	19.3	100	97	30-145	4	30	
Dibromochloromethane	ug/L	ND	20	20	19.2	19.4	96	97	30-150	1	30	
Dibromomethane	ug/L	ND	20	20	19.3	19.1	96	96	30-150	1	30	
Dichlorodifluoromethane	ug/L	ND	20	20	20.3	19.9	101	100	30-150	2	30	
Dichlorofluoromethane	ug/L	ND	20	20	19.7	19.8	99	99	30-150	0	30	
Diethyl ether (Ethyl ether)	ug/L	ND	20	20	17.6	17.6	88	88	30-150	0	30	
Ethylbenzene	ug/L	ND	20	20	19.3	19.3	97	96	30-150	0	30	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	16.2	15.1	81	75	30-150	7	30	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	20.9	21.0	105	105	30-150	0	30	
Methyl-tert-butyl ether	ug/L	ND	20	20	17.3	17.6	87	88	30-150	1	30	
Methylene Chloride	ug/L	ND	20	20	18.9	18.6	94	93	30-146	1	30	
n-Butylbenzene	ug/L	ND	20	20	19.9	21.0	100	105	30-150	5	30	
n-Propylbenzene	ug/L	ND	20	20	20.4	20.8	102	104	30-150	2	30	
Naphthalene	ug/L	ND	20	20	19.2	19.3	96	97	30-150	1	30	
p-Isopropyltoluene	ug/L	ND	20	20	19.6	20.9	98	105	30-150	7	30	
sec-Butylbenzene	ug/L	ND	20	20	20.4	21.6	102	108	30-150	6	30	
Styrene	ug/L	ND	20	20	19.3	19.2	96	96	30-150	1	30	
tert-Butylbenzene	ug/L	ND	20	20	19.9	20.5	99	102	30-150	3	30	
Tetrachloroethene	ug/L	ND	20	20	21.3	20.9	106	104	30-150	2	30	
Tetrahydrofuran	ug/L	ND	200	200	187	192	93	96	30-150	3	30	
Toluene	ug/L	ND	20	20	19.8	19.3	99	96	30-150	3	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	21.7	21.7	108	108	30-150	0	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	19.6	19.3	98	96	30-150	2	30	
Trichloroethene	ug/L	ND	20	20	21.6	20.8	108	104	30-150	4	30	
Trichlorofluoromethane	ug/L	ND	20	20	22.3	22.0	112	110	30-150	1	30	
Vinyl chloride	ug/L	ND	20	20	19.3	19.1	97	95	30-150	2	30	
Xylene (Total)	ug/L	ND	60	60	58.9	58.4	98	97	30-150	1	30	
1,2-Dichloroethane-d4 (S)	%.						98	101	75-125			1M
4-Bromofluorobenzene (S)	%.						101	101	75-125			
Toluene-d8 (S)	%.						104	103	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

QC Batch: 638189 Analysis Method: EPA 8081B
QC Batch Method: EPA 3550 Analysis Description: 8081S GCS Pesticides
Associated Lab Samples: 10495314017, 10495314018

METHOD BLANK: 3439973 Matrix: Solid
Associated Lab Samples: 10495314017, 10495314018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,4'-DDD	ug/kg	ND	3.3	10/16/19 23:21	
4,4'-DDE	ug/kg	ND	3.3	10/16/19 23:21	
4,4'-DDT	ug/kg	ND	3.3	10/16/19 23:21	
Aldrin	ug/kg	ND	1.7	10/16/19 23:21	
alpha-BHC	ug/kg	ND	1.7	10/16/19 23:21	
alpha-Chlordane	ug/kg	ND	1.7	10/16/19 23:21	
beta-BHC	ug/kg	ND	1.7	10/16/19 23:21	
Chlordane (Technical)	ug/kg	ND	16.7	10/16/19 23:21	
delta-BHC	ug/kg	ND	1.7	10/16/19 23:21	
Dieldrin	ug/kg	ND	3.3	10/16/19 23:21	
Endosulfan I	ug/kg	ND	1.7	10/16/19 23:21	
Endosulfan II	ug/kg	ND	3.3	10/16/19 23:21	
Endosulfan sulfate	ug/kg	ND	3.3	10/16/19 23:21	
Endrin	ug/kg	ND	3.3	10/16/19 23:21	
Endrin aldehyde	ug/kg	ND	3.3	10/16/19 23:21	
Endrin ketone	ug/kg	ND	3.3	10/16/19 23:21	
gamma-BHC (Lindane)	ug/kg	ND	1.7	10/16/19 23:21	
gamma-Chlordane	ug/kg	ND	1.7	10/16/19 23:21	
Heptachlor	ug/kg	ND	1.7	10/16/19 23:21	
Heptachlor epoxide	ug/kg	ND	1.7	10/16/19 23:21	
Methoxychlor	ug/kg	ND	16.7	10/16/19 23:21	
Toxaphene	ug/kg	ND	50.0	10/16/19 23:21	
Decachlorobiphenyl (S)	%.	93	30-150	10/16/19 23:21	
Tetrachloro-m-xylene (S)	%.	98	30-150	10/16/19 23:21	

LABORATORY CONTROL SAMPLE: 3439974

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/kg	33.3	34.4	103	75-125	
4,4'-DDE	ug/kg	33.3	33.8	101	75-125	
4,4'-DDT	ug/kg	33.3	35.4	106	73-125	
Aldrin	ug/kg	16.7	16.5	99	75-125	
alpha-BHC	ug/kg	16.7	16.6	100	75-125	
alpha-Chlordane	ug/kg	16.7	16.4	98	75-125	
beta-BHC	ug/kg	16.7	16.1	96	75-125	
delta-BHC	ug/kg	16.7	14.6	88	46-132	
Dieldrin	ug/kg	33.3	33.9	102	75-125	
Endosulfan I	ug/kg	16.7	16.4	99	68-125	
Endosulfan II	ug/kg	33.3	32.8	98	75-125	
Endosulfan sulfate	ug/kg	33.3	31.8	95	72-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

LABORATORY CONTROL SAMPLE: 3439974

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endrin	ug/kg	33.3	34.0	102	75-125	
Endrin aldehyde	ug/kg	33.3	31.6	95	75-125	
Endrin ketone	ug/kg	33.3	33.2	100	75-125	
gamma-BHC (Lindane)	ug/kg	16.7	16.6	99	75-125	
gamma-Chlordane	ug/kg	16.7	16.5	99	72-125	
Heptachlor	ug/kg	16.7	17.0	102	75-125	
Heptachlor epoxide	ug/kg	16.7	16.5	99	75-125	
Methoxychlor	ug/kg	167	180	108	73-125	CH
Decachlorobiphenyl (S)	%.			98	30-150	
Tetrachloro-m-xylene (S)	%.			100	30-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3439975 3439976

Parameter	Units	10495314017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4,4'-DDD	ug/kg	ND	40.4	40.4	36.6	35.9	90	89	30-150	2	20	
4,4'-DDE	ug/kg	ND	40.4	40.4	36.6	36.0	91	89	52-147	2	20	
4,4'-DDT	ug/kg	ND	40.4	40.4	35.7	35.6	88	88	53-142	0	20	
Aldrin	ug/kg	ND	20.3	20.3	18.5	18.3	91	90	70-125	1	20	
alpha-BHC	ug/kg	ND	20.3	20.3	17.9	17.9	88	88	58-136	0	20	
alpha-Chlordane	ug/kg	ND	20.3	20.3	22.2	21.3	110	105	65-135	4	20	
beta-BHC	ug/kg	ND	20.3	20.3	20.0	19.7	99	97	30-150	1	20	
delta-BHC	ug/kg	ND	20.3	20.3	18.8	18.7	93	93	36-140	0	20	
Dieldrin	ug/kg	ND	40.4	40.4	36.4	36.1	90	89	41-150	1	20	
Endosulfan I	ug/kg	ND	20.3	20.3	18.8	18.4	93	91	55-128	2	20	
Endosulfan II	ug/kg	ND	40.4	40.4	36.9	36.4	91	90	73-127	1	20	
Endosulfan sulfate	ug/kg	ND	40.4	40.4	36.8	36.7	91	91	56-129	0	20	
Endrin	ug/kg	ND	40.4	40.4	36.9	36.3	91	90	64-125	2	20	
Endrin aldehyde	ug/kg	ND	40.4	40.4	36.6	37.2	91	92	52-149	2	20	
Endrin ketone	ug/kg	ND	40.4	40.4	36.9	36.3	91	90	62-147	1	20	
gamma-BHC (Lindane)	ug/kg	ND	20.3	20.3	18.2	18.0	90	89	66-126	1	20	
gamma-Chlordane	ug/kg	ND	20.3	20.3	19.0	18.7	94	92	30-150	1	20	
Heptachlor	ug/kg	ND	20.3	20.3	18.7	18.5	93	91	72-128	1	20	
Heptachlor epoxide	ug/kg	ND	20.3	20.3	19.0	18.8	94	93	63-134	1	20	
Methoxychlor	ug/kg	ND	203	203	197	195	98	96	67-134	1	20	CH
Decachlorobiphenyl (S)	%.						95	96	30-150			
Tetrachloro-m-xylene (S)	%.						94	97	30-150			2M,D3

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

QC Batch: 638138
QC Batch Method: EPA 3550
Analysis Method: EPA 8270D by SIM
Analysis Description: 8270D Solid PAH by SIM MSSV
Associated Lab Samples: 10495314013, 10495314015

METHOD BLANK: 3439824
Matrix: Solid
Associated Lab Samples: 10495314013, 10495314015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	ND	10.0	10/16/19 11:11	
Acenaphthylene	ug/kg	ND	10.0	10/16/19 11:11	
Anthracene	ug/kg	ND	10.0	10/16/19 11:11	
Benzo(a)anthracene	ug/kg	ND	10.0	10/16/19 11:11	
Benzo(a)pyrene	ug/kg	ND	10.0	10/16/19 11:11	
Benzo(b)fluoranthene	ug/kg	ND	10.0	10/16/19 11:11	
Benzo(g,h,i)perylene	ug/kg	ND	10.0	10/16/19 11:11	
Benzo(k)fluoranthene	ug/kg	ND	10.0	10/16/19 11:11	
Chrysene	ug/kg	ND	10.0	10/16/19 11:11	
Dibenz(a,h)anthracene	ug/kg	ND	10.0	10/16/19 11:11	
Fluoranthene	ug/kg	ND	10.0	10/16/19 11:11	
Fluorene	ug/kg	ND	10.0	10/16/19 11:11	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	10.0	10/16/19 11:11	
Naphthalene	ug/kg	ND	10.0	10/16/19 11:11	
Phenanthrene	ug/kg	ND	10.0	10/16/19 11:11	
Pyrene	ug/kg	ND	10.0	10/16/19 11:11	
2-Fluorobiphenyl (S)	%.	89	30-125	10/16/19 11:11	
p-Terphenyl-d14 (S)	%.	95	30-125	10/16/19 11:11	

LABORATORY CONTROL SAMPLE: 3439825

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	33.3	27.9	84	46-125	
Acenaphthylene	ug/kg	33.3	28.2	85	44-125	
Anthracene	ug/kg	33.3	27.9	84	62-125	
Benzo(a)anthracene	ug/kg	33.3	31.0	93	53-125	
Benzo(a)pyrene	ug/kg	33.3	26.6	80	62-125	
Benzo(b)fluoranthene	ug/kg	33.3	28.4	85	51-125	
Benzo(g,h,i)perylene	ug/kg	33.3	26.1	78	58-125	
Benzo(k)fluoranthene	ug/kg	33.3	26.3	79	59-125	
Chrysene	ug/kg	33.3	29.8	90	59-125	
Dibenz(a,h)anthracene	ug/kg	33.3	26.5	80	60-125	
Fluoranthene	ug/kg	33.3	28.5	86	67-125	
Fluorene	ug/kg	33.3	28.2	84	51-125	
Indeno(1,2,3-cd)pyrene	ug/kg	33.3	26.1	78	59-125	
Naphthalene	ug/kg	33.3	24.9	75	47-125	
Phenanthrene	ug/kg	33.3	26.8	80	61-125	
Pyrene	ug/kg	33.3	29.8	89	52-125	
2-Fluorobiphenyl (S)	%.			83	30-125	
p-Terphenyl-d14 (S)	%.			89	30-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3439826 3439827

Parameter	Units	10495312006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Acenaphthene	ug/kg	ND	38.9	38.9	33.1	31.2	85	80	30-125	6	30	
Acenaphthylene	ug/kg	ND	38.9	38.9	35.0	32.1	90	82	30-125	9	30	
Anthracene	ug/kg	ND	38.9	38.9	35.8	33.9	92	87	30-131	5	30	
Benzo(a)anthracene	ug/kg	0.013 mg/kg	38.9	38.9	48.8	38.1	91	63	30-126	25	30	
Benzo(a)pyrene	ug/kg	0.012 mg/kg	38.9	38.9	40.2	33.7	72	55	30-150	18	30	
Benzo(b)fluoranthene	ug/kg	0.017 mg/kg	38.9	38.9	45.4	35.4	73	47	30-150	25	30	
Benzo(g,h,i)perylene	ug/kg	ND	38.9	38.9	35.9	31.5	92	81	30-150	13	30	
Benzo(k)fluoranthene	ug/kg	ND	38.9	38.9	38.2	33.4	98	86	30-150	14	30	
Chrysene	ug/kg	0.014 mg/kg	38.9	38.9	45.7	36.8	82	60	30-150	21	30	
Dibenz(a,h)anthracene	ug/kg	ND	38.9	38.9	30.3	30.1	78	77	30-143	1	30	
Fluoranthene	ug/kg	0.030 mg/kg	38.9	38.9	66.1	38.4	91	20	30-143	53	30	M1,R1
Fluorene	ug/kg	ND	38.9	38.9	34.3	32.1	88	82	30-138	6	30	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	38.9	38.9	34.8	31.1	89	80	30-150	11	30	
Naphthalene	ug/kg	ND	38.9	38.9	29.8	28.5	76	73	30-125	4	30	
Phenanthrene	ug/kg	ND	38.9	38.9	51.7	32.3	133	83	30-142	46	30	R1
Pyrene	ug/kg	0.026 mg/kg	38.9	38.9	62.2	37.8	94	32	30-149	49	30	R1
2-Fluorobiphenyl (S)	%.						83	81	30-125			
p-Terphenyl-d14 (S)	%.						87	88	30-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

QC Batch: 638207
QC Batch Method: EPA Mod. 3510C
Analysis Method: EPA 8270D by SIM
Analysis Description: 8270D PAH by SIM MSSV
Associated Lab Samples: 10495314020, 10495314021

METHOD BLANK: 3440042
Matrix: Water
Associated Lab Samples: 10495314020, 10495314021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	10/15/19 10:49	
Acenaphthylene	ug/L	ND	0.040	10/15/19 10:49	
Anthracene	ug/L	ND	0.040	10/15/19 10:49	
Benzo(a)anthracene	ug/L	ND	0.040	10/15/19 10:49	
Benzo(a)pyrene	ug/L	ND	0.040	10/15/19 10:49	
Benzo(b)fluoranthene	ug/L	ND	0.040	10/15/19 10:49	
Benzo(g,h,i)perylene	ug/L	ND	0.040	10/15/19 10:49	
Benzo(k)fluoranthene	ug/L	ND	0.040	10/15/19 10:49	
Chrysene	ug/L	ND	0.040	10/15/19 10:49	
Dibenz(a,h)anthracene	ug/L	ND	0.040	10/15/19 10:49	
Fluoranthene	ug/L	ND	0.040	10/15/19 10:49	
Fluorene	ug/L	ND	0.040	10/15/19 10:49	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	10/15/19 10:49	
Naphthalene	ug/L	ND	0.040	10/15/19 10:49	
Phenanthrene	ug/L	ND	0.040	10/15/19 10:49	
Pyrene	ug/L	ND	0.040	10/15/19 10:49	
2-Fluorobiphenyl (S)	%.	83	47-125	10/15/19 10:49	
p-Terphenyl-d14 (S)	%.	103	62-125	10/15/19 10:49	

LABORATORY CONTROL SAMPLE & LCSD: 3440043 3440044

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Acenaphthene	ug/L	1	0.82	0.79	82	79	50-125	4	20	
Acenaphthylene	ug/L	1	0.79	0.77	79	77	46-125	3	20	
Anthracene	ug/L	1	0.78	0.79	78	79	59-125	0	20	
Benzo(a)anthracene	ug/L	1	0.89	0.92	89	92	55-125	3	20	
Benzo(a)pyrene	ug/L	1	0.81	0.87	81	87	66-125	7	20	
Benzo(b)fluoranthene	ug/L	1	0.74	0.78	74	78	64-125	4	20	
Benzo(g,h,i)perylene	ug/L	1	0.83	0.85	83	85	58-125	3	20	
Benzo(k)fluoranthene	ug/L	1	0.90	0.91	90	91	60-125	1	20	
Chrysene	ug/L	1	0.96	1.1	96	109	62-125	13	20	
Dibenz(a,h)anthracene	ug/L	1	0.83	0.85	83	85	51-125	3	20	
Fluoranthene	ug/L	1	0.85	0.88	85	88	64-125	3	20	
Fluorene	ug/L	1	0.83	0.82	83	82	55-125	1	20	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.84	0.85	84	85	61-125	1	20	
Naphthalene	ug/L	1	0.74	0.74	74	74	48-125	0	20	
Phenanthrene	ug/L	1	0.84	0.84	84	84	63-125	1	20	
Pyrene	ug/L	1	0.91	0.94	91	94	61-125	3	20	
2-Fluorobiphenyl (S)	%.				81	77	47-125			
p-Terphenyl-d14 (S)	%.				96	96	62-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

QC Batch: 638190 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO Solid GCV
Associated Lab Samples: 10495314013, 10495314015

METHOD BLANK: 3439979 Matrix: Solid
Associated Lab Samples: 10495314013, 10495314015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/kg	ND	10.0	10/15/19 18:33	
n-Triacontane (S)	%.	87	44-143	10/15/19 18:33	

LABORATORY CONTROL SAMPLE & LCSD: 3439980 3439981

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/kg	80	79.6	73.0	99	91	61-125	9	20	
n-Triacontane (S)	%.				103	97	44-143			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

QC Batch: 638078
QC Batch Method: WI MOD DRO
Analysis Method: WI MOD DRO
Analysis Description: WIDRO Low Volume GCS w/Cleanup
Associated Lab Samples: 10495314020

METHOD BLANK: 3439605 Matrix: Water
Associated Lab Samples: 10495314020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/L	ND	0.10	10/15/19 17:50	
n-Triacontane (S)	%.	98	48-125	10/15/19 17:50	

LABORATORY CONTROL SAMPLE & LCSD: 3439606 3439607

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/L	0.8	0.58	0.70	73	88	39-125	19	20	
n-Triacontane (S)	%.				88	96	48-125			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3439657 3439658

Parameter	Units	10495327007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
WDRO C10-C28	mg/L	0.069J	0.8	0.8	0.54	0.65	59	73	70-130	18	20	M1
n-Triacontane (S)	%.						81	99	48-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

BATCH QUALIFIERS

Batch: 638424

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1M	Post-analysis pH measurement indicates insufficient VOA sample preservation. Therefore, analysis was conducted outside the recognized method holding time.
2M	Sample was yellow in color.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
P4	Sample field preservation does not meet EPA or method recommendations for this analysis.

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QUALIFIERS

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

ANALYTE QUALIFIERS

R1	RPD value was outside control limits.
RS	The RPD value in one of the constituent analytes was outside the control limits.
SS	This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.
T6	High boiling point hydrocarbons are present in the sample.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10495314017	**ST-3 (0-0.5)**	EPA 3550	638189	EPA 8081B	638962
10495314018	**ST-3 (1-2)**	EPA 3550	638189	EPA 8081B	638962
10495314013	**ST-1 (2-3)**	WI MOD DRO	638190	WI MOD DRO	638792
10495314015	**ST-2 (2-3)**	WI MOD DRO	638190	WI MOD DRO	638792
10495314020	**ST-1 (W)**	WI MOD DRO	638078	WI MOD DRO	638791
10495314020	**ST-1 (W)**	EPA 3010	638402	EPA 6010D	638786
10495314021	**ST-3 (W)**	EPA 3010	638402	EPA 6010D	638786
10495314013	**ST-1 (2-3)**	EPA 3050	638332	EPA 6020B	639172
10495314015	**ST-2 (2-3)**	EPA 3050	638332	EPA 6020B	639172
10495314017	**ST-3 (0-0.5)**	EPA 3050	638332	EPA 6020B	639172
10495314018	**ST-3 (1-2)**	EPA 3050	638332	EPA 6020B	639172
10495314020	**ST-1 (W)**	EPA 7470A	638403	EPA 7470A	638734
10495314021	**ST-3 (W)**	EPA 7470A	638403	EPA 7470A	638734
10495314001	**ST-4 (0-6")**	EPA 7471B	638127	EPA 7471B	638582
10495314002	**ST-4 (1-2')**	EPA 7471B	638127	EPA 7471B	638582
10495314004	**ST-7 (0-6")**	EPA 7471B	638127	EPA 7471B	638582
10495314005	**ST-7 (1-2')**	EPA 7471B	638127	EPA 7471B	638582
10495314007	**ST-21 (0-6")**	EPA 7471B	638127	EPA 7471B	638582
10495314008	**ST-21 (1-2')**	EPA 7471B	638127	EPA 7471B	638582
10495314010	**ST-14 (0-6")**	EPA 7471B	638127	EPA 7471B	638582
10495314011	**ST-14 (1-2')**	EPA 7471B	638127	EPA 7471B	638582
10495314013	**ST-1 (2-3)**	EPA 7471B	638127	EPA 7471B	638582
10495314015	**ST-2 (2-3)**	EPA 7471B	638127	EPA 7471B	638582
10495314017	**ST-3 (0-0.5)**	EPA 7471B	638127	EPA 7471B	638582
10495314018	**ST-3 (1-2)**	EPA 7471B	638127	EPA 7471B	638582
10495314001	**ST-4 (0-6")**	ASTM D2974	638337		
10495314002	**ST-4 (1-2')**	ASTM D2974	638337		
10495314004	**ST-7 (0-6")**	ASTM D2974	638337		
10495314005	**ST-7 (1-2')**	ASTM D2974	638337		
10495314007	**ST-21 (0-6")**	ASTM D2974	638337		
10495314008	**ST-21 (1-2')**	ASTM D2974	638337		
10495314010	**ST-14 (0-6")**	ASTM D2974	638337		
10495314011	**ST-14 (1-2')**	ASTM D2974	638337		
10495314013	**ST-1 (2-3)**	ASTM D2974	638337		
10495314015	**ST-2 (2-3)**	ASTM D2974	638337		
10495314017	**ST-3 (0-0.5)**	ASTM D2974	638337		
10495314018	**ST-3 (1-2)**	ASTM D2974	638337		
10495314013	**ST-1 (2-3)**	EPA 3550	638138	EPA 8270D by SIM	638638
10495314015	**ST-2 (2-3)**	EPA 3550	638138	EPA 8270D by SIM	638638
10495314020	**ST-1 (W)**	EPA Mod. 3510C	638207	EPA 8270D by SIM	638424
10495314021	**ST-3 (W)**	EPA Mod. 3510C	638207	EPA 8270D by SIM	638424
10495314013	**ST-1 (2-3)**	EPA 5035/5030B	638775	EPA 8260B	638911
10495314015	**ST-2 (2-3)**	EPA 5035/5030B	638775	EPA 8260B	638911
10495314017	**ST-3 (0-0.5)**	EPA 5035/5030B	638775	EPA 8260B	638911

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: B1904484.00 Hollydale Golf Cou
Pace Project No.: 10495314

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10495314018	**ST-3 (1-2)**	EPA 5035/5030B	638775	EPA 8260B	638911
10495314023	**MeOH Trip Blank**	EPA 5035/5030B	638775	EPA 8260B	638911
10495314020	**ST-1 (W)**	EPA 8260B	639045		
10495314021	**ST-3 (W)**	EPA 8260B	639045		
10495314022	**HCl Trip Blank**	EPA 8260B	639198		

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 2

2297249

Section A
Required Client Information:

Company:	Braun Intertec
Address:	11001 Hampshire Ave Bloomington, MN
Email To:	MKeefer@BraunIntertec
Phone:	952-334-3748
Fax:	
Requested Due Date/TAT:	Standard

Section B
Required Project Information:

Report To:	Mark Keefer
Copy To:	
Purchase Order No.:	
Project Name:	Hollydale Golf Course
Project Number:	B1904484.00

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	34125

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ______

Site Location STATE: MN

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes
MATRIX / CODE
Drinking Water DW
Water WT
Waste Water WW
Product P
Soil/Solid SL
Oil OL
Wipe WP
Air AR
Tissue TS
Other OT

WO#: 10495314

10495314

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	~~Total Mercury ML~~	Total Mercury	Hold	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	ST-4 (0-6")	SL		10/10	930				1	1									X	X			001
2	ST-4 (1-2')				930															X			002
3	ST-4 (2-2.5')				930																X		003
4	ST-7 (0-6")				1010															X			004
5	ST-7 (1-2')				1010															X			005
6	ST-7 (2-2.5')				1010																X		006
7	ST-21 (0-6")				1100															X			007
8	ST-21 (1-2')				1100															X			008
9	ST-21 (2-2.5')				1100																X		009
10	ST-14 (0-6")				1130															X			010
11	ST-14 (1-2')				1130															X			011
12	ST-14 (2-2.5')				1130																X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	[signature] / Braun	10/10	1530	Mark Keefer	10/10	1530		Y	Y	Y
	HNMcTavish / Braun Intertec	10/11/19		Ashley W / Pace	10/11	855	0.3	Y	Y	Y
	[signature] / Pace	10.11.19	1300	[signature] / Pace	10-11-19	1300	0.1 0.2	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Miller Gruenewald

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY):

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-C-010-rev.00, 09Nov2017

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 2 of 2

2266016

Section A Required Client Information:

Company:	Braun Intertec
Address:	11001 Hampshire Ave S, Bloomington, MN 55438
Email To:	MKeefer@braunintertec.com
Phone: 952.995.2493	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Mark Keefer
Copy To:	
Purchase Order No.:	
Project Name:	Hollydale Golf Course
Project Number:	B1904484.00

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	34125

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: MN

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	VOCs	DRO w/silica gel	PAHs	RCRA (w/200.8)	Organochlorine Pesticides	RCRA (6010)	Hold	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	ST-1 (2-3)	SL	G			10/10/19	1000		6	4						2			X	X	X	X					013
2	ST-1 (5-6)	"	"			"	1010		7	5						2								X			014
3	ST-2 (2-3)	"	"			"	1130		4	4						4			X	X	X	X					015
4	ST-2 (4-5)	"	"			"	1140		↓	↓						↓								X			016
5	ST-3 (0-0.5)	"	"			"	1240		5	3						2			X			X	X				017
6	ST-3 (1-2)	"	"			"	1250		4	4						4			X			X	X				018
7	ST-3 (2-2.5)	↓	"			"	1300		↓	↓						↓								X			019
8	ST-1 (W)	WT	"			"	1200		9	4			5						X	X	X		X				020
9	ST-3 (W)	↓	↓			↓	1400		10	8			2						X		X		X				021
10	HCl Trip Blank CEG 10/11/19								2																		022
11	MeOH Trip Blank CEG 10/11/19								1																		023
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
VOCs NOT PRESERVED	HN McTavish / Braun Intertec	10/11/19	855	Ashley W Page	10/11	855	8.3	Y	Y	Y
RCRA NOT FILTERED	[signature] / Pace	10.11.19	1300				0.1 0.2	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: HN McTavish

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/10/19

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 23Aug2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.29**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Braun BLM

Project #: **WO#: 10495314**

PM: BM2 **Due Date: 10/18/19**

CLIENT: Braun-BLM

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Pace ☐ SpeeDee ☐ Commercial **See Exceptions** ☐

Tracking Number:

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☒ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☑ T1(0461) ☐ T2(1336) ☐ T3(0459) ☒ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.1, 0.2 °C

Correction Factor: True **Cooler Temp Corrected w/temp blank:** 0.1, 0.2 °C

Average Corrected Temp (no temp blank only): ☐ See Exceptions ☐ 1 Container

USDA Regulated Soil: (☐ N/A, water sample/Other: _____)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☒ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

Date/Initials of Person Examining Contents: CEG 10/11/19

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☒ Yes ☒ Yes	☐ No ☐ No		8.
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☒ No	☐ N/A	10. Is sediment visible in the dissolved container? ☒ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☒ Water ☑ Soil ☐ Oil ☐ Other	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☒ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☑ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** **See Exception** ☐
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☒ No	☐ N/A	13. No Headspace **See Exception** ☐
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	14.
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	Pace Trip Blank Lot # (if purchased): 229773, 082619-3

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: BM **Date:** 10/15/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: CEG

Pace Analytical®	Document Name: Cooler Transfer Check List	Revised Date: 12Feb2018 Page 1 of 1
	Document Number: F-MN-C-205-Rev.01	Issuing Authority: Pace Minnesota Quality Office

Bloomington Service Center Cooler Transfer Check List

Client: Braun Intertec

Project Manager: BM2

Received with Custody Seal: (Yes) No

Custody Seal Intact: (Yes) No NA

	Temp Read	Corrected Temp	Correction Factor
Temperature C:	0.8 0.4	0.7 0.3	-0.01

IR Gun # B88A0143310092

☐ Samples on Ice, cooling process has begun

Rush/Short Hold: NA

Containers Intact: (Yes) No

Re-packed and Re-Iced: NA

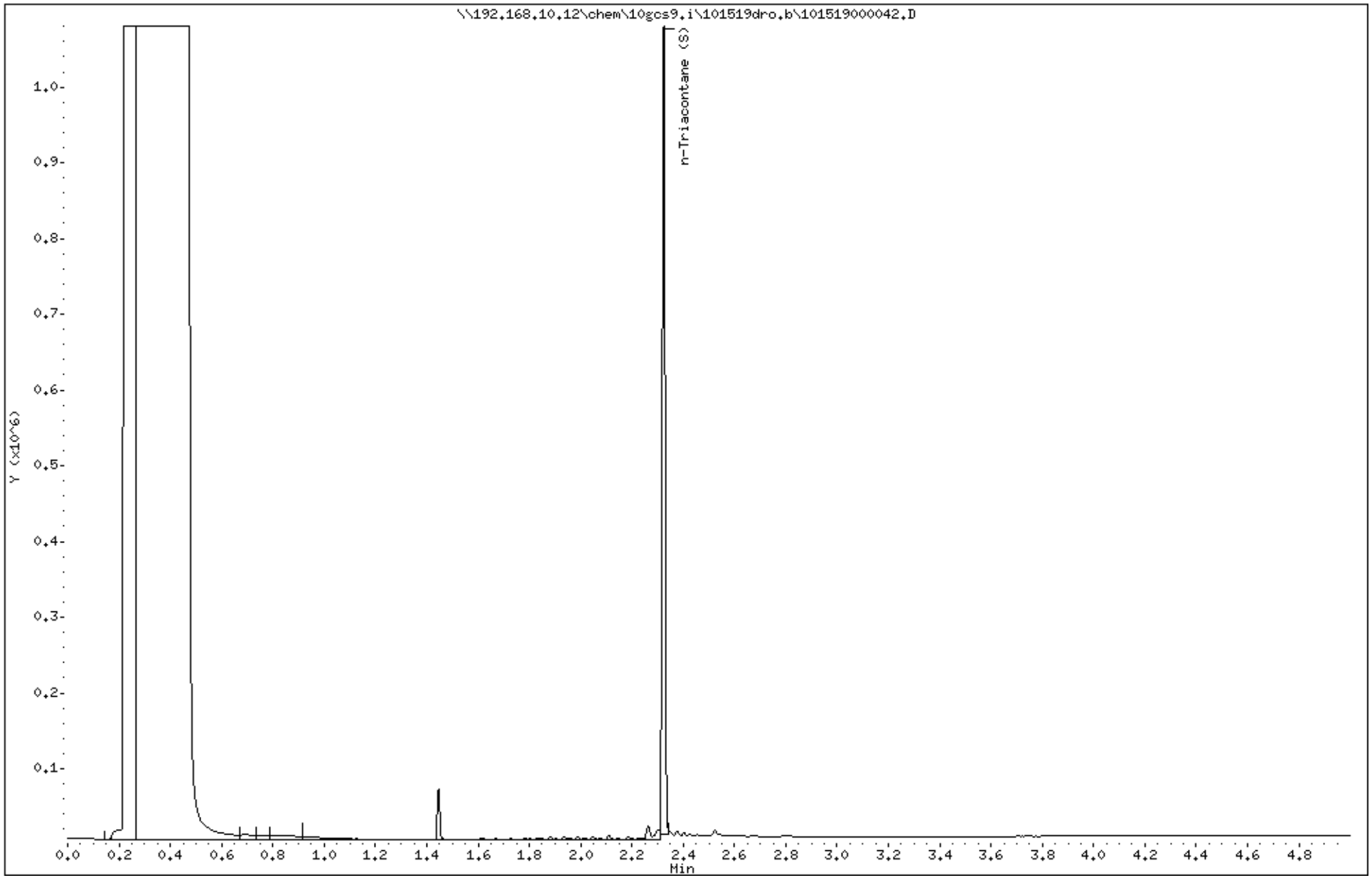
Temp Blank Included: (Yes) No

Shipped By/Date: 10/11/FAW1

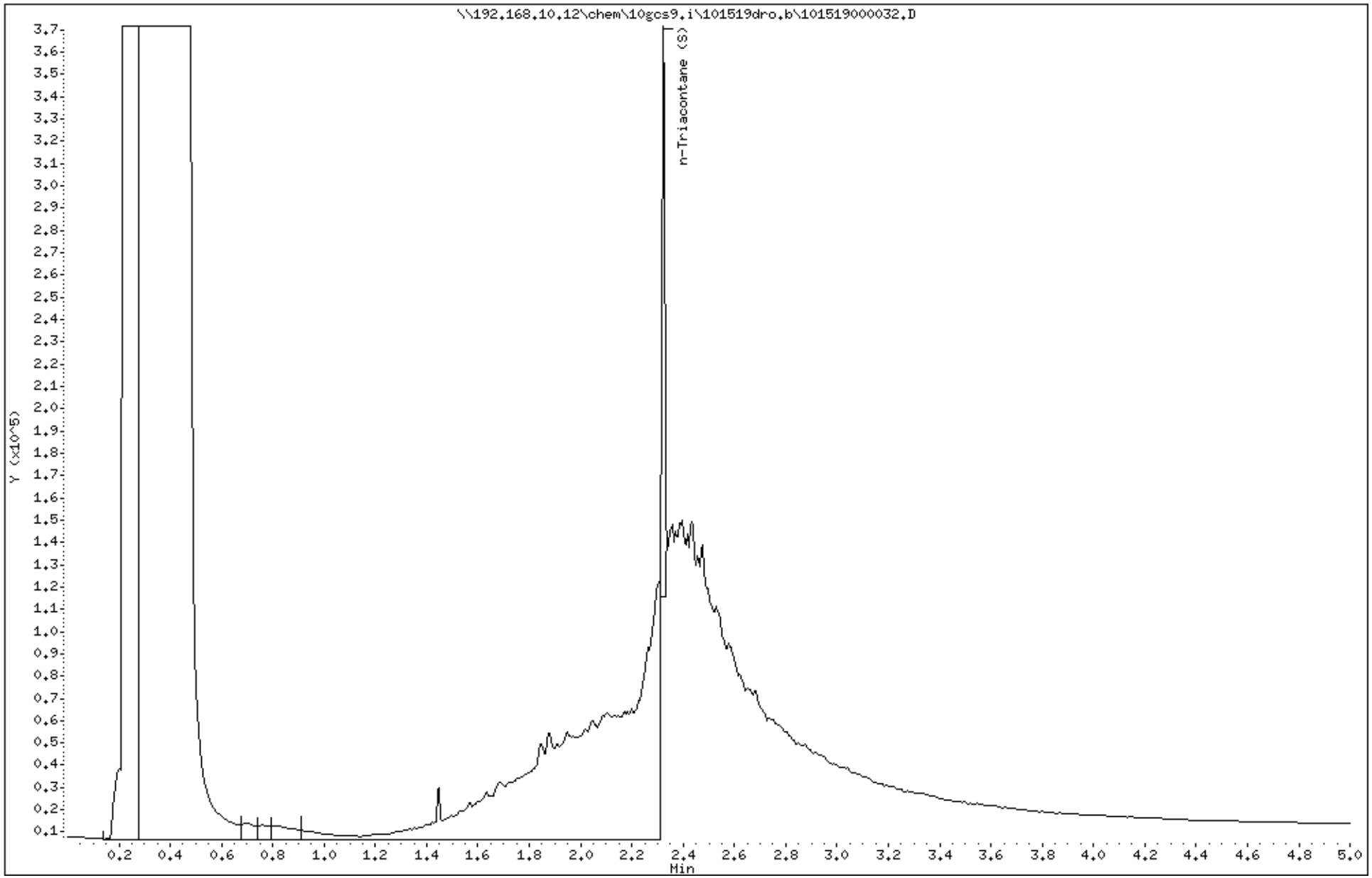
Notes: 2 coolers

Data File: \\192.168.10.12\chem\10gcs9.i\101519dro.b\101519000042.D
Date : 15-OCT-2019 20:11
Client ID: ST-1 (2-3)
Sample Info: 10495314013
Volume Injected (uL): 1.0
Column phase: DB-5-US19150005

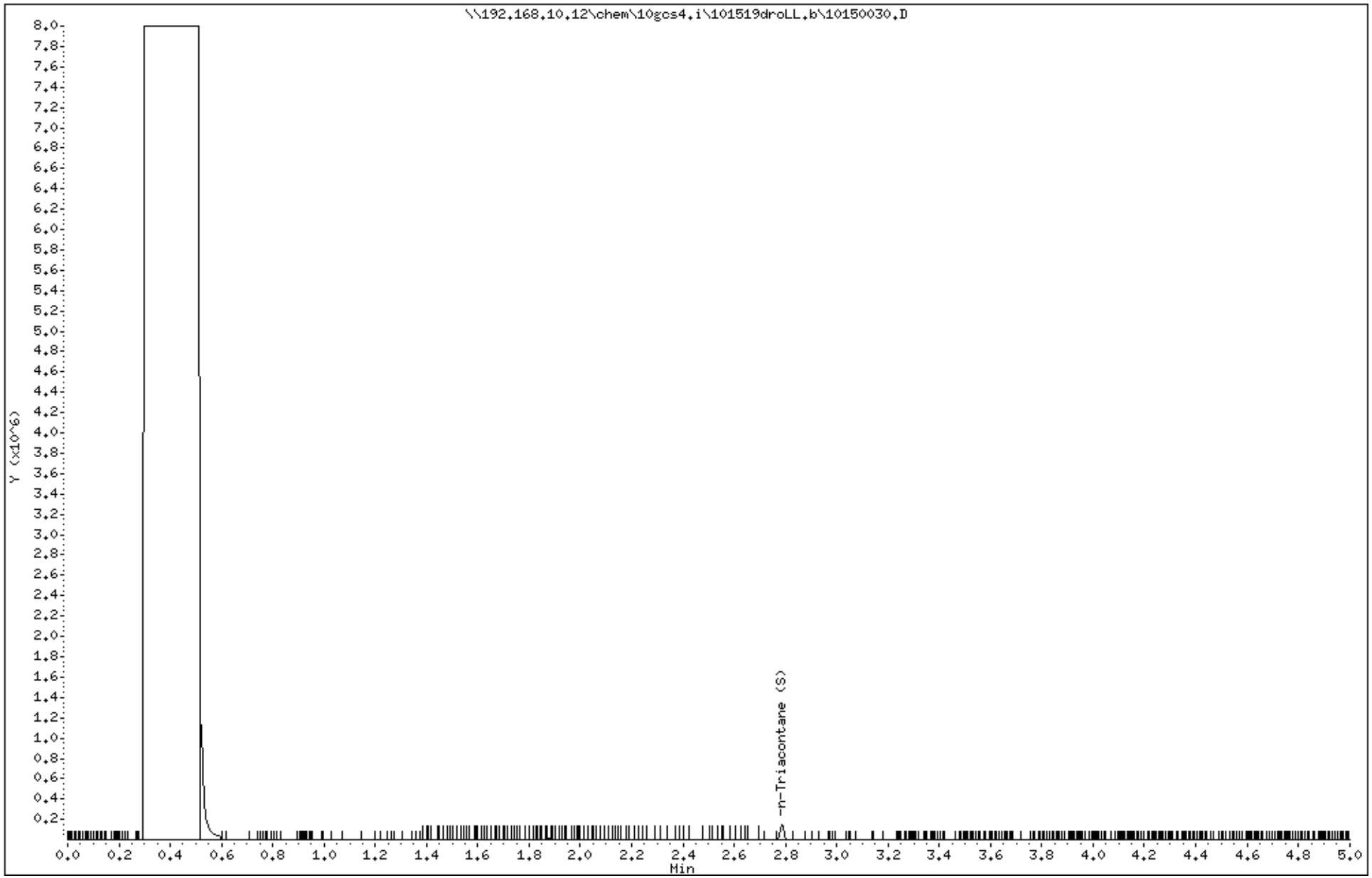
Instrument: 10gcs9.i
Operator: EC2
Column diameter: 0.32



Data File: \\192.168.10.12\chem\10gcs9.i\101519dro.b\101519000032.D
Date : 15-OCT-2019 19:01
Client ID: ST-2 (2-3)
Instrument: 10gcs9.i
Sample Info: 10495314015X5
Volume Injected (uL): 1.0
Operator: EC2
Column phase: DB-5-US19150005
Column diameter: 0.32



Data File: \\192.168.10.12\chem\10gcs4.i\101519droLL.b\10150030.D
Date : 15-OCT-2019 18:06
Client ID: ST-1 (W)
Instrument: 10gcs4.i
Sample Info: 10495314020
Volume Injected (uL): 1.0
Operator: EC2
Column phase: DB-5-US19300030
Column diameter: 0.32



Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

October 22, 2019

Mark Keefer
Braun Intertec
11001 Hampshire Ave S
Bloomington, MN 55438

RE: Project: B1904484.00
Pace Project No.: 10495623

Dear Mark Keefer:
Enclosed are the analytical results for sample(s) received by the laboratory on October 15, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Bob Michels
bob.michels@pacelabs.com
(612)709-5046
Project Manager

Enclosures

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: B1904484.00
Pace Project No.: 10495623

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

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SAMPLE SUMMARY

Project: B1904484.00
Pace Project No.: 10495623

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10495623001	**HA-1 (0-0.5)**	Solid	10/14/19 14:45	10/15/19 12:20
10495623002	**HA-1 (2-2.5)**	Solid	10/14/19 15:15	10/15/19 12:20
10495623004	**HA-2 (2-2.5)**	Solid	10/14/19 16:15	10/15/19 12:20
10495623005	**Trip Blank**	Solid	10/14/19 00:00	10/15/19 12:20

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SAMPLE ANALYTE COUNT

Project: B1904484.00
Pace Project No.: 10495623

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10495623001	**HA-1 (0-0.5)**	WI MOD DRO	EC2	2	PASI-M
		EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	CH3	19	PASI-M
		EPA 8260B	CD2	70	PASI-M
10495623002	**HA-1 (2-2.5)**	WI MOD DRO	EC2	2	PASI-M
		EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	SNG	19	PASI-M
		EPA 8260B	CD2	70	PASI-M
10495623004	**HA-2 (2-2.5)**	WI MOD DRO	EC2	2	PASI-M
		EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	SNG	19	PASI-M
		EPA 8260B	CD2	70	PASI-M
10495623005	**Trip Blank**	EPA 8260B	CD2	70	PASI-M

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SUMMARY OF DETECTION

Project: B1904484.00
Pace Project No.: 10495623

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10495623001	**HA-1 (0-0.5)**					
WI MOD DRO	WDRO C10-C28	18100	mg/kg	2150	10/19/19 14:24	
EPA 6010D	Arsenic	3.7	mg/kg	1.2	10/17/19 15:36	
EPA 6010D	Barium	123	mg/kg	0.62	10/17/19 15:36	
EPA 6010D	Cadmium	0.41	mg/kg	0.19	10/17/19 15:36	
EPA 6010D	Chromium	9.8	mg/kg	0.62	10/17/19 15:36	
EPA 6010D	Lead	34.4	mg/kg	0.62	10/17/19 15:36	
EPA 7471B	Mercury	0.11	mg/kg	0.024	10/18/19 13:02	
ASTM D2974	Percent Moisture	23.3	%	0.10	10/17/19 09:52	
EPA 8270D by SIM	Anthracene	586	ug/kg	261	10/21/19 21:17	
EPA 8270D by SIM	Fluoranthene	299	ug/kg	261	10/21/19 21:17	
EPA 8270D by SIM	Fluorene	485	ug/kg	261	10/21/19 21:17	
EPA 8270D by SIM	Naphthalene	289	ug/kg	261	10/21/19 21:17	
EPA 8270D by SIM	Phenanthrene	2550	ug/kg	261	10/21/19 21:17	
EPA 8270D by SIM	Pyrene	3330	ug/kg	261	10/21/19 21:17	
EPA 8260B	n-Butylbenzene	359	ug/kg	329	10/22/19 16:23	
EPA 8260B	1,3,5-Trimethylbenzene	431	ug/kg	329	10/22/19 16:23	
10495623002	**HA-1 (2-2.5)**					
WI MOD DRO	WDRO C10-C28	21.0	mg/kg	8.8	10/18/19 18:14	
EPA 6010D	Arsenic	5.5	mg/kg	1.2	10/17/19 15:38	
EPA 6010D	Barium	94.9	mg/kg	0.60	10/17/19 15:38	
EPA 6010D	Chromium	14.3	mg/kg	0.60	10/17/19 15:38	
EPA 6010D	Lead	8.0	mg/kg	0.60	10/17/19 15:38	
EPA 7471B	Mercury	0.063	mg/kg	0.022	10/18/19 13:09	
ASTM D2974	Percent Moisture	18.3	%	0.10	10/17/19 09:52	
10495623004	**HA-2 (2-2.5)**					
EPA 6010D	Arsenic	5.4	mg/kg	1.1	10/17/19 15:39	
EPA 6010D	Barium	84.5	mg/kg	0.56	10/17/19 15:39	
EPA 6010D	Cadmium	0.31	mg/kg	0.17	10/17/19 15:39	
EPA 6010D	Chromium	15.4	mg/kg	0.56	10/17/19 15:39	
EPA 6010D	Lead	23.1	mg/kg	0.56	10/17/19 15:39	
EPA 7471B	Mercury	0.087	mg/kg	0.023	10/18/19 13:11	
ASTM D2974	Percent Moisture	16.9	%	0.10	10/17/19 09:52	
EPA 8270D by SIM	Benzo(b)fluoranthene	18.6	ug/kg	12.0	10/17/19 15:07	
EPA 8270D by SIM	Chrysene	13.9	ug/kg	12.0	10/17/19 15:07	
EPA 8270D by SIM	Fluoranthene	12.5	ug/kg	12.0	10/17/19 15:07	

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PROJECT NARRATIVE

Project: B1904484.00
Pace Project No.: 10495623

Method: **WI MOD DRO**
Description: WIDRO GCS
Client: Braun Intertec Corporation
Date: October 22, 2019

General Information:
3 samples were analyzed for WI MOD DRO. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with WI MOD DRO with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 638847

S4: Surrogate recovery not evaluated against control limits due to sample dilution.
- HA-1 (0-0.5) (Lab ID: 10495623001)
  - n-Triacontane (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: B1904484.00
Pace Project No.: 10495623

Method: **EPA 6010D**
Description: 6010D MET ICP
Client: Braun Intertec Corporation
Date: October 22, 2019

General Information:
3 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 638608

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10495528001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3441855)
  - Barium
  - Lead
- MSD (Lab ID: 3441856)
  - Barium
  - Lead

Additional Comments:

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PROJECT NARRATIVE

Project: B1904484.00
Pace Project No.: 10495623

Method: **EPA 7471B**
Description: 7471B Mercury
Client: Braun Intertec Corporation
Date: October 22, 2019

General Information:
3 samples were analyzed for EPA 7471B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7471B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: B1904484.00
Pace Project No.: 10495623

Method: **EPA 8270D by SIM**
Description: 8270D MSSV PAH by SIM
Client: Braun Intertec Corporation
Date: October 22, 2019

General Information:
3 samples were analyzed for EPA 8270D by SIM. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3550 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 638701

S4: Surrogate recovery not evaluated against control limits due to sample dilution.
- HA-1 (0-0.5) (Lab ID: 10495623001)
  - 2-Fluorobiphenyl (S)
  - p-Terphenyl-d14 (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: B1904484.00
Pace Project No.: 10495623

Method: **EPA 8270D by SIM**
Description: 8270D MSSV PAH by SIM
Client: Braun Intertec Corporation
Date: October 22, 2019

Analyte Comments:

QC Batch: 638701

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- HA-1 (0-0.5) (Lab ID: 10495623001)
  - 2-Fluorobiphenyl (S)

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- HA-1 (0-0.5) (Lab ID: 10495623001)
  - Total BaP Eq. MN 2006sh. ND=0
- HA-1 (2-2.5) (Lab ID: 10495623002)
  - Total BaP Eq. MN 2006sh. ND=0
- HA-2 (2-2.5) (Lab ID: 10495623004)
  - Total BaP Eq. MN 2006sh. ND=0

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PROJECT NARRATIVE

Project: B1904484.00
Pace Project No.: 10495623

Method: **EPA 8260B**
Description: 8260B MSV 5030 Med Level
Client: Braun Intertec Corporation
Date: October 22, 2019

General Information:
4 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 5035/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 639901

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10495632001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 3447631)
  - Dichlorofluoromethane

R1: RPD value was outside control limits.

- MSD (Lab ID: 3447631)
  - Dichlorofluoromethane

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: B1904484.00
Pace Project No.: 10495623

Method: **EPA 8260B**
Description: 8260B MSV 5030 Med Level
Client: Braun Intertec Corporation
Date: October 22, 2019

Analyte Comments:

QC Batch: 639901

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- HA-1 (0-0.5) (Lab ID: 10495623001)
  - 1,2-Dichloroethane-d4 (S)

- BLANK (Lab ID: 3447628)
  - Dichlorofluoromethane
- HA-1 (0-0.5) (Lab ID: 10495623001)
  - Dichlorofluoromethane
- HA-1 (2-2.5) (Lab ID: 10495623002)
  - Dichlorofluoromethane
- HA-2 (2-2.5) (Lab ID: 10495623004)
  - Dichlorofluoromethane
- LCS (Lab ID: 3447629)
  - Dichlorofluoromethane
- MS (Lab ID: 3447630)
  - Dichlorofluoromethane
- MSD (Lab ID: 3447631)
  - Dichlorofluoromethane
- Trip Blank (Lab ID: 10495623005)
  - Dichlorofluoromethane

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10495623

Sample: HA-1 (0-0.5) **Lab ID: 10495623001** Collected: 10/14/19 14:45 Received: 10/15/19 12:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	**18100**	mg/kg	2150	200	10/16/19 13:26	10/19/19 14:24		
Surrogates								
n-Triacontane (S)	0	%.	50-150	200	10/16/19 13:26	10/19/19 14:24	638-68-6	S4
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050							
Arsenic	**3.7**	mg/kg	1.2	1	10/17/19 08:30	10/17/19 15:36	7440-38-2	
Barium	**123**	mg/kg	0.62	1	10/17/19 08:30	10/17/19 15:36	7440-39-3	
Cadmium	**0.41**	mg/kg	0.19	1	10/17/19 08:30	10/17/19 15:36	7440-43-9	
Chromium	**9.8**	mg/kg	0.62	1	10/17/19 08:30	10/17/19 15:36	7440-47-3	
Lead	**34.4**	mg/kg	0.62	1	10/17/19 08:30	10/17/19 15:36	7439-92-1	
Selenium	ND	mg/kg	1.2	1	10/17/19 08:30	10/17/19 15:36	7782-49-2	
Silver	ND	mg/kg	0.62	1	10/17/19 08:30	10/17/19 15:36	7440-22-4	
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.11**	mg/kg	0.024	1	10/17/19 09:02	10/18/19 13:02	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**23.3**	%	0.10	1		10/17/19 09:52		
8270D MSSV PAH by SIM	Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550							
Acenaphthene	ND	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	83-32-9	
Acenaphthylene	ND	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	208-96-8	
Anthracene	**586**	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	120-12-7	
Benzo(a)anthracene	ND	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	56-55-3	
Benzo(a)pyrene	ND	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	207-08-9	
Chrysene	ND	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	53-70-3	
Fluoranthene	**299**	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	206-44-0	
Fluorene	**485**	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	193-39-5	
Naphthalene	**289**	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	91-20-3	
Phenanthrene	**2550**	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	85-01-8	
Pyrene	**3330**	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	ND	ug/kg	261	20	10/16/19 10:43	10/21/19 21:17		N2
Surrogates								
2-Fluorobiphenyl (S)	0	%.	30-125	20	10/16/19 10:43	10/21/19 21:17	321-60-8	D3,S4
p-Terphenyl-d14 (S)	0	%.	30-125	20	10/16/19 10:43	10/21/19 21:17	1718-51-0	S4
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Acetone	ND	ug/kg	6580	5	10/22/19 10:44	10/22/19 16:23	67-64-1	
Allyl chloride	ND	ug/kg	1320	5	10/22/19 10:44	10/22/19 16:23	107-05-1	
Benzene	ND	ug/kg	132	5	10/22/19 10:44	10/22/19 16:23	71-43-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10495623

Sample: HA-1 (0-0.5) **Lab ID: 10495623001** Collected: 10/14/19 14:45 Received: 10/15/19 12:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Bromobenzene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	108-86-1	
Bromochloromethane	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	74-97-5	
Bromodichloromethane	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	75-27-4	
Bromoform	ND	ug/kg	1320	5	10/22/19 10:44	10/22/19 16:23	75-25-2	
Bromomethane	ND	ug/kg	3290	5	10/22/19 10:44	10/22/19 16:23	74-83-9	
2-Butanone (MEK)	ND	ug/kg	1640	5	10/22/19 10:44	10/22/19 16:23	78-93-3	
n-Butylbenzene	**359**	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	104-51-8	
sec-Butylbenzene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	135-98-8	
tert-Butylbenzene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	98-06-6	
Carbon tetrachloride	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	56-23-5	
Chlorobenzene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	108-90-7	
Chloroethane	ND	ug/kg	3290	5	10/22/19 10:44	10/22/19 16:23	75-00-3	
Chloroform	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	67-66-3	
Chloromethane	ND	ug/kg	1320	5	10/22/19 10:44	10/22/19 16:23	74-87-3	
2-Chlorotoluene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	95-49-8	
4-Chlorotoluene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	3290	5	10/22/19 10:44	10/22/19 16:23	96-12-8	
Dibromochloromethane	ND	ug/kg	1320	5	10/22/19 10:44	10/22/19 16:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	106-93-4	
Dibromomethane	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	1320	5	10/22/19 10:44	10/22/19 16:23	75-71-8	
1,1-Dichloroethane	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	75-34-3	
1,2-Dichloroethane	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	107-06-2	
1,1-Dichloroethene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	156-60-5	
Dichlorofluoromethane	ND	ug/kg	3290	5	10/22/19 10:44	10/22/19 16:23	75-43-4	
1,2-Dichloropropane	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	78-87-5	
1,3-Dichloropropane	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	142-28-9	
2,2-Dichloropropane	ND	ug/kg	1320	5	10/22/19 10:44	10/22/19 16:23	594-20-7	
1,1-Dichloropropene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	1320	5	10/22/19 10:44	10/22/19 16:23	60-29-7	
Ethylbenzene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	1640	5	10/22/19 10:44	10/22/19 16:23	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	98-82-8	
p-Isopropyltoluene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	99-87-6	
Methylene Chloride	ND	ug/kg	1320	5	10/22/19 10:44	10/22/19 16:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1640	5	10/22/19 10:44	10/22/19 16:23	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	1634-04-4	
Naphthalene	ND	ug/kg	1320	5	10/22/19 10:44	10/22/19 16:23	91-20-3	
n-Propylbenzene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	103-65-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10495623

Sample: HA-1 (0-0.5) **Lab ID: 10495623001** Collected: 10/14/19 14:45 Received: 10/15/19 12:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Styrene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	79-34-5	
Tetrachloroethene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	127-18-4	
Tetrahydrofuran	ND	ug/kg	13200	5	10/22/19 10:44	10/22/19 16:23	109-99-9	
Toluene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	79-00-5	
Trichloroethene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	79-01-6	
Trichlorofluoromethane	ND	ug/kg	1320	5	10/22/19 10:44	10/22/19 16:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	1320	5	10/22/19 10:44	10/22/19 16:23	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	1320	5	10/22/19 10:44	10/22/19 16:23	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	95-63-6	
1,3,5-Trimethylbenzene	**431**	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	108-67-8	
Vinyl chloride	ND	ug/kg	329	5	10/22/19 10:44	10/22/19 16:23	75-01-4	
Xylene (Total)	ND	ug/kg	986	5	10/22/19 10:44	10/22/19 16:23	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	114	%.	75-125	5	10/22/19 10:44	10/22/19 16:23	17060-07-0	D3
Toluene-d8 (S)	101	%.	75-125	5	10/22/19 10:44	10/22/19 16:23	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125	5	10/22/19 10:44	10/22/19 16:23	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10495623

Sample: HA-1 (2-2.5) **Lab ID: 10495623002** Collected: 10/14/19 15:15 Received: 10/15/19 12:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	**21.0**	mg/kg	8.8	1	10/16/19 13:26	10/18/19 18:14		
Surrogates								
n-Triacontane (S)	94	%.	50-150	1	10/16/19 13:26	10/18/19 18:14	638-68-6	
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050							
Arsenic	**5.5**	mg/kg	1.2	1	10/17/19 08:30	10/17/19 15:38	7440-38-2	
Barium	**94.9**	mg/kg	0.60	1	10/17/19 08:30	10/17/19 15:38	7440-39-3	
Cadmium	ND	mg/kg	0.18	1	10/17/19 08:30	10/17/19 15:38	7440-43-9	
Chromium	**14.3**	mg/kg	0.60	1	10/17/19 08:30	10/17/19 15:38	7440-47-3	
Lead	**8.0**	mg/kg	0.60	1	10/17/19 08:30	10/17/19 15:38	7439-92-1	
Selenium	ND	mg/kg	1.2	1	10/17/19 08:30	10/17/19 15:38	7782-49-2	
Silver	ND	mg/kg	0.60	1	10/17/19 08:30	10/17/19 15:38	7440-22-4	
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.063**	mg/kg	0.022	1	10/17/19 09:02	10/18/19 13:09	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**18.3**	%	0.10	1		10/17/19 09:52		
8270D MSSV PAH by SIM	Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550							
Acenaphthene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	83-32-9	
Acenaphthylene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	208-96-8	
Anthracene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	120-12-7	
Benzo(a)anthracene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	56-55-3	
Benzo(a)pyrene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	207-08-9	
Chrysene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	53-70-3	
Fluoranthene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	206-44-0	
Fluorene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	193-39-5	
Naphthalene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	91-20-3	
Phenanthrene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	85-01-8	
Pyrene	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	ND	ug/kg	12.2	1	10/16/19 10:43	10/17/19 14:46		N2
Surrogates								
2-Fluorobiphenyl (S)	70	%.	30-125	1	10/16/19 10:43	10/17/19 14:46	321-60-8	
p-Terphenyl-d14 (S)	62	%.	30-125	1	10/16/19 10:43	10/17/19 14:46	1718-51-0	
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Acetone	ND	ug/kg	1240	1	10/22/19 10:44	10/22/19 15:44	67-64-1	
Allyl chloride	ND	ug/kg	247	1	10/22/19 10:44	10/22/19 15:44	107-05-1	
Benzene	ND	ug/kg	24.7	1	10/22/19 10:44	10/22/19 15:44	71-43-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10495623

Sample: HA-1 (2-2.5) **Lab ID: 10495623002** Collected: 10/14/19 15:15 Received: 10/15/19 12:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Bromobenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	108-86-1	
Bromochloromethane	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	74-97-5	
Bromodichloromethane	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	75-27-4	
Bromoform	ND	ug/kg	247	1	10/22/19 10:44	10/22/19 15:44	75-25-2	
Bromomethane	ND	ug/kg	618	1	10/22/19 10:44	10/22/19 15:44	74-83-9	
2-Butanone (MEK)	ND	ug/kg	309	1	10/22/19 10:44	10/22/19 15:44	78-93-3	
n-Butylbenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	104-51-8	
sec-Butylbenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	135-98-8	
tert-Butylbenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	98-06-6	
Carbon tetrachloride	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	56-23-5	
Chlorobenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	108-90-7	
Chloroethane	ND	ug/kg	618	1	10/22/19 10:44	10/22/19 15:44	75-00-3	
Chloroform	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	67-66-3	
Chloromethane	ND	ug/kg	247	1	10/22/19 10:44	10/22/19 15:44	74-87-3	
2-Chlorotoluene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	95-49-8	
4-Chlorotoluene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	618	1	10/22/19 10:44	10/22/19 15:44	96-12-8	
Dibromochloromethane	ND	ug/kg	247	1	10/22/19 10:44	10/22/19 15:44	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	106-93-4	
Dibromomethane	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	247	1	10/22/19 10:44	10/22/19 15:44	75-71-8	
1,1-Dichloroethane	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	75-34-3	
1,2-Dichloroethane	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	107-06-2	
1,1-Dichloroethene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	156-60-5	
Dichlorofluoromethane	ND	ug/kg	618	1	10/22/19 10:44	10/22/19 15:44	75-43-4	
1,2-Dichloropropane	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	78-87-5	
1,3-Dichloropropane	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	142-28-9	
2,2-Dichloropropane	ND	ug/kg	247	1	10/22/19 10:44	10/22/19 15:44	594-20-7	
1,1-Dichloropropene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	247	1	10/22/19 10:44	10/22/19 15:44	60-29-7	
Ethylbenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	309	1	10/22/19 10:44	10/22/19 15:44	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	98-82-8	
p-Isopropyltoluene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	99-87-6	
Methylene Chloride	ND	ug/kg	247	1	10/22/19 10:44	10/22/19 15:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	309	1	10/22/19 10:44	10/22/19 15:44	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	1634-04-4	
Naphthalene	ND	ug/kg	247	1	10/22/19 10:44	10/22/19 15:44	91-20-3	
n-Propylbenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	103-65-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10495623

Sample: HA-1 (2-2.5) **Lab ID: 10495623002** Collected: 10/14/19 15:15 Received: 10/15/19 12:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Styrene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	79-34-5	
Tetrachloroethene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	127-18-4	
Tetrahydrofuran	ND	ug/kg	2470	1	10/22/19 10:44	10/22/19 15:44	109-99-9	
Toluene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	79-00-5	
Trichloroethene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	79-01-6	
Trichlorofluoromethane	ND	ug/kg	247	1	10/22/19 10:44	10/22/19 15:44	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	247	1	10/22/19 10:44	10/22/19 15:44	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	247	1	10/22/19 10:44	10/22/19 15:44	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	108-67-8	
Vinyl chloride	ND	ug/kg	61.8	1	10/22/19 10:44	10/22/19 15:44	75-01-4	
Xylene (Total)	ND	ug/kg	185	1	10/22/19 10:44	10/22/19 15:44	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	109	%.	75-125	1	10/22/19 10:44	10/22/19 15:44	17060-07-0	
Toluene-d8 (S)	101	%.	75-125	1	10/22/19 10:44	10/22/19 15:44	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125	1	10/22/19 10:44	10/22/19 15:44	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10495623

Sample: HA-2 (2-2.5) **Lab ID: 10495623004** Collected: 10/14/19 16:15 Received: 10/15/19 12:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	ND	mg/kg	8.2	1	10/16/19 13:26	10/18/19 17:53		
Surrogates								
n-Triacontane (S)	89	%.	50-150	1	10/16/19 13:26	10/18/19 17:53	638-68-6	
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050							
Arsenic	**5.4**	mg/kg	1.1	1	10/17/19 08:30	10/17/19 15:39	7440-38-2	
Barium	**84.5**	mg/kg	0.56	1	10/17/19 08:30	10/17/19 15:39	7440-39-3	
Cadmium	**0.31**	mg/kg	0.17	1	10/17/19 08:30	10/17/19 15:39	7440-43-9	
Chromium	**15.4**	mg/kg	0.56	1	10/17/19 08:30	10/17/19 15:39	7440-47-3	
Lead	**23.1**	mg/kg	0.56	1	10/17/19 08:30	10/17/19 15:39	7439-92-1	
Selenium	ND	mg/kg	1.1	1	10/17/19 08:30	10/17/19 15:39	7782-49-2	
Silver	ND	mg/kg	0.56	1	10/17/19 08:30	10/17/19 15:39	7440-22-4	
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B							
Mercury	**0.087**	mg/kg	0.023	1	10/17/19 09:02	10/18/19 13:11	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974							
Percent Moisture	**16.9**	%	0.10	1		10/17/19 09:52		
8270D MSSV PAH by SIM	Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550							
Acenaphthene	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	83-32-9	
Acenaphthylene	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	208-96-8	
Anthracene	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	120-12-7	
Benzo(a)anthracene	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	56-55-3	
Benzo(a)pyrene	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	50-32-8	
Benzo(b)fluoranthene	**18.6**	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	207-08-9	
Chrysene	**13.9**	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	53-70-3	
Fluoranthene	**12.5**	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	206-44-0	
Fluorene	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	193-39-5	
Naphthalene	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	91-20-3	
Phenanthrene	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	85-01-8	
Pyrene	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07	129-00-0	
Total BaP Eq. MN 2006sh. ND=0	ND	ug/kg	12.0	1	10/16/19 10:43	10/17/19 15:07		N2
Surrogates								
2-Fluorobiphenyl (S)	67	%.	30-125	1	10/16/19 10:43	10/17/19 15:07	321-60-8	
p-Terphenyl-d14 (S)	65	%.	30-125	1	10/16/19 10:43	10/17/19 15:07	1718-51-0	
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Acetone	ND	ug/kg	1170	1	10/22/19 10:44	10/22/19 16:04	67-64-1	
Allyl chloride	ND	ug/kg	233	1	10/22/19 10:44	10/22/19 16:04	107-05-1	
Benzene	ND	ug/kg	23.3	1	10/22/19 10:44	10/22/19 16:04	71-43-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10495623

Sample: HA-2 (2-2.5) **Lab ID: 10495623004** Collected: 10/14/19 16:15 Received: 10/15/19 12:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Bromobenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	108-86-1	
Bromochloromethane	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	74-97-5	
Bromodichloromethane	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	75-27-4	
Bromoform	ND	ug/kg	233	1	10/22/19 10:44	10/22/19 16:04	75-25-2	
Bromomethane	ND	ug/kg	584	1	10/22/19 10:44	10/22/19 16:04	74-83-9	
2-Butanone (MEK)	ND	ug/kg	292	1	10/22/19 10:44	10/22/19 16:04	78-93-3	
n-Butylbenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	104-51-8	
sec-Butylbenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	135-98-8	
tert-Butylbenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	98-06-6	
Carbon tetrachloride	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	56-23-5	
Chlorobenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	108-90-7	
Chloroethane	ND	ug/kg	584	1	10/22/19 10:44	10/22/19 16:04	75-00-3	
Chloroform	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	67-66-3	
Chloromethane	ND	ug/kg	233	1	10/22/19 10:44	10/22/19 16:04	74-87-3	
2-Chlorotoluene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	95-49-8	
4-Chlorotoluene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	584	1	10/22/19 10:44	10/22/19 16:04	96-12-8	
Dibromochloromethane	ND	ug/kg	233	1	10/22/19 10:44	10/22/19 16:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	106-93-4	
Dibromomethane	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	233	1	10/22/19 10:44	10/22/19 16:04	75-71-8	
1,1-Dichloroethane	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	75-34-3	
1,2-Dichloroethane	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	107-06-2	
1,1-Dichloroethene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	156-60-5	
Dichlorofluoromethane	ND	ug/kg	584	1	10/22/19 10:44	10/22/19 16:04	75-43-4	
1,2-Dichloropropane	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	78-87-5	
1,3-Dichloropropane	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	142-28-9	
2,2-Dichloropropane	ND	ug/kg	233	1	10/22/19 10:44	10/22/19 16:04	594-20-7	
1,1-Dichloropropene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	233	1	10/22/19 10:44	10/22/19 16:04	60-29-7	
Ethylbenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	292	1	10/22/19 10:44	10/22/19 16:04	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	98-82-8	
p-Isopropyltoluene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	99-87-6	
Methylene Chloride	ND	ug/kg	233	1	10/22/19 10:44	10/22/19 16:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	292	1	10/22/19 10:44	10/22/19 16:04	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	1634-04-4	
Naphthalene	ND	ug/kg	233	1	10/22/19 10:44	10/22/19 16:04	91-20-3	
n-Propylbenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	103-65-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10495623

Sample: HA-2 (2-2.5) **Lab ID: 10495623004** Collected: 10/14/19 16:15 Received: 10/15/19 12:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Styrene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	79-34-5	
Tetrachloroethene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	127-18-4	
Tetrahydrofuran	ND	ug/kg	2330	1	10/22/19 10:44	10/22/19 16:04	109-99-9	
Toluene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	79-00-5	
Trichloroethene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	79-01-6	
Trichlorofluoromethane	ND	ug/kg	233	1	10/22/19 10:44	10/22/19 16:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	233	1	10/22/19 10:44	10/22/19 16:04	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	233	1	10/22/19 10:44	10/22/19 16:04	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	108-67-8	
Vinyl chloride	ND	ug/kg	58.4	1	10/22/19 10:44	10/22/19 16:04	75-01-4	
Xylene (Total)	ND	ug/kg	175	1	10/22/19 10:44	10/22/19 16:04	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	106	%.	75-125	1	10/22/19 10:44	10/22/19 16:04	17060-07-0	
Toluene-d8 (S)	101	%.	75-125	1	10/22/19 10:44	10/22/19 16:04	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1	10/22/19 10:44	10/22/19 16:04	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10495623

Sample: Trip Blank **Lab ID: 10495623005** Collected: 10/14/19 00:00 Received: 10/15/19 12:20 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Acetone	ND	ug/kg	1000	1	10/22/19 10:44	10/22/19 15:25	67-64-1	
Allyl chloride	ND	ug/kg	200	1	10/22/19 10:44	10/22/19 15:25	107-05-1	
Benzene	ND	ug/kg	20.0	1	10/22/19 10:44	10/22/19 15:25	71-43-2	
Bromobenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	108-86-1	
Bromochloromethane	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	74-97-5	
Bromodichloromethane	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	75-27-4	
Bromoform	ND	ug/kg	200	1	10/22/19 10:44	10/22/19 15:25	75-25-2	
Bromomethane	ND	ug/kg	500	1	10/22/19 10:44	10/22/19 15:25	74-83-9	
2-Butanone (MEK)	ND	ug/kg	250	1	10/22/19 10:44	10/22/19 15:25	78-93-3	
n-Butylbenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	104-51-8	
sec-Butylbenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	135-98-8	
tert-Butylbenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	98-06-6	
Carbon tetrachloride	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	56-23-5	
Chlorobenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	108-90-7	
Chloroethane	ND	ug/kg	500	1	10/22/19 10:44	10/22/19 15:25	75-00-3	
Chloroform	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	67-66-3	
Chloromethane	ND	ug/kg	200	1	10/22/19 10:44	10/22/19 15:25	74-87-3	
2-Chlorotoluene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	95-49-8	
4-Chlorotoluene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	500	1	10/22/19 10:44	10/22/19 15:25	96-12-8	
Dibromochloromethane	ND	ug/kg	200	1	10/22/19 10:44	10/22/19 15:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	106-93-4	
Dibromomethane	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	200	1	10/22/19 10:44	10/22/19 15:25	75-71-8	
1,1-Dichloroethane	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	75-34-3	
1,2-Dichloroethane	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	107-06-2	
1,1-Dichloroethene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	156-60-5	
Dichlorofluoromethane	ND	ug/kg	500	1	10/22/19 10:44	10/22/19 15:25	75-43-4	
1,2-Dichloropropane	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	78-87-5	
1,3-Dichloropropane	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	142-28-9	
2,2-Dichloropropane	ND	ug/kg	200	1	10/22/19 10:44	10/22/19 15:25	594-20-7	
1,1-Dichloropropene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	200	1	10/22/19 10:44	10/22/19 15:25	60-29-7	
Ethylbenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	250	1	10/22/19 10:44	10/22/19 15:25	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	98-82-8	
p-Isopropyltoluene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	99-87-6	
Methylene Chloride	ND	ug/kg	200	1	10/22/19 10:44	10/22/19 15:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	250	1	10/22/19 10:44	10/22/19 15:25	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10495623

Sample: Trip Blank **Lab ID: 10495623005** Collected: 10/14/19 00:00 Received: 10/15/19 12:20 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Methyl-tert-butyl ether	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	1634-04-4	
Naphthalene	ND	ug/kg	200	1	10/22/19 10:44	10/22/19 15:25	91-20-3	
n-Propylbenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	103-65-1	
Styrene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	79-34-5	
Tetrachloroethene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	127-18-4	
Tetrahydrofuran	ND	ug/kg	2000	1	10/22/19 10:44	10/22/19 15:25	109-99-9	
Toluene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	79-00-5	
Trichloroethene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	79-01-6	
Trichlorofluoromethane	ND	ug/kg	200	1	10/22/19 10:44	10/22/19 15:25	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	200	1	10/22/19 10:44	10/22/19 15:25	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	200	1	10/22/19 10:44	10/22/19 15:25	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	108-67-8	
Vinyl chloride	ND	ug/kg	50.0	1	10/22/19 10:44	10/22/19 15:25	75-01-4	
Xylene (Total)	ND	ug/kg	150	1	10/22/19 10:44	10/22/19 15:25	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	107	%.	75-125	1	10/22/19 10:44	10/22/19 15:25	17060-07-0	
Toluene-d8 (S)	102	%.	75-125	1	10/22/19 10:44	10/22/19 15:25	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125	1	10/22/19 10:44	10/22/19 15:25	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10495623

QC Batch: 638609 Analysis Method: EPA 7471B
QC Batch Method: EPA 7471B Analysis Description: 7471B Mercury Solids
Associated Lab Samples: 10495623001, 10495623002, 10495623004

METHOD BLANK: 3441857 Matrix: Solid
Associated Lab Samples: 10495623001, 10495623002, 10495623004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.018	10/18/19 12:45	

LABORATORY CONTROL SAMPLE: 3441858

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.45	0.49	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3441859 3441860

Parameter	Units	10495570001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	ND	0.49	0.48	0.54	0.52	106	105	80-120	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10495623

QC Batch: 638608 Analysis Method: EPA 6010D
QC Batch Method: EPA 3050 Analysis Description: 6010D Solids
Associated Lab Samples: 10495623001, 10495623002, 10495623004

METHOD BLANK: 3441853 Matrix: Solid
Associated Lab Samples: 10495623001, 10495623002, 10495623004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.91	10/17/19 14:57	
Barium	mg/kg	ND	0.45	10/17/19 14:57	
Cadmium	mg/kg	ND	0.14	10/17/19 14:57	
Chromium	mg/kg	ND	0.45	10/17/19 14:57	
Lead	mg/kg	ND	0.45	10/17/19 14:57	
Selenium	mg/kg	ND	0.91	10/17/19 14:57	
Silver	mg/kg	ND	0.45	10/17/19 14:57	

LABORATORY CONTROL SAMPLE: 3441854

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	47.1	94	80-120	
Barium	mg/kg	50	50.1	100	80-120	
Cadmium	mg/kg	50	49.6	99	80-120	
Chromium	mg/kg	50	50.3	101	80-120	
Lead	mg/kg	50	51.2	102	80-120	
Selenium	mg/kg	50	44.5	89	80-120	
Silver	mg/kg	25	24.3	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3441855 3441856

Parameter	Units	10495528001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	2.0	58.6	59.2	55.6	56.3	91	92	75-125	1	20	
Barium	mg/kg	40.8	58.6	59.2	78.1	81.1	64	68	75-125	4	20	M1
Cadmium	mg/kg	0.24	58.6	59.2	54.8	54.4	93	92	75-125	1	20	
Chromium	mg/kg	13.3	58.6	59.2	65.3	66.3	89	90	75-125	2	20	
Lead	mg/kg	115	58.6	59.2	97.0	85.4	-31	-50	75-125	13	20	M1
Selenium	mg/kg	ND	58.6	59.2	50.5	50.4	86	85	75-125	0	20	
Silver	mg/kg	ND	29.3	29.6	28.3	28.6	97	97	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10495623

QC Batch: 638953 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974
Associated Lab Samples: 10495623001, 10495623002, 10495623004

SAMPLE DUPLICATE: 3442939

Parameter	Units	10495570001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	8.5	8.9	4	30	

SAMPLE DUPLICATE: 3442940

Parameter	Units	10494874001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	12.3	12.9	5	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10495623

QC Batch: 639901 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV 5030 Med Level
Associated Lab Samples: 10495623001, 10495623002, 10495623004, 10495623005

METHOD BLANK: 3447628 Matrix: Solid
Associated Lab Samples: 10495623001, 10495623002, 10495623004, 10495623005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	50.0	10/22/19 14:28	
1,1,1-Trichloroethane	ug/kg	ND	50.0	10/22/19 14:28	
1,1,2,2-Tetrachloroethane	ug/kg	ND	50.0	10/22/19 14:28	
1,1,2-Trichloroethane	ug/kg	ND	50.0	10/22/19 14:28	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	200	10/22/19 14:28	
1,1-Dichloroethane	ug/kg	ND	50.0	10/22/19 14:28	
1,1-Dichloroethene	ug/kg	ND	50.0	10/22/19 14:28	
1,1-Dichloropropene	ug/kg	ND	50.0	10/22/19 14:28	
1,2,3-Trichlorobenzene	ug/kg	ND	50.0	10/22/19 14:28	
1,2,3-Trichloropropane	ug/kg	ND	200	10/22/19 14:28	
1,2,4-Trichlorobenzene	ug/kg	ND	50.0	10/22/19 14:28	
1,2,4-Trimethylbenzene	ug/kg	ND	50.0	10/22/19 14:28	
1,2-Dibromo-3-chloropropane	ug/kg	ND	500	10/22/19 14:28	
1,2-Dibromoethane (EDB)	ug/kg	ND	50.0	10/22/19 14:28	
1,2-Dichlorobenzene	ug/kg	ND	50.0	10/22/19 14:28	
1,2-Dichloroethane	ug/kg	ND	50.0	10/22/19 14:28	
1,2-Dichloropropane	ug/kg	ND	50.0	10/22/19 14:28	
1,3,5-Trimethylbenzene	ug/kg	ND	50.0	10/22/19 14:28	
1,3-Dichlorobenzene	ug/kg	ND	50.0	10/22/19 14:28	
1,3-Dichloropropane	ug/kg	ND	50.0	10/22/19 14:28	
1,4-Dichlorobenzene	ug/kg	ND	50.0	10/22/19 14:28	
2,2-Dichloropropane	ug/kg	ND	200	10/22/19 14:28	
2-Butanone (MEK)	ug/kg	ND	250	10/22/19 14:28	
2-Chlorotoluene	ug/kg	ND	50.0	10/22/19 14:28	
4-Chlorotoluene	ug/kg	ND	50.0	10/22/19 14:28	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	250	10/22/19 14:28	
Acetone	ug/kg	ND	1000	10/22/19 14:28	
Allyl chloride	ug/kg	ND	200	10/22/19 14:28	
Benzene	ug/kg	ND	20.0	10/22/19 14:28	
Bromobenzene	ug/kg	ND	50.0	10/22/19 14:28	
Bromochloromethane	ug/kg	ND	50.0	10/22/19 14:28	
Bromodichloromethane	ug/kg	ND	50.0	10/22/19 14:28	
Bromoform	ug/kg	ND	200	10/22/19 14:28	
Bromomethane	ug/kg	ND	500	10/22/19 14:28	
Carbon tetrachloride	ug/kg	ND	50.0	10/22/19 14:28	
Chlorobenzene	ug/kg	ND	50.0	10/22/19 14:28	
Chloroethane	ug/kg	ND	500	10/22/19 14:28	
Chloroform	ug/kg	ND	50.0	10/22/19 14:28	
Chloromethane	ug/kg	ND	200	10/22/19 14:28	
cis-1,2-Dichloroethene	ug/kg	ND	50.0	10/22/19 14:28	
cis-1,3-Dichloropropene	ug/kg	ND	50.0	10/22/19 14:28	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10495623

METHOD BLANK: 3447628 Matrix: Solid
Associated Lab Samples: 10495623001, 10495623002, 10495623004, 10495623005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/kg	ND	200	10/22/19 14:28	
Dibromomethane	ug/kg	ND	50.0	10/22/19 14:28	
Dichlorodifluoromethane	ug/kg	ND	200	10/22/19 14:28	
Dichlorofluoromethane	ug/kg	ND	500	10/22/19 14:28	
Diethyl ether (Ethyl ether)	ug/kg	ND	200	10/22/19 14:28	
Ethylbenzene	ug/kg	ND	50.0	10/22/19 14:28	
Hexachloro-1,3-butadiene	ug/kg	ND	250	10/22/19 14:28	
Isopropylbenzene (Cumene)	ug/kg	ND	50.0	10/22/19 14:28	
Methyl-tert-butyl ether	ug/kg	ND	50.0	10/22/19 14:28	
Methylene Chloride	ug/kg	ND	200	10/22/19 14:28	
n-Butylbenzene	ug/kg	ND	50.0	10/22/19 14:28	
n-Propylbenzene	ug/kg	ND	50.0	10/22/19 14:28	
Naphthalene	ug/kg	ND	200	10/22/19 14:28	
p-Isopropyltoluene	ug/kg	ND	50.0	10/22/19 14:28	
sec-Butylbenzene	ug/kg	ND	50.0	10/22/19 14:28	
Styrene	ug/kg	ND	50.0	10/22/19 14:28	
tert-Butylbenzene	ug/kg	ND	50.0	10/22/19 14:28	
Tetrachloroethene	ug/kg	ND	50.0	10/22/19 14:28	
Tetrahydrofuran	ug/kg	ND	2000	10/22/19 14:28	
Toluene	ug/kg	ND	50.0	10/22/19 14:28	
trans-1,2-Dichloroethene	ug/kg	ND	50.0	10/22/19 14:28	
trans-1,3-Dichloropropene	ug/kg	ND	50.0	10/22/19 14:28	
Trichloroethene	ug/kg	ND	50.0	10/22/19 14:28	
Trichlorofluoromethane	ug/kg	ND	200	10/22/19 14:28	
Vinyl chloride	ug/kg	ND	50.0	10/22/19 14:28	
Xylene (Total)	ug/kg	ND	150	10/22/19 14:28	
1,2-Dichloroethane-d4 (S)	%.	104	75-125	10/22/19 14:28	
4-Bromofluorobenzene (S)	%.	100	75-125	10/22/19 14:28	
Toluene-d8 (S)	%.	102	75-125	10/22/19 14:28	

LABORATORY CONTROL SAMPLE: 3447629

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	1000	1020	102	53-125	
1,1,1-Trichloroethane	ug/kg	1000	1180	118	53-146	
1,1,2,2-Tetrachloroethane	ug/kg	1000	808	81	51-125	
1,1,2-Trichloroethane	ug/kg	1000	943	94	55-125	
1,1,2-Trichlorotrifluoroethane	ug/kg	1000	1110	111	49-150	
1,1-Dichloroethane	ug/kg	1000	941	94	56-125	
1,1-Dichloroethene	ug/kg	1000	1140	114	48-148	
1,1-Dichloropropene	ug/kg	1000	1170	117	55-142	
1,2,3-Trichlorobenzene	ug/kg	1000	929	93	47-125	
1,2,3-Trichloropropane	ug/kg	1000	836	84	52-125	
1,2,4-Trichlorobenzene	ug/kg	1000	921	92	48-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10495623

LABORATORY CONTROL SAMPLE: 3447629

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	1010	101	51-126	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2140	86	50-125	
1,2-Dibromoethane (EDB)	ug/kg	1000	953	95	52-125	
1,2-Dichlorobenzene	ug/kg	1000	933	93	50-125	
1,2-Dichloroethane	ug/kg	1000	1040	104	51-125	
1,2-Dichloropropane	ug/kg	1000	914	91	57-125	
1,3,5-Trimethylbenzene	ug/kg	1000	1070	107	52-127	
1,3-Dichlorobenzene	ug/kg	1000	968	97	50-128	
1,3-Dichloropropane	ug/kg	1000	896	90	55-125	
1,4-Dichlorobenzene	ug/kg	1000	938	94	51-125	
2,2-Dichloropropane	ug/kg	1000	1070	107	41-136	
2-Butanone (MEK)	ug/kg	5000	3840	77	43-125	
2-Chlorotoluene	ug/kg	1000	965	96	52-126	
4-Chlorotoluene	ug/kg	1000	992	99	53-126	
4-Methyl-2-pentanone (MIBK)	ug/kg	5000	4080	82	39-125	
Acetone	ug/kg	5000	5230	105	46-136	
Allyl chloride	ug/kg	1000	1060	106	48-130	
Benzene	ug/kg	1000	1000	100	48-125	
Bromobenzene	ug/kg	1000	959	96	51-125	
Bromochloromethane	ug/kg	1000	1080	108	52-125	
Bromodichloromethane	ug/kg	1000	948	95	51-131	
Bromoform	ug/kg	1000	881	88	52-125	
Bromomethane	ug/kg	1000	1060	106	30-150	
Carbon tetrachloride	ug/kg	1000	1120	112	59-129	
Chlorobenzene	ug/kg	1000	929	93	54-125	
Chloroethane	ug/kg	1000	833	83	61-132	
Chloroform	ug/kg	1000	1010	101	52-125	
Chloromethane	ug/kg	1000	813	81	46-125	
cis-1,2-Dichloroethene	ug/kg	1000	1120	112	54-127	
cis-1,3-Dichloropropene	ug/kg	1000	1040	104	50-134	
Dibromochloromethane	ug/kg	1000	951	95	54-125	
Dibromomethane	ug/kg	1000	993	99	51-125	
Dichlorodifluoromethane	ug/kg	1000	745	74	42-125	
Dichlorofluoromethane	ug/kg	1000	863	86	30-150	
Diethyl ether (Ethyl ether)	ug/kg	1000	946	95	50-127	
Ethylbenzene	ug/kg	1000	1020	102	51-125	
Hexachloro-1,3-butadiene	ug/kg	1000	1270	127	41-133	
Isopropylbenzene (Cumene)	ug/kg	1000	1010	101	54-134	
Methyl-tert-butyl ether	ug/kg	1000	888	89	53-125	
Methylene Chloride	ug/kg	1000	966	97	48-125	
n-Butylbenzene	ug/kg	1000	1110	111	49-135	
n-Propylbenzene	ug/kg	1000	1030	103	55-129	
Naphthalene	ug/kg	1000	828	83	51-125	
p-Isopropyltoluene	ug/kg	1000	1060	106	53-134	
sec-Butylbenzene	ug/kg	1000	1040	104	52-134	
Styrene	ug/kg	1000	1030	103	53-128	
tert-Butylbenzene	ug/kg	1000	1030	103	51-133	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10495623

LABORATORY CONTROL SAMPLE: 3447629

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/kg	1000	1130	113	54-131	
Tetrahydrofuran	ug/kg	10000	10100	101	42-145	
Toluene	ug/kg	1000	1050	105	51-125	
trans-1,2-Dichloroethene	ug/kg	1000	1200	120	50-130	
trans-1,3-Dichloropropene	ug/kg	1000	940	94	52-125	
Trichloroethene	ug/kg	1000	1060	106	55-131	
Trichlorofluoromethane	ug/kg	1000	913	91	30-150	
Vinyl chloride	ug/kg	1000	833	83	58-125	
Xylene (Total)	ug/kg	3000	3090	103	52-125	
1,2-Dichloroethane-d4 (S)	%.			100	75-125	
4-Bromofluorobenzene (S)	%.			101	75-125	
Toluene-d8 (S)	%.			99	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3447630 3447631

Parameter	Units	10495632001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/kg	ND	1250	1280	1370	1340	109	105	68-150	2	30	
1,1,1-Trichloroethane	ug/kg	ND	1250	1280	1640	1550	130	121	63-150	6	30	
1,1,2,2-Tetrachloroethane	ug/kg	ND	1250	1280	1230	1170	98	91	60-146	5	30	
1,1,2-Trichloroethane	ug/kg	ND	1250	1280	1310	1310	104	102	63-143	0	30	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	1250	1280	1530	1370	122	107	30-150	11	30	
1,1-Dichloroethane	ug/kg	ND	1250	1280	1290	1250	103	97	63-144	3	30	
1,1-Dichloroethene	ug/kg	ND	1250	1280	1540	1450	123	113	30-150	6	30	
1,1-Dichloropropene	ug/kg	ND	1250	1280	1640	1500	131	117	54-150	9	30	
1,2,3-Trichlorobenzene	ug/kg	ND	1250	1280	1440	1430	115	111	63-142	1	30	
1,2,3-Trichloropropane	ug/kg	ND	1250	1280	1210	1190	96	93	59-147	1	30	
1,2,4-Trichlorobenzene	ug/kg	ND	1250	1280	1460	1380	116	108	66-142	6	30	
1,2,4-Trimethylbenzene	ug/kg	ND	1250	1280	1460	1480	112	111	65-145	1	30	
1,2-Dibromo-3-chloropropane	ug/kg	ND	3140	3210	3360	3370	107	105	60-142	0	30	
1,2-Dibromoethane (EDB)	ug/kg	ND	1250	1280	1310	1270	104	99	67-135	3	30	
1,2-Dichlorobenzene	ug/kg	ND	1250	1280	1300	1270	104	99	68-141	2	30	
1,2-Dichloroethane	ug/kg	ND	1250	1280	1350	1350	108	106	56-132	0	30	
1,2-Dichloropropane	ug/kg	ND	1250	1280	1210	1240	97	97	58-150	2	30	
1,3,5-Trimethylbenzene	ug/kg	ND	1250	1280	1540	1570	118	117	66-148	1	30	
1,3-Dichlorobenzene	ug/kg	ND	1250	1280	1320	1260	105	98	63-148	5	30	
1,3-Dichloropropane	ug/kg	ND	1250	1280	1280	1240	102	97	63-142	3	30	
1,4-Dichlorobenzene	ug/kg	ND	1250	1280	1300	1260	104	98	68-140	3	30	
2,2-Dichloropropane	ug/kg	ND	1250	1280	1530	1410	122	110	62-143	8	30	
2-Butanone (MEK)	ug/kg	ND	6270	6410	6150	6120	98	96	53-138	1	30	
2-Chlorotoluene	ug/kg	ND	1250	1280	1300	1280	104	100	64-145	2	30	
4-Chlorotoluene	ug/kg	ND	1250	1280	1300	1330	104	104	63-149	2	30	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	6270	6410	6260	6070	100	95	47-150	3	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10495623

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3447630 3447631

Parameter	Units	10495632001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Acetone	ug/kg	ND	6270	6410	6360	6920	97	103	64-150	8	30	
Allyl chloride	ug/kg	ND	1250	1280	1390	1360	111	106	49-146	2	30	
Benzene	ug/kg	ND	1250	1280	1350	1290	108	101	63-136	4	30	
Bromobenzene	ug/kg	ND	1250	1280	1250	1230	100	96	63-142	2	30	
Bromochloromethane	ug/kg	ND	1250	1280	1320	1340	105	105	61-139	1	30	
Bromodichloromethane	ug/kg	ND	1250	1280	1250	1250	100	98	63-150	0	30	
Bromoform	ug/kg	ND	1250	1280	1270	1220	102	95	64-140	4	30	
Bromomethane	ug/kg	ND	1250	1280	1430	1470	114	115	56-148	3	30	
Carbon tetrachloride	ug/kg	ND	1250	1280	1590	1450	127	113	75-148	9	30	
Chlorobenzene	ug/kg	ND	1250	1280	1270	1280	102	100	62-147	0	30	
Chloroethane	ug/kg	ND	1250	1280	1140	984	91	77	37-150	15	30	
Chloroform	ug/kg	ND	1250	1280	1390	1330	111	104	66-130	4	30	
Chloromethane	ug/kg	ND	1250	1280	1050	1040	83	81	35-131	0	30	
cis-1,2-Dichloroethene	ug/kg	ND	1250	1280	1510	1450	120	113	63-143	4	30	
cis-1,3-Dichloropropene	ug/kg	ND	1250	1280	1360	1380	109	108	60-150	1	30	
Dibromochloromethane	ug/kg	ND	1250	1280	1270	1240	101	97	64-144	2	30	
Dibromomethane	ug/kg	ND	1250	1280	1380	1330	110	104	59-148	4	30	
Dichlorodifluoromethane	ug/kg	ND	1250	1280	1020	1010	82	79	30-125	1	30	
Dichlorofluoromethane	ug/kg	ND	1250	1280	1220	1960	97	153	39-150	47	30	M1,R1
Diethyl ether (Ethyl ether)	ug/kg	ND	1250	1280	1320	1320	106	103	59-149	1	30	
Ethylbenzene	ug/kg	ND	1250	1280	1370	1320	109	103	64-142	4	30	
Hexachloro-1,3-butadiene	ug/kg	ND	1250	1280	1770	1770	141	138	58-150	0	30	
Isopropylbenzene (Cumene)	ug/kg	ND	1250	1280	1450	1390	115	109	67-150	4	30	
Methyl-tert-butyl ether	ug/kg	ND	1250	1280	1250	1270	100	99	69-134	1	30	
Methylene Chloride	ug/kg	ND	1250	1280	1330	1330	106	103	56-134	0	30	
n-Butylbenzene	ug/kg	ND	1250	1280	1640	1570	127	119	64-150	4	30	
n-Propylbenzene	ug/kg	ND	1250	1280	1390	1430	109	111	65-150	3	30	
Naphthalene	ug/kg	ND	1250	1280	1460	1510	113	115	63-148	4	30	
p-Isopropyltoluene	ug/kg	ND	1250	1280	1500	1500	118	115	69-150	0	30	
sec-Butylbenzene	ug/kg	ND	1250	1280	1510	1530	118	117	69-150	2	30	
Styrene	ug/kg	ND	1250	1280	1370	1350	110	106	63-150	1	30	
tert-Butylbenzene	ug/kg	ND	1250	1280	1440	1440	115	113	67-150	0	30	
Tetrachloroethene	ug/kg	ND	1250	1280	1540	1530	123	120	62-150	1	30	
Tetrahydrofuran	ug/kg	ND	12500	12800	13400	13000	107	101	53-150	3	30	
Toluene	ug/kg	ND	1250	1280	1340	1310	106	102	61-141	2	30	
trans-1,2-Dichloroethene	ug/kg	ND	1250	1280	1470	1470	117	114	52-148	0	30	
trans-1,3-Dichloropropene	ug/kg	ND	1250	1280	1280	1280	102	100	62-142	0	30	
Trichloroethene	ug/kg	ND	1250	1280	1350	1290	108	101	59-150	4	30	
Trichlorofluoromethane	ug/kg	ND	1250	1280	1290	1280	103	100	30-150	1	30	
Vinyl chloride	ug/kg	ND	1250	1280	1060	1070	85	84	44-144	1	30	
Xylene (Total)	ug/kg	ND	3760	3840	4200	4100	112	107	67-145	2	30	
1,2-Dichloroethane-d4 (S)	%.						101	101	75-125			
4-Bromofluorobenzene (S)	%.						101	103	75-125			
Toluene-d8 (S)	%.						98	100	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10495623

QC Batch: 638701 Analysis Method: EPA 8270D by SIM
QC Batch Method: EPA 3550 Analysis Description: 8270D Solid PAH by SIM MSSV
Associated Lab Samples: 10495623001, 10495623002, 10495623004

METHOD BLANK: 3442043 Matrix: Solid
Associated Lab Samples: 10495623001, 10495623002, 10495623004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	ND	10.0	10/17/19 11:34	
Acenaphthylene	ug/kg	ND	10.0	10/17/19 11:34	
Anthracene	ug/kg	ND	10.0	10/17/19 11:34	
Benzo(a)anthracene	ug/kg	ND	10.0	10/17/19 11:34	
Benzo(a)pyrene	ug/kg	ND	10.0	10/17/19 11:34	
Benzo(b)fluoranthene	ug/kg	ND	10.0	10/17/19 11:34	
Benzo(g,h,i)perylene	ug/kg	ND	10.0	10/17/19 11:34	
Benzo(k)fluoranthene	ug/kg	ND	10.0	10/17/19 11:34	
Chrysene	ug/kg	ND	10.0	10/17/19 11:34	
Dibenz(a,h)anthracene	ug/kg	ND	10.0	10/17/19 11:34	
Fluoranthene	ug/kg	ND	10.0	10/17/19 11:34	
Fluorene	ug/kg	ND	10.0	10/17/19 11:34	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	10.0	10/17/19 11:34	
Naphthalene	ug/kg	ND	10.0	10/17/19 11:34	
Phenanthrene	ug/kg	ND	10.0	10/17/19 11:34	
Pyrene	ug/kg	ND	10.0	10/17/19 11:34	
2-Fluorobiphenyl (S)	%.	94	30-125	10/17/19 11:34	
p-Terphenyl-d14 (S)	%.	82	30-125	10/17/19 11:34	

LABORATORY CONTROL SAMPLE: 3442044

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	33.3	28.7	86	46-125	
Acenaphthylene	ug/kg	33.3	26.0	78	44-125	
Anthracene	ug/kg	33.3	30.4	91	62-125	
Benzo(a)anthracene	ug/kg	33.3	26.2	79	53-125	
Benzo(a)pyrene	ug/kg	33.3	27.6	83	62-125	
Benzo(b)fluoranthene	ug/kg	33.3	27.5	82	51-125	
Benzo(g,h,i)perylene	ug/kg	33.3	27.4	82	58-125	
Benzo(k)fluoranthene	ug/kg	33.3	29.5	88	59-125	
Chrysene	ug/kg	33.3	29.2	88	59-125	
Dibenz(a,h)anthracene	ug/kg	33.3	28.6	86	60-125	
Fluoranthene	ug/kg	33.3	29.4	88	67-125	
Fluorene	ug/kg	33.3	28.7	86	51-125	
Indeno(1,2,3-cd)pyrene	ug/kg	33.3	28.0	84	59-125	
Naphthalene	ug/kg	33.3	26.3	79	47-125	
Phenanthrene	ug/kg	33.3	28.6	86	61-125	
Pyrene	ug/kg	33.3	27.5	83	52-125	
2-Fluorobiphenyl (S)	%.			82	30-125	
p-Terphenyl-d14 (S)	%.			78	30-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10495623

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3442045 3442046

Parameter	Units	10495570001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Acenaphthene	ug/kg	ND	36.4	36.4	28.2	28.8	77	79	30-125	2	30	
Acenaphthylene	ug/kg	ND	36.4	36.4	26.1	26.5	72	73	30-125	2	30	
Anthracene	ug/kg	ND	36.4	36.4	30.6	32.8	84	90	30-131	7	30	
Benzo(a)anthracene	ug/kg	ND	36.4	36.4	26.8	28.5	74	78	30-126	6	30	
Benzo(a)pyrene	ug/kg	ND	36.4	36.4	28.7	30.7	79	84	30-150	7	30	
Benzo(b)fluoranthene	ug/kg	ND	36.4	36.4	28.6	28.7	79	79	30-150	0	30	
Benzo(g,h,i)perylene	ug/kg	ND	36.4	36.4	27.6	29.6	76	81	30-150	7	30	
Benzo(k)fluoranthene	ug/kg	ND	36.4	36.4	30.3	32.0	83	88	30-150	6	30	
Chrysene	ug/kg	ND	36.4	36.4	30.0	31.8	82	87	30-150	6	30	
Dibenz(a,h)anthracene	ug/kg	ND	36.4	36.4	28.9	31.0	79	85	30-143	7	30	
Fluoranthene	ug/kg	ND	36.4	36.4	30.1	31.5	83	87	30-143	5	30	
Fluorene	ug/kg	ND	36.4	36.4	28.7	29.2	79	80	30-138	2	30	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	36.4	36.4	28.3	30.4	78	83	30-150	7	30	
Naphthalene	ug/kg	ND	36.4	36.4	25.7	26.3	71	72	30-125	2	30	
Phenanthrene	ug/kg	ND	36.4	36.4	28.4	30.0	78	82	30-142	5	30	
Pyrene	ug/kg	ND	36.4	36.4	28.1	29.8	77	82	30-149	6	30	
2-Fluorobiphenyl (S)	%.						74	76	30-125			
p-Terphenyl-d14 (S)	%.						72	76	30-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10495623

QC Batch: 638847 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10495623001, 10495623002, 10495623004

METHOD BLANK: 3442521 Matrix: Solid
Associated Lab Samples: 10495623001, 10495623002, 10495623004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/kg	ND	10.0	10/18/19 16:36	
n-Triacontane (S)	%.	105	50-150	10/18/19 16:36	

LABORATORY CONTROL SAMPLE & LCSD: 3442522 3442523

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/kg	80	66.0	80.5	83	101	70-120	20	20	
n-Triacontane (S)	%.				98	111	50-150			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: B1904484.00
Pace Project No.: 10495623

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
R1	RPD value was outside control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: B1904484.00
Pace Project No.: 10495623

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10495623001	**HA-1 (0-0.5)**	WI MOD DRO	638847	WI MOD DRO	639522
10495623002	**HA-1 (2-2.5)**	WI MOD DRO	638847	WI MOD DRO	639522
10495623004	**HA-2 (2-2.5)**	WI MOD DRO	638847	WI MOD DRO	639522
10495623001	**HA-1 (0-0.5)**	EPA 3050	638608	EPA 6010D	639146
10495623002	**HA-1 (2-2.5)**	EPA 3050	638608	EPA 6010D	639146
10495623004	**HA-2 (2-2.5)**	EPA 3050	638608	EPA 6010D	639146
10495623001	**HA-1 (0-0.5)**	EPA 7471B	638609	EPA 7471B	639212
10495623002	**HA-1 (2-2.5)**	EPA 7471B	638609	EPA 7471B	639212
10495623004	**HA-2 (2-2.5)**	EPA 7471B	638609	EPA 7471B	639212
10495623001	**HA-1 (0-0.5)**	ASTM D2974	638953		
10495623002	**HA-1 (2-2.5)**	ASTM D2974	638953		
10495623004	**HA-2 (2-2.5)**	ASTM D2974	638953		
10495623001	**HA-1 (0-0.5)**	EPA 3550	638701	EPA 8270D by SIM	639005
10495623002	**HA-1 (2-2.5)**	EPA 3550	638701	EPA 8270D by SIM	639005
10495623004	**HA-2 (2-2.5)**	EPA 3550	638701	EPA 8270D by SIM	639005
10495623001	**HA-1 (0-0.5)**	EPA 5035/5030B	639901	EPA 8260B	640007
10495623002	**HA-1 (2-2.5)**	EPA 5035/5030B	639901	EPA 8260B	640007
10495623004	**HA-2 (2-2.5)**	EPA 5035/5030B	639901	EPA 8260B	640007
10495623005	**Trip Blank**	EPA 5035/5030B	639901	EPA 8260B	640007

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

2275802

Section A Required Client Information:

- Company: Braun Intertec
- Address: 11001 Hampshire Ave S
- Email To: mkeefer@braunintertec.com
- Phone: 9523343798 Fax:
- Requested Due Date/TAT:

Section B Required Project Information:

- Report To: Mark Keefer
- Copy To:
- Purchase Order No.:
- Project Name:
- Project Number: B1904484.00

Section C Invoice Information:

- Attention:
- Company Name:
- Address:
- Pace Quote Reference:
- Pace Project Manager:
- Pace Profile #: 34125

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ______

Site Location STATE: MN

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	VOC	DRO	PAH	8RCRA	Moisture	hold	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	HA-1 (0-0.5)	SL	G			10/15	1445		7	5						2		X	X	X	X	X			001
2	HA-1 (2-2.5)	↓	↓			↓	1515		↓	↓						↓		X	X	X	X	X			002
3	HA-2 (0-0.5)	↓	↓			↓	1545		↓	↓						↓							X		003
4	HA-2 (2-2.5)	↓	↓			↓	1615		↓	↓						↓		X	X	X	X	X			004
5	Trip Blank - CD 10/15/19																								005
6																									
7																									
8																									
9																									
10																									
11																									
12																									

WO#: 10495623

10495623

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Run all except HA-2 (0-0.5)	Elliott Allen / Braun	10/15	1000	[signature] / Pace	10/15	1000	9.0	Y	N	Y
	[signature] / Pace	10.15.19	1220	[signature]	10/15/19	12:20	1.2	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Elliott Allen

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/15/19

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-C-010-rev.00, 09Nov2017

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 23Aug2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.29**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt **Client Name:** Braun-BLM **Project #:** **WO#: 10495623**

PM: BM2 **Due Date: 10/22/19**

CLIENT: Braun-BLM

Courier: ☐Fed Ex ☐UPS ☐USPS ☐Client ☒Pace ☐SpeeDee ☐Commercial **See Exceptions** ☐

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☐Yes ☒No **Seals Intact?** ☐Yes ☒No **Biological Tissue Frozen?** ☐Yes ☐No ☒N/A

Packing Material: ☒Bubble Wrap ☒Bubble Bags ☐None ☐Other:_____ **Temp Blank?** ☒Yes ☐No

Thermometer: ☒T1(0461) ☐T2(1336) ☐T3(0459) ☐T4(0254) ☐T5(0489) **Type of Ice:** ☒Wet ☐Blue ☐None ☐Dry ☐Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 1.0 °C **Average Corrected Temp (no temp blank only):** ☐See Exceptions

Correction Factor: True **Cooler Temp Corrected w/temp blank:** 1.0 °C _____ °C ☐1 Container

USDA Regulated Soil: (☒ N/A, water sample/Other:_____) **Date/Initials of Person Examining Contents:** CLJ 10/15/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐Yes ☒No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐Yes ☒No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒Yes	☐No		1.
Chain of Custody Relinquished?	☒Yes	☐No		2.
Sampler Name and/or Signature on COC?	☒Yes	☐No	☐N/A	3.
Samples Arrived within Hold Time?	☒Yes	☐No		4.
Short Hold Time Analysis (<72 hr)?	☐Yes	☒No		5. ☐Fecal Coliform ☐HPC ☐Total Coliform/E coli ☐BOD/cBOD ☐Hex Chrome ☐Turbidity ☐Nitrate ☐Nitrite ☐Orthophos ☐Other_____
Rush Turn Around Time Requested?	☐Yes	☒No		6.
Sufficient Volume?	☒Yes	☐No		7.
Correct Containers Used? -Pace Containers Used?	☒Yes ☒Yes	☐No ☐No		8.
Containers Intact?	☒Yes	☐No		9.
Field Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☒N/A	10. Is sediment visible in the dissolved container? ☐Yes ☐No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☐Water ☒Soil ☐Oil ☐Other_____	☒Yes	☐No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
All containers needing acid/base preservation have been checked?	☐Yes	☐No	☒N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☐Yes	☐No	☒N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐Yes	☐No	☒N/A	Positive for Res. Chlorine? ☐Yes ☐No **pH Paper Lot#** **See Exception** ☐
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	☐Yes	☐No	☒N/A	13. **See Exception** ☐
Trip Blank Present?	☒Yes	☐No	☐N/A	14.
Trip Blank Custody Seals Present?	☒Yes	☐No	☐N/A	Pace Trip Blank Lot # (if purchased): No Lot #.

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐Yes ☐No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: BM **Date:** 10/16/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: 6N2(2)

Pace Analytical®	Document Name: Cooler Transfer Check List	Revised Date: 12Feb2018 Page 1 of 1
	Document Number: F-MN-C-205-Rev.01	Issuing Authority: Pace Minnesota Quality Office

Bloomington Service Center Cooler Transfer Check List

Client: Braun Intertec

Project Manager: BMZ

Received with Custody Seal: Yes (No)

Custody Seal Intact: Yes No (NA)

Temperature C:	Temp Read	Corrected Temp	Correction Factor
IR Gun # B88A0143310092	9.1	9.0	-0.01

☑ Samples on Ice, cooling process has begun

Rush/Short Hold: NA

Containers Intact: (Yes) No

Re-packed and Re-Iced: NA

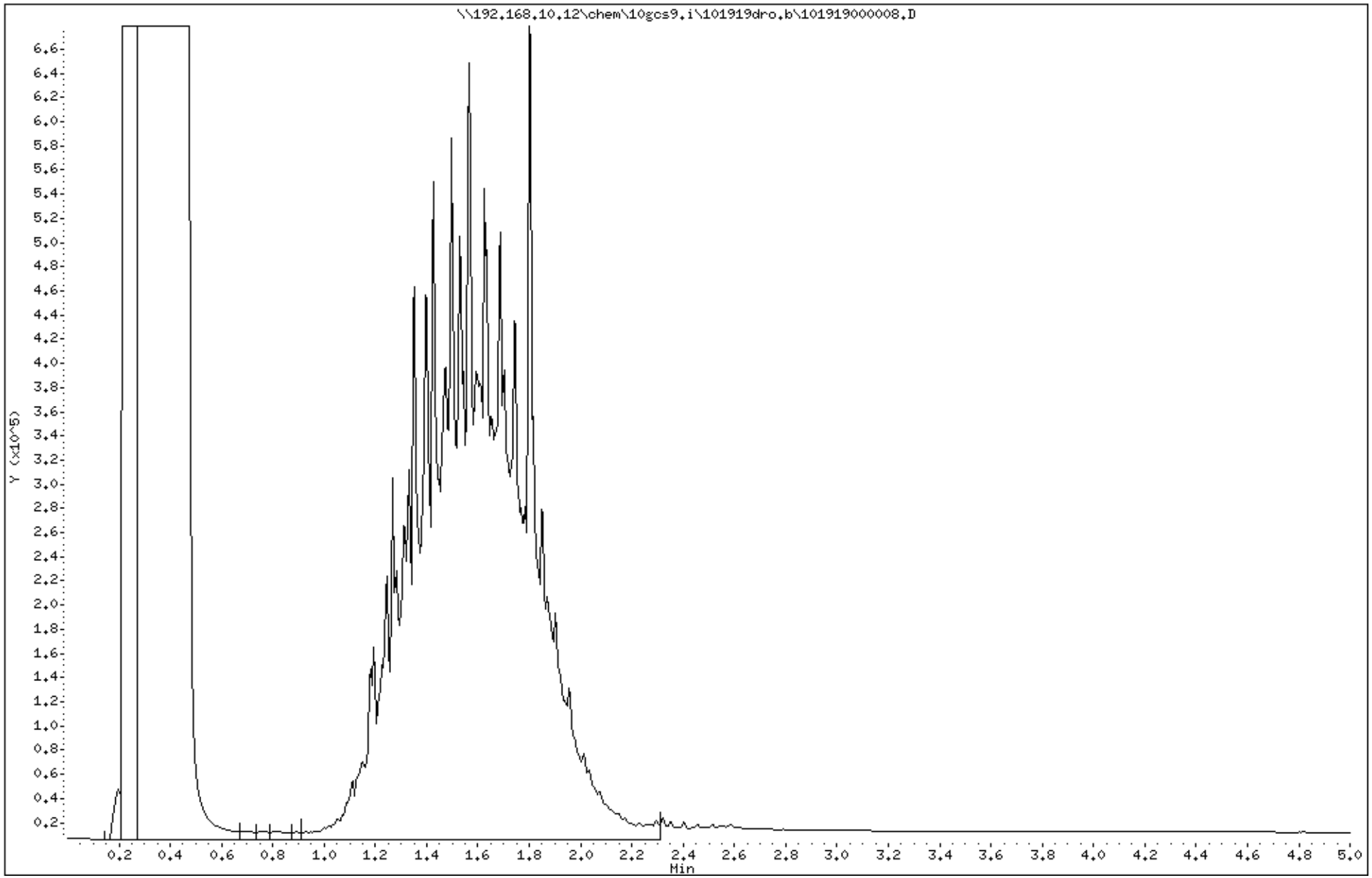
Temp Blank Included: (Yes) No

Shipped By/Date: 10/15/19 AW

Notes:

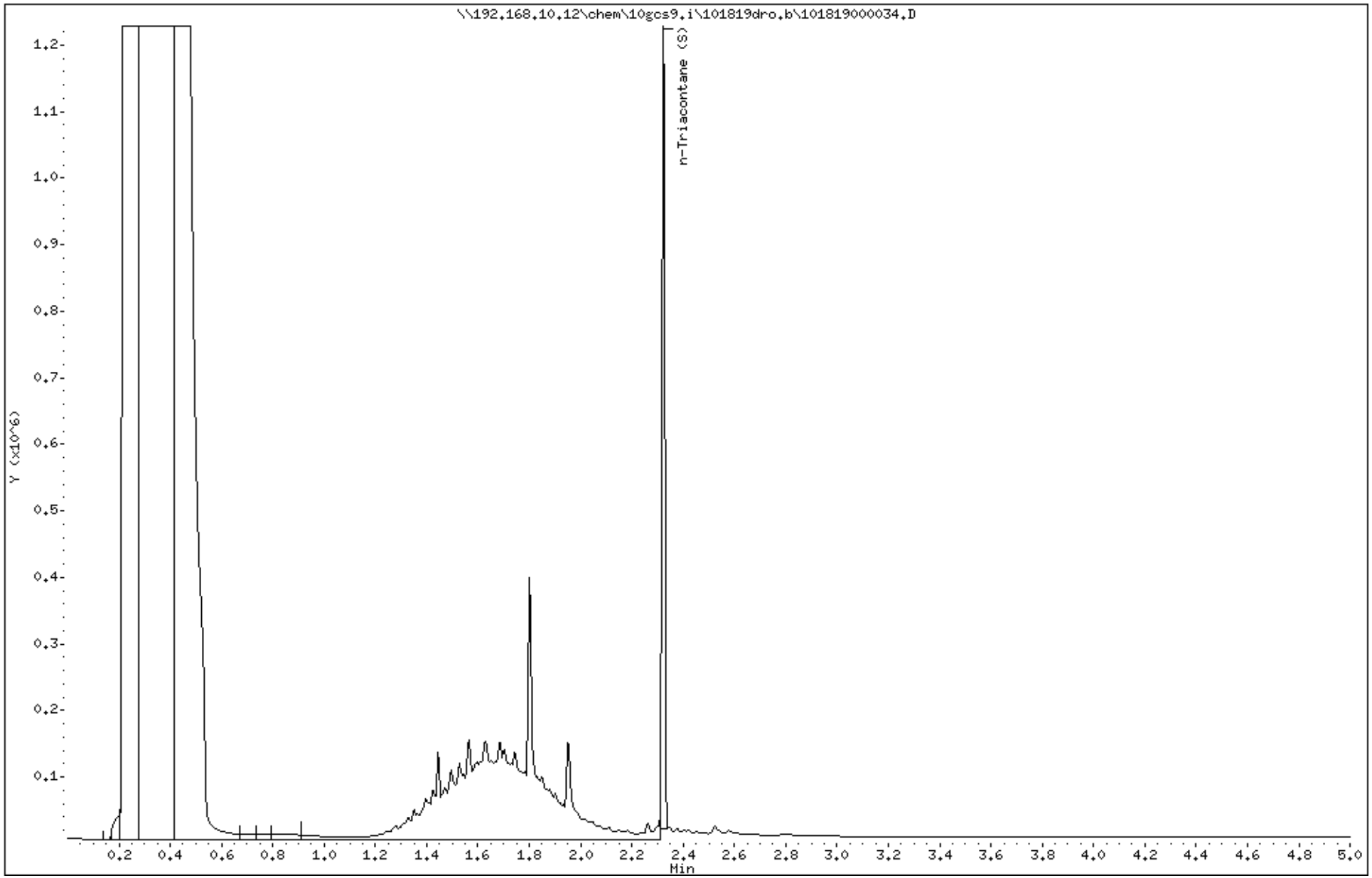
Data File: \\192.168.10.12\chem\10gcs9.i\101919dro.b\101919000008.D
Date : 19-OCT-2019 14:24
Client ID: HA-1 (0-0.5)
Sample Info: 10495623001X200
Volume Injected (uL): 1.0
Column phase: DB-5-US19150005

Instrument: 10gcs9.i
Operator: EC2
Column diameter: 0.32



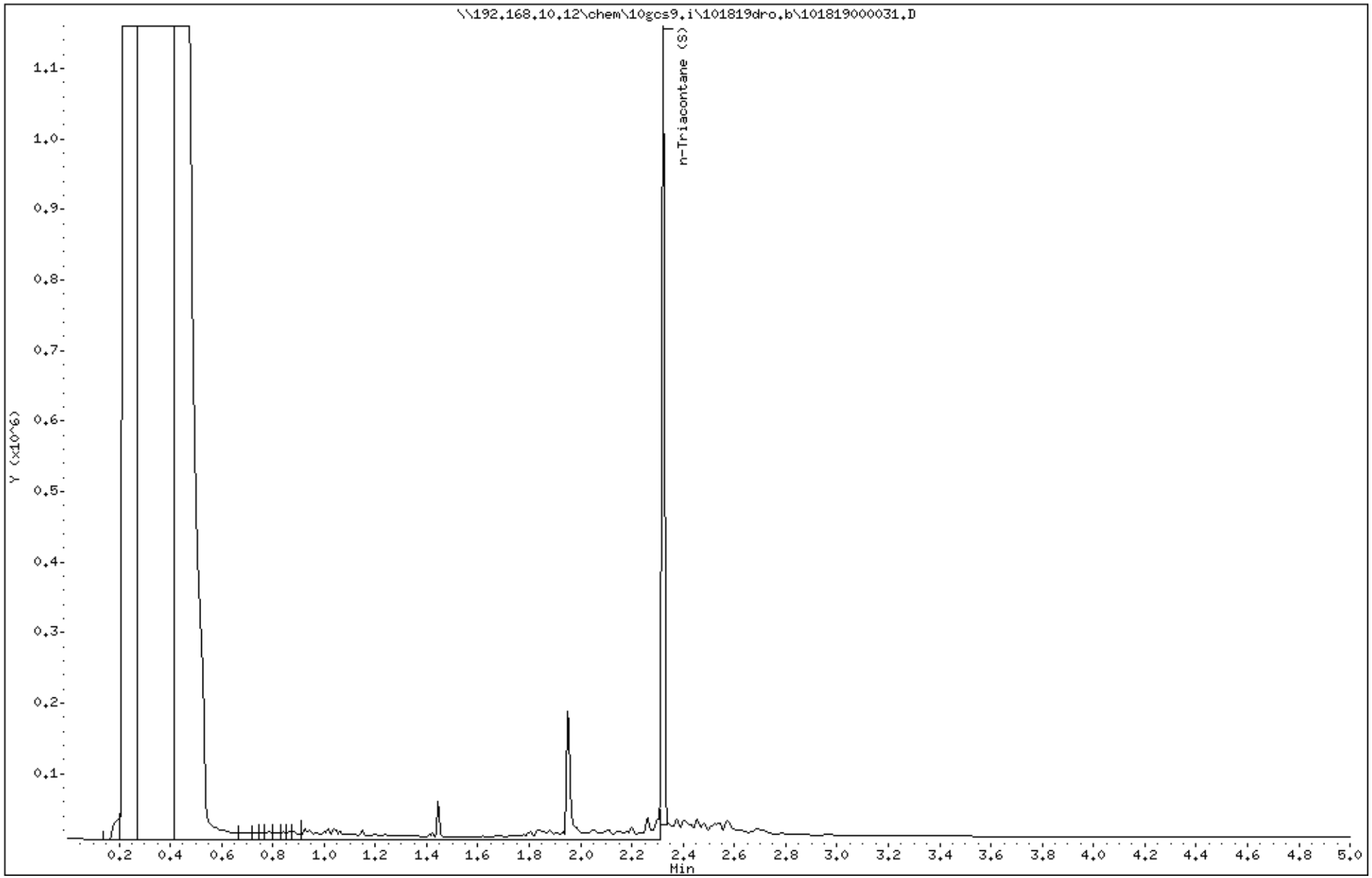
Data File: \\192.168.10.12\chem\10gcs9.i\101819dro.b\101819000034.D
Date : 18-OCT-2019 18:14
Client ID: HA-1 (2-2.5)
Sample Info: 10495623002
Volume Injected (uL): 1.0
Column phase: DB-5-US19150005

Instrument: 10gcs9.i
Operator: EC2
Column diameter: 0.32



Data File: \\192.168.10.12\chem\10gcs9.i\101819dro.b\101819000031.D
Date : 18-OCT-2019 17:53
Client ID: HA-2 (2-2.5)
Sample Info: 10495623004
Volume Injected (uL): 1.0
Column phase: DB-5-US19150005

Instrument: 10gcs9.i
Operator: EC2
Column diameter: 0.32



Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

April 29, 2021

Mark Keefer
Braun Intertec
11001 Hampshire Ave S
Bloomington, MN 55438

RE: Project: B1904484.00
Pace Project No.: 10556143

Dear Mark Keefer:

Enclosed are the analytical results for sample(s) received by the laboratory between April 20, 2021 and April 21, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses were subcontracted outside of the Pace Network. The test report from the external subcontractor is attached to this report in its entirety.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jason Stegenga
jason.stegenga@pacelabs.com
(612)607-1700
Project Manager

Enclosures

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: B1904484.00
Pace Project No.: 10556143

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
*Please Note: Applicable air certifications are denoted with an asterisk (*).

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: B1904484.00
Pace Project No.: 10556143

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10556143001	**AG-1 (0-0.5)**	Solid	04/19/21 12:25	04/20/21 16:20
10556143002	**AG-1 (2-2.5)**	Solid	04/19/21 12:45	04/20/21 16:20
10556143003	**AG-1 (4-4.5)**	Solid	04/19/21 13:00	04/20/21 16:20
10556143004	**AG-1B (0-0.5)**	Solid	04/19/21 13:05	04/20/21 16:20
10556143005	**AG-1B (2-2.5)**	Solid	04/19/21 13:15	04/20/21 16:20
10556143006	**AG-1B (4-4.5)**	Solid	04/19/21 13:45	04/20/21 16:20
10556143007	**AG-2 (0-0.5)**	Solid	04/19/21 13:55	04/20/21 16:20
10556143008	**AG-2 (2-2.5)**	Solid	04/19/21 14:10	04/20/21 16:20
10556143009	**AG-2 (4-4.5)**	Solid	04/19/21 14:15	04/20/21 16:20
10556143010	**AG-2B (0-0.5)**	Solid	04/19/21 14:20	04/20/21 16:20
10556143011	**AG-2B (2-2.5)**	Solid	04/19/21 14:30	04/20/21 16:20
10556143012	**AG-2B (4-4.5)**	Solid	04/19/21 14:35	04/20/21 16:20
10556143013	**AG-3 (0-0.5)**	Solid	04/19/21 15:00	04/20/21 16:20
10556143014	**AG-3 (2-2.5)**	Solid	04/19/21 15:10	04/20/21 16:20
10556143015	**AG-3 (4-4.5)**	Solid	04/19/21 15:15	04/20/21 16:20
10556143016	**AG-4 (0-0.5)**	Solid	04/19/21 15:35	04/20/21 16:20
10556143017	**AG-4 (2-2.5)**	Solid	04/19/21 15:45	04/20/21 16:20
10556143018	**AG-4 (4-4.5)**	Solid	04/19/21 15:50	04/20/21 16:20
10556143019	**AG-5 (0-0.5)**	Solid	04/19/21 16:00	04/20/21 16:20
10556143020	**AG-5 (2-2.5)**	Solid	04/19/21 16:05	04/20/21 16:20
10556143021	**AG-5 (4-4.5)**	Solid	04/19/21 16:15	04/20/21 16:20
10556143022	**AGSW-1**	Water	04/19/21 16:50	04/20/21 16:20
10556143023	**DUP-1**	Water	04/19/21 12:00	04/20/21 16:20
10556143024	**AGSW-2**	Water	04/21/21 08:20	04/21/21 10:45

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: B1904484.00
Pace Project No.: 10556143

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10556143001	**AG-1 (0-0.5)**	EPA 6020B	RJS	1	PASI-M
		ASTM D2974	RD1	1	PASI-M
10556143002	**AG-1 (2-2.5)**	EPA 6020B	RJS	1	PASI-M
		ASTM D2974	RD1	1	PASI-M
10556143007	**AG-2 (0-0.5)**	EPA 6020B	RJS	1	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	RD1	1	PASI-M
10556143008	**AG-2 (2-2.5)**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	RD1	1	PASI-M
10556143013	**AG-3 (0-0.5)**	EPA 6020B	RJS	1	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10556143014	**AG-3 (2-2.5)**	EPA 6020B	RJS	1	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10556143016	**AG-4 (0-0.5)**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10556143017	**AG-4 (2-2.5)**	EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10556143022	**AGSW-1**	EPA 300.0	KEO	1	PASI-M
10556143023	**DUP-1**	EPA 300.0	KEO	1	PASI-M
10556143024	**AGSW-2**	EPA 300.0	KEO	1	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: B1904484.00
Pace Project No.: 10556143

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10556143001	**AG-1 (0-0.5)**					
EPA 6020B	Arsenic	4.2	mg/kg	0.55	04/28/21 12:00	
ASTM D2974	Percent Moisture	16.9	%	0.10	04/26/21 12:25	N2
10556143002	**AG-1 (2-2.5)**					
EPA 6020B	Arsenic	4.4	mg/kg	0.56	04/28/21 11:38	
ASTM D2974	Percent Moisture	16.6	%	0.10	04/26/21 12:25	N2
10556143007	**AG-2 (0-0.5)**					
EPA 6020B	Arsenic	4.1	mg/kg	0.58	04/28/21 12:15	
EPA 7471B	Mercury	0.22	mg/kg	0.025	04/25/21 20:50	M1, R1
ASTM D2974	Percent Moisture	20.4	%	0.10	04/26/21 12:26	N2
10556143008	**AG-2 (2-2.5)**					
EPA 7471B	Mercury	0.2	mg/kg	0.10	04/25/21 22:41	
ASTM D2974	Percent Moisture	19.5	%	0.10	04/26/21 12:27	N2
10556143013	**AG-3 (0-0.5)**					
EPA 6020B	Arsenic	3.0	mg/kg	0.62	04/28/21 12:25	
EPA 7471B	Mercury	0.064	mg/kg	0.022	04/25/21 20:58	
ASTM D2974	Percent Moisture	24.9	%	0.10	04/21/21 13:02	N2
10556143014	**AG-3 (2-2.5)**					
EPA 6020B	Arsenic	4.3	mg/kg	0.68	04/28/21 12:28	
EPA 7471B	Mercury	0.044	mg/kg	0.025	04/25/21 20:59	
ASTM D2974	Percent Moisture	26.9	%	0.10	04/21/21 13:02	N2
10556143016	**AG-4 (0-0.5)**					
EPA 7471B	Mercury	0.035	mg/kg	0.020	04/25/21 21:04	
ASTM D2974	Percent Moisture	18.4	%	0.10	04/21/21 13:02	N2
10556143017	**AG-4 (2-2.5)**					
EPA 7471B	Mercury	0.026	mg/kg	0.024	04/25/21 21:06	
ASTM D2974	Percent Moisture	22.9	%	0.10	04/21/21 13:03	N2
10556143024	**AGSW-2**					
EPA 300.0	Nitrate as N	1.0	mg/L	0.10	04/22/21 13:19	

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: B1904484.00
Pace Project No.: 10556143

Method: **EPA 6020B**
Description: 6020B MET ICPMS
Client: Braun Intertec Corporation
Date: April 29, 2021

General Information:
5 samples were analyzed for EPA 6020B by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3050B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: B1904484.00
Pace Project No.: 10556143

Method: **EPA 7471B**
Description: 7471B Mercury
Client: Braun Intertec Corporation
Date: April 29, 2021

General Information:
6 samples were analyzed for EPA 7471B by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7471B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 737132

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10556143007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 3930766)
  - Mercury

R1: RPD value was outside control limits.

- MSD (Lab ID: 3930766)
  - Mercury

Additional Comments:

Analyte Comments:

QC Batch: 737132

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MSD (Lab ID: 3930766)
  - Mercury

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: B1904484.00
Pace Project No.: 10556143

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: Braun Intertec Corporation
Date: April 29, 2021

General Information:
3 samples were analyzed for EPA 300.0 by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10556143

Sample: AG-1 (0-0.5) **Lab ID: 10556143001** Collected: 04/19/21 12:25 Received: 04/20/21 16:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3050B Pace Analytical Services - Minneapolis							
Arsenic	**4.2**	mg/kg	0.55	20	04/27/21 14:44	04/28/21 12:00	7440-38-2	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**16.9**	%	0.10	1		04/26/21 12:25		N2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10556143

Sample: AG-1 (2-2.5) **Lab ID: 10556143002** Collected: 04/19/21 12:45 Received: 04/20/21 16:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3050B Pace Analytical Services - Minneapolis							
Arsenic	**4.4**	mg/kg	0.56	20	04/27/21 14:44	04/28/21 11:38	7440-38-2	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**16.6**	%	0.10	1		04/26/21 12:25		N2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10556143

Sample: AG-2 (0-0.5) **Lab ID: 10556143007** Collected: 04/19/21 13:55 Received: 04/20/21 16:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3050B Pace Analytical Services - Minneapolis							
Arsenic	**4.1**	mg/kg	0.58	20	04/27/21 14:44	04/28/21 12:15	7440-38-2	
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B Pace Analytical Services - Minneapolis							
Mercury	**0.22**	mg/kg	0.025	1	04/23/21 17:10	04/25/21 20:50	7439-97-6	M1,R1
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**20.4**	%	0.10	1		04/26/21 12:26		N2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10556143

Sample: AG-2 (2-2.5) **Lab ID: 10556143008** Collected: 04/19/21 14:10 Received: 04/20/21 16:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B Pace Analytical Services - Minneapolis							
Mercury	**0.2**	mg/kg	0.10	5	04/23/21 17:10	04/25/21 22:41	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**19.5**	%	0.10	1		04/26/21 12:27		N2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10556143

Sample: AG-3 (0-0.5) **Lab ID: 10556143013** Collected: 04/19/21 15:00 Received: 04/20/21 16:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3050B Pace Analytical Services - Minneapolis							
Arsenic	**3.0**	mg/kg	0.62	20	04/27/21 14:44	04/28/21 12:25	7440-38-2	
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B Pace Analytical Services - Minneapolis							
Mercury	**0.064**	mg/kg	0.022	1	04/23/21 17:10	04/25/21 20:58	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**24.9**	%	0.10	1		04/21/21 13:02		N2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10556143

Sample: AG-3 (2-2.5) **Lab ID: 10556143014** Collected: 04/19/21 15:10 Received: 04/20/21 16:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3050B Pace Analytical Services - Minneapolis							
Arsenic	**4.3**	mg/kg	0.68	20	04/27/21 14:44	04/28/21 12:28	7440-38-2	
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B Pace Analytical Services - Minneapolis							
Mercury	**0.044**	mg/kg	0.025	1	04/23/21 17:10	04/25/21 20:59	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**26.9**	%	0.10	1		04/21/21 13:02		N2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10556143

Sample: AG-4 (0-0.5) **Lab ID: 10556143016** Collected: 04/19/21 15:35 Received: 04/20/21 16:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B Pace Analytical Services - Minneapolis							
Mercury	**0.035**	mg/kg	0.020	1	04/23/21 17:10	04/25/21 21:04	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**18.4**	%	0.10	1		04/21/21 13:02		N2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10556143

Sample: AG-4 (2-2.5) **Lab ID: 10556143017** Collected: 04/19/21 15:45 Received: 04/20/21 16:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7471B Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B Pace Analytical Services - Minneapolis							
Mercury	**0.026**	mg/kg	0.024	1	04/23/21 17:10	04/25/21 21:06	7439-97-6	
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**22.9**	%	0.10	1		04/21/21 13:03		N2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10556143

Sample: AGSW-1 **Lab ID: 10556143022** Collected: 04/19/21 16:50 Received: 04/20/21 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Nitrate as N	ND	mg/L	0.10	1		04/21/21 10:57	14797-55-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10556143

Sample: DUP-1 **Lab ID: 10556143023** Collected: 04/19/21 12:00 Received: 04/20/21 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Nitrate as N	ND	mg/L	0.10	1		04/21/21 09:32	14797-55-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: B1904484.00
Pace Project No.: 10556143

Sample: AGSW-2 **Lab ID: 10556143024** Collected: 04/21/21 08:20 Received: 04/21/21 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Nitrate as N	**1.0**	mg/L	0.10	1		04/22/21 13:19	14797-55-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10556143

QC Batch: 737132 | Analysis Method: EPA 7471B
QC Batch Method: EPA 7471B | Analysis Description: 7471B Mercury Solids
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10556143007, 10556143008, 10556143013, 10556143014, 10556143016, 10556143017

METHOD BLANK: 3930763 Matrix: Solid
Associated Lab Samples: 10556143007, 10556143008, 10556143013, 10556143014, 10556143016, 10556143017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.017	04/25/21 20:46	

LABORATORY CONTROL SAMPLE: 3930764

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.47	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3930765 3930766

Parameter	Units	10556143007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.22	0.6	0.57	0.81	1.2	98	169	80-120	37	20	E,M1, R1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10556143

QC Batch: 737737 | Analysis Method: EPA 6020B
QC Batch Method: EPA 3050B | Analysis Description: 6020B Solids UPD5
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10556143001, 10556143002, 10556143007, 10556143013, 10556143014

METHOD BLANK: 3934262 Matrix: Solid
Associated Lab Samples: 10556143001, 10556143002, 10556143007, 10556143013, 10556143014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.45	04/28/21 11:13	

LABORATORY CONTROL SAMPLE: 3934263

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	49	43.7	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3934264 3934265

Parameter	Units	10556143001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	4.2	60.2	58.4	54.4	53.7	83	85	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10556143

QC Batch: 736342
QC Batch Method: ASTM D2974
Analysis Method: ASTM D2974
Analysis Description: Dry Weight / %M by ASTM D2974
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10556143013, 10556143014, 10556143016, 10556143017

SAMPLE DUPLICATE: 3926641

Parameter	Units	10556182003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	10.1	10.3	2	30	N2

SAMPLE DUPLICATE: 3926642

Parameter	Units	10556143017 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.9	25.5	11	30	N2

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10556143

QC Batch: 737418
QC Batch Method: ASTM D2974
Analysis Method: ASTM D2974
Analysis Description: Dry Weight / %M by ASTM D2974
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10556143001, 10556143002, 10556143007, 10556143008

SAMPLE DUPLICATE: 3932513

Parameter	Units	10556645002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	30.2	31.1	3	30	N2

SAMPLE DUPLICATE: 3932514

Parameter	Units	10556446007 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	14.7	14.5	1	30	N2

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10556143

QC Batch: 736380
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10556143022, 10556143023

METHOD BLANK: 3925870 Matrix: Water
Associated Lab Samples: 10556143022, 10556143023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate as N	mg/L	ND	0.10	04/21/21 12:33	

LABORATORY CONTROL SAMPLE: 3925871

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	4	4.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3925872 3925873

Parameter	Units	10555642001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	0.15	4	4	4.3	4.2	104	101	80-120	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3925874 3925875

Parameter	Units	10555642002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	0.60	4	4	4.8	4.7	104	101	80-120	3	20	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: B1904484.00
Pace Project No.: 10556143

QC Batch: 736721
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10556143024

METHOD BLANK: 3928293 Matrix: Water
Associated Lab Samples: 10556143024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate as N	mg/L	ND	0.10	04/22/21 12:58	

LABORATORY CONTROL SAMPLE: 3928294

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	4	4.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3928295 3928296

Parameter	Units	10556270002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	0.77	4	4	4.9	4.9	103	104	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3928297 3928298

Parameter	Units	10556270001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	1.7	4	4	5.9	6.0	105	107	80-120	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: B1904484.00
Pace Project No.: 10556143

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
R1	RPD value was outside control limits.

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: B1904484.00
Pace Project No.: 10556143

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10556143001	**AG-1 (0-0.5)**	EPA 3050B	737737	EPA 6020B	738039
10556143002	**AG-1 (2-2.5)**	EPA 3050B	737737	EPA 6020B	738039
10556143007	**AG-2 (0-0.5)**	EPA 3050B	737737	EPA 6020B	738039
10556143013	**AG-3 (0-0.5)**	EPA 3050B	737737	EPA 6020B	738039
10556143014	**AG-3 (2-2.5)**	EPA 3050B	737737	EPA 6020B	738039
10556143007	**AG-2 (0-0.5)**	EPA 7471B	737132	EPA 7471B	737333
10556143008	**AG-2 (2-2.5)**	EPA 7471B	737132	EPA 7471B	737333
10556143013	**AG-3 (0-0.5)**	EPA 7471B	737132	EPA 7471B	737333
10556143014	**AG-3 (2-2.5)**	EPA 7471B	737132	EPA 7471B	737333
10556143016	**AG-4 (0-0.5)**	EPA 7471B	737132	EPA 7471B	737333
10556143017	**AG-4 (2-2.5)**	EPA 7471B	737132	EPA 7471B	737333
10556143001	**AG-1 (0-0.5)**	ASTM D2974	737418		
10556143002	**AG-1 (2-2.5)**	ASTM D2974	737418		
10556143007	**AG-2 (0-0.5)**	ASTM D2974	737418		
10556143008	**AG-2 (2-2.5)**	ASTM D2974	737418		
10556143013	**AG-3 (0-0.5)**	ASTM D2974	736342		
10556143014	**AG-3 (2-2.5)**	ASTM D2974	736342		
10556143016	**AG-4 (0-0.5)**	ASTM D2974	736342		
10556143017	**AG-4 (2-2.5)**	ASTM D2974	736342		
10556143022	**AGSW-1**	EPA 300.0	736380		
10556143023	**DUP-1**	EPA 300.0	736380		
10556143024	**AGSW-2**	EPA 300.0	736721		

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 10556143

ALL SHADED AREAS are for LAB USE ONLY

Company: Braun Intertec	Billing Information: Same
Address: 11001 Hampshire Ave S.	
Report To: Mark Keefer	Email To: MKeefer@braunintertec.com
Copy To:	Site Collection Info/Address:
Customer Project Name/Number: B1904484.00	State: MN/ County/City: Time Zone Collected: [ ] PT [ ] MT [X] CT [ ] ET
Phone: Email:	Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): Graham Hanson	Purchase Order #: Quote #: DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: 4/30/2021 Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [X] Hold: ____	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) Field Filtered (if applicable): [ ] Yes [ ] No Analysis: ____

Container Preservative Type **: U U U U U U

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

Lab Profile/Line: ~~80474~~ 40 34125

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: ____	
Sample pH Acceptable	Y N NA
pH Strips: ____	
Sulfide Present	Y N NA
Lead Acetate Strips: ____	

LAB USE ONLY:
Lab Sample # / Comments:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Nitrate	TKN	Pesticides by MDA List 1	Chlorothalonil + Propiconazole	Mercury 7471A	HOLD - Freeze	Lab Sample #
AG-1(0-0.5)	SL	C	4/19/21	1225				4	X	X	X	X			~~011~~ 001
AG-1(2-2.5)		C		1245					X	X	X	X			~~012~~ 002
AG-1(4-4.5)		G		1300											~~013~~ 003
AG-1B(0-0.5)		C		1305									X	X	~~014~~ 004
AG-1B(2-2.5)		C		1315									X	X	~~015~~ 005
AG-1B(4-4.5)		G		1345									X		~~016~~ 006
AG-2(0-0.5)		C		1355					X	X	X	X	X		~~017~~ 007
AG-2(2-2.5)		C		1410					X	X	X	X	X		~~018~~ 008
AG-2(4-4.5)		G		1415											~~019~~ 009
AG-2B(0-0.5)		C		1420									X		~~020~~ 010

MKA 4/21/21

Customer Remarks / Special Conditions / Possible Hazards: All held samples to be Frozen and Held by Pace

Type of Ice Used: (Wet) Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2543875

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: (Y) N NA
Therm ID#: ____
Cooler 1 Temp Upon Receipt: ____oC
Cooler 1 Therm Corr. Factor: ____oC
Cooler 1 Corrected Temp: ____oC
Comments: Temps 0.2 0.4 0.3

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Relinquished by/Company: (Signature) Graham Hanson/Braun	Date/Time: 4/20/21	Received by/Company: (Signature) PACE	Date/Time: 4.20.21 14:10
Relinquished by/Company: (Signature) PACE	Date/Time: 4.20.21 1410	Received by/Company: (Signature) Charles B/ Pace	Date/Time: 1530 4.20.21
Relinquished by/Company: (Signature) Charles B/ Pace	Date/Time: 1620 4.20.21	Received by/Company: (Signature) /PACE	Date/Time: 4.20.21 16:20

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Non Conformance(s): YES / NO

Page: 1 of: 3

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE — WO# : 10556143

10556143

Company: Braun Intertec	Billing Information: Same
Address: 11001 Hampshire Ave S.	
Report To: Mark Kuester	Email To:
Copy To:	Site Collection Info/Address:
Customer Project Name/Number:	State: MN County/City: Time Zone Collected: [ ]PT [ ]MT [ ]CT [ ]ET
Phone: Email:	Site/Facility ID #:
Collected By (print): Graham Hanson	Purchase Order #: Quote #:
Collected By (signature):	Turnaround Date Required: 4/30/2021
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: [ ] Same Day [ ] Next Day [ ]2 Day [ ]3 Day [ ]4 Day [ ]5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [ ] No	
DW PWS ID #: DW Location Code:	
Immediately Packed on Ice: [X] Yes [ ] No	
Field Filtered (if applicable): [ ] Yes [ ] No	Analysis: _____

Container Preservative Type ** — U U U U U

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Analyses: Nitrate	TKN	Pesticides by MDA List 1	Chlorothalonil + propiconazole	Mercury 7471A	HOLD – Frozen	Lab Sample # / Comments
AG-2B (2-2.5)	SL	C	4/19/21	1430				4						X	001 011
AG-2B (4-4.5)	G	G		1435										X	002 012
AG-3 (0-0.5)	C	C		1500									X		003 013
AG-3 (2-2.5)	C	C		1510									X		004 014
AG-3 (4-4.5)	G	G		1515										X	005 015
AG-4 (0-0.5)	C	C		1535									X		006 016
AG-4 (2-2.5)	C	C		1545									X		007 017
AG-4 (4-4.5)	G	G		1550										X	008 018
AG-5 (0-0.5)	C	C		1600										X	009 019
AG-5 (2-2.5)	C	C		1605					X	X	X	X			010 020

MKA 4/21/21

Lab Profile/Line: 34125

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
All Hold samples to be Frozen + held by PACE

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2557688

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: (Y) N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: _____oC
Cooler 1 Therm Corr. Factor: _____oC
Cooler 1 Corrected Temp: _____oC
Comments: Temps 0.2 0.4 0.3

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non-Conformance(s): YES / NO

Page: 2 of: 3

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Braun	4/20/21	PACE	4.20.21 1410
PACE	4.20.21 1410	Charles B/ Pace	4.20.21 1530
Charles B/ Pace	4.20.21 1620	PACE	4.20.21 16:20

MTJL LAB USE ONLY

Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: Braun Intertec	Billing Information: Same
Address: 11001 Hampshire Ave S.	
Report To: Mark Keefer	Email To: MKeefer@BraunIntertec
Copy To:	Site Collection Info/Address:
Customer Project Name/Number: B1904484.00	State: MN County/City: Time Zone Collected: [ ] PT [ ] MT [X] CT [ ] ET
Phone: Email:	Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): Graham Hanson	Purchase Order #: Quote #: DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: 4/30/2021 Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

Container Preservative Type **: U U U U U

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Analyses: Nitrate	TKN	Pesticides by MDA List 1	Chlorothalonil + Propiconazole	Mercury 7471A	HOLD - Frozen					Lab Sample # / Comments
AG-5(4-4.5)	SL	G	4/19/21	1615				4						X					021
AGSW-1	GW	G	↓	1650				↓	X	X	X	X							022
DWP-1	↓	G	↓	1200				↓	X	X	X	X							023

Lab Profile/Line: 34125

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
All Held Samples to be Frozen by Pace + Stored

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2557689

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: ____oC
Cooler 1 Therm Corr. Factor: ____oC
Cooler 1 Corrected Temp: ____oC
Comments: Temps 0.2, 0.4, 0.3

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 3 of: 3

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Braun	4/20/21	PACE	4.20.21 1410
PACE	4.20.21 1410		4.20.21 1530
	4.20.21 1620	PACE	4.20.21 16:20

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Page 30 of 33

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) - MN**	Document Revised: 14Apr2021 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0150 Rev.02**	Pace Analytical Services - **Minneapolis**

Sample Condition Upon Receipt

Client Name: Braun Intertec

Project #: WO#: 10556143
PM: JS5 Due Date: 04/29/21
CLIENT: Braun-BLM

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☒ Pace ☐ SpeeDee ☐ Commercial

Tracking Number: _____ See Exceptions ☐ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No **Seals Intact?** ☐ Yes ☒ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☒ Yes ☐ No

Thermometer: ☐ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ OS418-LS ☐ T4(0254) ☒ T5(0489) ☐ 160285052 **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ No **Were All Container Temps Taken?** ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.9, 0.6, 0.5 °C

Correction Factor: -0.2 **Cooler Temp Corrected w/temp blank:** 0.2, 0.4, 0.3 °C

Average Corrected Temp (no temp blank only): _____ °C ☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: (☐ N/A, water sample/Other: _____)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☒ No

Date/Initials of Person Examining Contents: RHL 4.20.21

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☒ Yes	☐ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☒ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used?	☒ Yes	☐ No		8.
-Pace Containers Used?	☒ Yes	☐ No		
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐ **ENV-FRM-MIN4-0142**
Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other _____				
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes	☐ No	☒ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☒ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** **See Exception** ☐ **ENV-FRM-MIN4-0142**
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☒ N/A	13. **See Exception** ☐ **ENV-FRM-MIN4-0140**
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☒ N/A	
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Mark Keefer Date/Time: 4/21/21

Comments/Resolution: TKN not needed for water samples per client email. TKN subbed to MVTL per client approval.

Project Manager Review: _____ **Date:** 4/21/21

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: CA (1) ED

Service Center Transfer Checklist

Service Center: MPLS ☐ BLM ☒ AZ ☐

Client: Brown

Destination Lab:

MPLS ☒ Duluth ☐ VM ☐ National ☐ Other ☐

Received w/ Custody Seal? Yes ☐ No ☒

Custody Seal Intact? Yes ☐ No ☒

Temperature °C:

Temp Read	Corr. Factor	Corr. Temp
2.3	+0.2C	2.5

IR Gun: B88A0143310092 ☐ Samples on ice, in cool down

Rush ☐ **Short Hold** ☐ **N/A** ☒

Containers Intact? Yes ☒ No ☐

Repacked and Re-Iced? Yes ☐ No ☒

Notes:

No Temp Blank Section

Read Temp	Corr. Temp	Avg. Temp

Temp 0.4

Service Center Transfer Checklist

Service Center: MPLS ☐ BLM ☒ AZ ☐

Client: Brown

Destination Lab:

MPLS ☒ Duluth ☐ VM ☐ National ☐ Other ☐

Received w/ Custody Seal? Yes ☐ No ☒

Custody Seal Intact? Yes ☐ No ☒

Temperature °C:

Temp Read	Corr. Factor	Corr. Temp
5.0	+0.2C	5.2

IR Gun: B88A0143310092 ☐ Samples on ice, in cool down

Rush ☐ **Short Hold** ☐ **N/A** ☒

Containers Intact? Yes ☒ No ☐

Repacked and Re-Iced? Yes ☐ No ☒

Notes:

No Temp Blank Section

Read Temp	Corr. Temp	Avg. Temp

Service Center Transfer Checklist

Service Center: MPLS ☐ BLM ☒ AZ ☐

Client: [redacted]

Destination Lab:

MPLS ☒ Duluth ☐ VM ☐ National ☐ Other ☐

Received w/ Custody Seal? Yes ☐ No ☒

Custody Seal Intact? Yes ☐ No ☒

Temperature °C:	Temp Read	Corr. Factor	Corr. Temp
	2.1	+0.2C	2.3

IR Gun: B88A0143310092 ☐ Samples on ice, in cool down

Rush ☐ **Short Hold** ☐ **N/A** ☒

Containers Intact? Yes ☒ No ☐

Repacked and Re-Iced? Yes ☐ No ☒

Notes:

No Temp Blank Section

Read Temp	Corr. Temp	Avg. Temp

Temp 0.3

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

WO# : 10556143

10556143

LAB USE ONLY- Affix

ALL SH

Company: Braun Intertec	Billing Information: Same
Address: 11001 Hampshire Ave S.	
Report To: Mark Keeter	Email To: MKeeter@BraunIntertec.com
Copy To:	Site Collection Info/Address:
Customer Project Name/Number: B1904484.00	State: / County/City: Time Zone Collected: [ ] PT [ ] MT [X] CT [ ] ET
Phone: Email:	Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): Graham Hanson	Purchase Order #: Quote #: DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: 4/30/2021 Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

Container Preservative Type **

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Nitrate	MDA List 1 Restricted	Chlorothalonil + Degradate	Analyses	Lab Profile/Line:
A6SW-2	GW	G	4/21/21	0820				4	X	X	X		001

Lab Profile/Line: Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2557691

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: 5
Cooler 1 Temp Upon Receipt: -0.1 oC
Cooler 1 Therm Corr. Factor: +0.2 oC
Cooler 1 Corrected Temp: 0.1 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
[signature]/Braun	4/21/21 1045	RHL/Pace	4/21/21 1045
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) - MN**	Document Revised: 14Apr2021 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0150 Rev.02**	Pace Analytical Services - **Minneapolis**

Sample Condition Upon Receipt

Client Name: Braun Interior

Project #: WO#: 10556143

PM: JS5 Due Date: 04/29/21

CLIENT: Braun-BLM

Courier: ☐Fed Ex ☐UPS ☐USPS ☒Client ☐Pace ☐SpeeDee ☐Commercial

Tracking Number: _____ See Exceptions ☐ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☐Yes ☒No **Seals Intact?** ☐Yes ☒No **Biological Tissue Frozen?** ☐Yes ☐No ☒N/A

Packing Material: ☒Bubble Wrap ☒Bubble Bags ☐None ☐Other:_____ **Temp Blank?** ☒Yes ☐No

Thermometer: ☐T1(0461) ☐T2(1336) ☐T3(0459) ☐OS418-LS ☐T4(0254) ☒T5(0489) ☐160285052 **Type of Ice:** ☒Wet ☐Blue ☐None ☐Dry ☐Melted

Did Samples Originate in West Virginia? ☐Yes ☒No **Were All Container Temps Taken?** ☐Yes ☐No ☒N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** -0.1 °C **Average Corrected Temp (no temp blank only):** _____ °C ☐See Exceptions ENV-FRM-MIN4-0142 ☐1 Container

Correction Factor: +0.2 **Cooler Temp Corrected w/temp blank:** 0.1 °C

USDA Regulated Soil: (☒N/A, water sample/Other:_____) **Date/Initials of Person Examining Contents:** RHL 4.21.21

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐Yes ☐No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐Yes ☐No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒Yes	☐No		1.
Chain of Custody Relinquished?	☒Yes	☐No		2.
Sampler Name and/or Signature on COC?	☒Yes	☐No	☐N/A	3.
Samples Arrived within Hold Time?	☒Yes	☐No		4.
Short Hold Time Analysis (<72 hr)?	☒Yes	☐No		5. ☐Fecal Coliform ☐HPC ☐Total Coliform/E coli ☐BOD/cBOD ☐Hex Chrome ☐Turbidity ☒Nitrate ☐Nitrite ☐Orthophos ☐Other_____
Rush Turn Around Time Requested?	☐Yes	☒No		6.
Sufficient Volume?	☒Yes	☐No		7.
Correct Containers Used? -Pace Containers Used?	☒Yes ☒Yes	☐No ☐No		8.
Containers Intact?	☒Yes	☐No		9.
Field Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☒N/A	10. Is sediment visible in the dissolved container? ☐Yes ☐No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☒Water ☐Soil ☐Oil ☐Other_____	☒Yes	☐No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐ **ENV-FRM-MIN4-0142**
All containers needing acid/base preservation have been checked?	☐Yes	☐No	☒N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐Yes	☐No	☒N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐Yes	☐No	☒N/A	Positive for Res. Chlorine? ☐Yes ☐No **pH Paper Lot#** **See Exception** ☐ **ENV-FRM-MIN4-0142**
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	☐Yes	☐No	☒N/A	13. **See Exception** ☐ **ENV-FRM-MIN4-0140**
Headspace in VOA Vials (greater than 6mm)?	☐Yes	☐No	☒N/A	
Trip Blank Present?	☐Yes	☐No	☒N/A	14.
Trip Blank Custody Seals Present?	☐Yes	☐No	☒N/A	Pace Trip Blank Lot # (if purchased):_____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐Yes ☐No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** 4/21/21

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: RHL/CMI

12-8352

Chain of Custody

PASI Minnesota Laboratory

Pace Analytical®
www.pacelabs.com

Workorder: 10556143 **Workorder Name:** B1904484.00 **Results Requested By:** 4/29/2021

Report / Invoice To	Subcontract To	
Jason Stegenga Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612)607-1700 Email: jason.stegenga@pacelabs.com	MVTL 1126 N Front Street New Ulm, MN 56073	P.O. 10556143

State of Sample Origin: MN

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Preserved Containers: JGFU	Requested Analysis: 351.2 TKN (MVTL)	LAB USE ONLY
1	AG-1 (0-0.5)	4/19/2021 12:25	10556143001	Solid	1		X	N2654
2	AG-1 (2-2.5)	4/19/2021 12:45	10556143002	Solid	1		X	55
3	AG-2 (0-0.5)	4/19/2021 13:55	10556143007	Solid	1		X	56
4	AG-2 (2-2.5)	4/19/2021 14:10	10556143008	Solid	1		X	57
5	AG-5 (2-2.5)	4/19/2021 16:05	10556143020	Solid	1		X	58

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	4/20/21 1700	DLR ROI 22 Apr 21	9:53
2				
3				

Comments

0.2°C Tom 774

Cooler Temperature on Receipt _____ °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Samples Intact** Y or N

MVTL

MINNESOTA VALLEY TESTING LABORATORIES, INC.

1126 N. Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 E. Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Highway ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885
www.mvtl.com

MEMBER ACIL

Report Date: 28 Apr 2021
Lab Number: 21-N2654
Work Order #: 12-8352
Account #: 013980
Sample Matrix: SOIL
Date Sampled: 19 Apr 2021 12:25
Date Received: 22 Apr 2021 9:53
PO #: 10556143

Temp at Receipt: 0.2C

JASON STEGENGA
PACE ANALYTICAL SERVICES INC
1700 ELM ST SE STE 200
MINNEAPOLIS MN 55414

Project Name: B1904484.00

Sample Description: AG-1 (0-0.5)

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Nitrogen, Kjeldahl	1300	mg/Kg	8.00	SM 4500NorgB/NH3 E	26 Apr 21	DS

Approved by:

Dan O'Connell David Smahel
Chemistry Laboratory Managers New Ulm, MN

RL = Reporting Limit
Analyses performed under our Minnesota Department of Health Accreditation conform to the current TNI standards.
The reporting limit was elevated for any analyte requiring a dilution as coded below:
@ = Due to sample matrix # = Due to concentration of other analytes
! = Due to sample quantity + = Due to internal standard response
CERTIFICATION: MN LAB # 027-015-125 ND WW/DW # R-040

MVTL

MINNESOTA VALLEY TESTING LABORATORIES, INC.

1126 N. Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 E. Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Highway ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885
www.mvtl.com

MEMBER ACIL

Report Date: 28 Apr 2021
Lab Number: 21-N2655
Work Order #: 12-8352
Account #: 013980
Sample Matrix: SOIL
Date Sampled: 19 Apr 2021 12:45
Date Received: 22 Apr 2021 9:53
PO #: 10556143

JASON STEGENGA
PACE ANALYTICAL SERVICES INC
1700 ELM ST SE STE 200
MINNEAPOLIS MN 55414

Project Name: B1904484.00

Sample Description: AG-1 (2-2.5)

Temp at Receipt: 0.2C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Nitrogen, Kjeldahl	980	mg/Kg	8.00	SM 4500NorgB/NH3 E	26 Apr 21	DS

Approved by:

Dan O'Connell David Smahel
Chemistry Laboratory Managers New Ulm, MN

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The reporting limit was elevated for any analyte requiring a dilution as coded below:
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! = Due to sample quantity + = Due to internal standard response
CERTIFICATION: MN LAB # 027-015-125 ND WW/DW # R-040

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MEMBER ACIL

Report Date: 28 Apr 2021
Lab Number: 21-N2656
Work Order #: 12-8352
Account #: 013980
Sample Matrix: SOIL
Date Sampled: 19 Apr 2021 13:55
Date Received: 22 Apr 2021 9:53
PO #: 10556143

JASON STEGENGA
PACE ANALYTICAL SERVICES INC
1700 ELM ST SE STE 200
MINNEAPOLIS MN 55414

Project Name: B1904484.00

Sample Description: AG-2 (0-0.5)

Temp at Receipt: 0.2C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Nitrogen, Kjeldahl	1170	mg/Kg	8.00	SM 4500NorgB/NH3 E	26 Apr 21	DS

Approved by:

Dan O'Connell David Smahel
Chemistry Laboratory Managers New Ulm, MN

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The reporting limit was elevated for any analyte requiring a dilution as coded below:
@ = Due to sample matrix # = Due to concentration of other analytes
! = Due to sample quantity + = Due to internal standard response
CERTIFICATION: MN LAB # 027-015-125 ND WW/DW # R-040

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www.mvtl.com

MEMBER ACIL

Report Date: 28 Apr 2021
Lab Number: 21-N2657
Work Order #: 12-8352
Account #: 013980
Sample Matrix: SOIL
Date Sampled: 19 Apr 2021 14:10
Date Received: 22 Apr 2021 9:53
PO #: 10556143

JASON STEGENGA
PACE ANALYTICAL SERVICES INC
1700 ELM ST SE STE 200
MINNEAPOLIS MN 55414

Project Name: B1904484.00

Sample Description: AG-2 (2-2.5)

Temp at Receipt: 0.2C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Nitrogen, Kjeldahl	1220	mg/Kg	8.00	SM 4500NorgB/NH3 E	26 Apr 21	DS

Approved by:

Dan O'Connell David Smahel
Chemistry Laboratory Managers New Ulm, MN

RL = Reporting Limit
Analyses performed under our Minnesota Department of Health Accreditation conform to the current TNI standards.
The reporting limit was elevated for any analyte requiring a dilution as coded below:
@ = Due to sample matrix # = Due to concentration of other analytes
! = Due to sample quantity + = Due to internal standard response
CERTIFICATION: MN LAB # 027-015-125 ND WW/DW # R-040

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MEMBER ACIL

Report Date: 28 Apr 2021
Lab Number: 21-N2658
Work Order #: 12-8352
Account #: 013980
Sample Matrix: SOIL
Date Sampled: 19 Apr 2021 16:05
Date Received: 22 Apr 2021 9:53
PO #: 10556143

JASON STEGENGA
PACE ANALYTICAL SERVICES INC
1700 ELM ST SE STE 200
MINNEAPOLIS MN 55414

Project Name: B1904484.00

Sample Description: AG-5 (2-2.5)

Temp at Receipt: 0.2C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Nitrogen, Kjeldahl	369	mg/Kg	8.00	SM 4500NorgB/NH3 E	26 Apr 21	DS

Approved by:

Dan O'Connell David Smahel
Chemistry Laboratory Managers New Ulm, MN

RL = Reporting Limit
Analyses performed under our Minnesota Department of Health Accreditation conform to the current TNI standards.
The reporting limit was elevated for any analyte requiring a dilution as coded below:
@ = Due to sample matrix # = Due to concentration of other analytes
! = Due to sample quantity + = Due to internal standard response
CERTIFICATION: MN LAB # 027-015-125 ND WW/DW # R-040

Synergistic Pesticide Laboratory LLC
2700B N. Hayden Island Dr.
Portland, OR 97217
Lab: 503-641-0500
Fax: 503-954-3073
info@synpestlab.com

Client Name: Pace Analytical Minnesota
Client Address: 1700 Elm Street
Minneapolis, MN 55414
Client Phone: 612-607-1700

Date: 4/28/21
SPL Project #: 21 017
Client Project #: 10556143

SAMPLE RESULTS:

SPL ID: **21 017-01**
Sample ID: 10556143001 (AG-1 (0-0.5))
Matrix: SOIL
Method: **Chlorothalonil & Propiconazole Analysis (QuEChERS 15662, EPA 8321B, EPA 8270E)**
Units: ppm (µg/g)

Date Sampled: 4/19/21
Date Received: 4/22/21
Date Extracted: 4/26/21
Date Analyzed: 4/26-4/27/21

Analyte	Class	Result	RL
Chlorothalonil	F	0.356	0.025
Propiconazole	F	0.152	0.025
Decachlorobiphenyl (Surrogate)	---	119%	---
Fenbuconazole (Surrogate)	---	107%	---

SPL ID: **21 017-02**
Sample ID: 10556143002 (AG-1 (2-2.5))
Matrix: SOIL
Method: **Chlorothalonil & Propiconazole Analysis (QuEChERS 15662, EPA 8321B, EPA 8270E)**
Units: ppm (µg/g)

Date Sampled: 4/19/21
Date Received: 4/22/21
Date Extracted: 4/26/21
Date Analyzed: 4/26-4/27/21

Analyte	Class	Result	RL
Chlorothalonil	F	0.153	0.025
Propiconazole	F	0.113	0.025
Decachlorobiphenyl (Surrogate)	---	122%	---
Fenbuconazole (Surrogate)	---	107%	---

SPL ID: **21 017-03**
Sample ID: 10556143007 (AG-2 (0-0.5))
Matrix: SOIL
Method: **Chlorothalonil & Propiconazole Analysis (QuEChERS 15662, EPA 8321B, EPA 8270E)**
Units: ppm (µg/g)

Date Sampled: 4/19/21
Date Received: 4/22/21
Date Extracted: 4/26/21
Date Analyzed: 4/26-4/27/21

Analyte	Class	Result	RL
Chlorothalonil	F	14.2	0.025
Propiconazole	F	31.5	0.025
Decachlorobiphenyl (Surrogate)	---	81%	---
Fenbuconazole (Surrogate)	---	112%	---

Synergistic Pesticide Laboratory LLC
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Lab: 503-641-0500
Fax: 503-954-3073
info@synpestlab.com

Client Name: Pace Analytical Minnesota
Client Address: 1700 Elm Street
Minneapolis, MN 55414
Client Phone: 612-607-1700

Date: 4/28/21
SPL Project #: 21 017
Client Project #: 10556143

SAMPLE RESULTS:

SPL ID: **21 017-04**
Sample ID: 10556143008 (AG-2 (2-2.5))
Matrix: SOIL
Method: **Chlorothalonil & Propiconazole Analysis (QuEChERS 15662, EPA 8321B, EPA 8270E)**
Units: ppm (µg/g)

Date Sampled: 4/19/21
Date Received: 4/22/21
Date Extracted: 4/26/21
Date Analyzed: 4/26-4/27/21

Analyte	Class	Result	RL
Chlorothalonil	F	3.28	0.025
Propiconazole	F	8.67	0.025
Decachlorobiphenyl (Surrogate)	---	118%	---
Fenbuconazole (Surrogate)	---	108%	---

SPL ID: **21 017-05**
Sample ID: 10556143020 (AG-5 (2-2.5))
Matrix: SOIL
Method: **Chlorothalonil & Propiconazole Analysis (QuEChERS 15662, EPA 8321B, EPA 8270E)**
Units: ppm (µg/g)

Date Sampled: 4/19/21
Date Received: 4/22/21
Date Extracted: 4/26/21
Date Analyzed: 4/26-4/27/21

Analyte	Class	Result	RL
Chlorothalonil	F	0.219	0.025
Propiconazole	F	nd	0.025
Decachlorobiphenyl (Surrogate)	---	124%	---
Fenbuconazole (Surrogate)	---	109%	---

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2700B N. Hayden Island Dr.
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Fax: 503-954-3073
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Client Name: Pace Analytical Minnesota
Client Address: 1700 Elm Street
Minneapolis, MN 55414
Client Phone: 612-607-1700

Date: 4/28/21
SPL Project #: 21 017
Client Project #: 10556143

SAMPLE RESULTS:

SPL ID: **21 017-06**
Sample ID: 10556143022 (AGSW-1)
Matrix: WATER
Method: **Chlorothalonil & Propiconazole Analysis (EPA 3510c, EPA 8321B, EPA 8270E)**
Units: ppb (µg/L)

Date Sampled: 4/19/21
Date Received: 4/22/21
Date Extracted: 4/24/21
Date Analyzed: 4/27/21

Analyte	Class	Result	RL
Chlorothalonil	F	nd	0.3
Propiconazole	F	nd	0.3
Decachlorobiphenyl (Surrogate)	---	102%	---
Fenbuconazole (Surrogate)	---	96%	---

SPL ID: **21 017-07**
Sample ID: 10556143023 (DUP-1)
Matrix: WATER
Method: **Chlorothalonil & Propiconazole Analysis (EPA 3510c, EPA 8321B, EPA 8270E)**
Units: ppb (µg/L)

Date Sampled: 4/19/21
Date Received: 4/22/21
Date Extracted: 4/24/21
Date Analyzed: 4/27/21

Analyte	Class	Result	RL
Chlorothalonil	F	nd	0.3
Propiconazole	F	nd	0.3
Decachlorobiphenyl (Surrogate)	---	58%	---
Fenbuconazole (Surrogate)	---	99%	---

SPL ID: **21 017-08**
Sample ID: 10556143024 (AGSW-2)
Matrix: WATER
Method: **Chlorothalonil & Propiconazole Analysis (EPA 3510c, EPA 8321B, EPA 8270E)**
Units: ppb (µg/L)

Date Sampled: 4/21/21
Date Received: 4/22/21
Date Extracted: 4/24/21
Date Analyzed: 4/27/21

Analyte	Class	Result	RL
Chlorothalonil	F	nd	0.3
Propiconazole	F	nd	0.3
Decachlorobiphenyl (Surrogate)	---	102%	---
Fenbuconazole (Surrogate)	---	91%	---

Synergistic Pesticide Laboratory LLC
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Lab: 503-641-0500
Fax: 503-954-3073
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Client Name: Pace Analytical Minnesota
Client Address: 1700 Elm Street
Minneapolis, MN 55414
Client Phone: 612-607-1700

Date: 4/28/21
SPL Project #: 21 017
Client Project #: 10556143

QUALITY CONTROL RESULTS:

Method: **Chlorothalonil & Propiconazole Analysis (QuEChERS 15662, EPA 8321B, EPA 8270E)**
Units: ppm (µg/g)
Matrix: SOIL

Date Extracted: 4/26/21
Date Analyzed: 4/26-4/27/21

21 024 MB

Analyte	Amt Spiked	Result	Percent Recovery
Chlorothalonil	---	nd	---
Propiconazole	---	nd	---
Decachlorobiphenyl (Surrogate)	0.1	0.127	127%
Fenbuconazole (Surrogate)	0.1	0.098	98%

21 024 LCS

Analyte	Amt Spiked	Result	Percent Recovery
Chlorothalonil	0.5	1.62	325%^{RM}
Propiconazole	0.5	0.484	97%
Decachlorobiphenyl (Surrogate)	0.1	0.121	121%
Fenbuconazole (Surrogate)	0.1	0.097	97%

21 017-01 MS

Analyte	Amt Spiked	Result	Percent Recovery
Chlorothalonil	0.25	AH	AH%
Propiconazole	0.25	0.239	96%
Decachlorobiphenyl (Surrogate)	0.1	0.100	100%
Fenbuconazole (Surrogate)	0.1	0.107	107%

21 017-01 MSD

Analyte	Amt Spiked	Result	Percent Recovery
Chlorothalonil	0.25	AH	AH%
Propiconazole	0.25	0.255	103%
Decachlorobiphenyl (Surrogate)	0.1	0.099	99%
Fenbuconazole (Surrogate)	0.1	0.105	105%

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Client Address: 1700 Elm Street
Minneapolis, MN 55414
Client Phone: 612-607-1700

Date: 4/28/21
SPL Project #: 21 017
Client Project #: 10556143

QUALITY CONTROL RESULTS:

Method: **Chlorothalonil & Propiconazole Analysis (EPA 3510c, EPA 8321B, EPA 8270E)**
Units: ppb (µg/L)
Matrix: WATER

Date Extracted: 4/24/21
Date Analyzed: 4/27/21

21 023 MB

Analyte	Amt Spiked	Result	Percent Recovery
Chlorothalonil	---	nd	---
Propiconazole	---	nd	---
Decachlorobiphenyl (Surrogate)	0.2	0.161	81%
Fenbuconazole (Surrogate)	0.2	0.173	87%

21 023 LCS

Analyte	Amt Spiked	Result	Percent Recovery
Chlorothalonil	1.0	1.18	118%
Propiconazole	1.0	0.929	93%
Decachlorobiphenyl (Surrogate)	0.2	0.111	56%
Fenbuconazole (Surrogate)	0.2	0.179	90%

21 023 LCSD

Analyte	Amt Spiked	Result	Percent Recovery
Chlorothalonil	1.0	1.34	134%
Propiconazole	1.0	0.956	96%
Decachlorobiphenyl (Surrogate)	0.2	0.114	57%
Fenbuconazole (Surrogate)	0.2	0.189	95%

Synergistic Pesticide Laboratory LLC
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Fax: 503-954-3073
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Client Name:	Pace Analytical Minnesota	**Date:**	4/28/21
Client Address:	1700 Elm Street	**SPL Project #:**	21 017
	Minneapolis, MN 55414	**Client Project #:**	10556143
Client Phone:	612-607-1700		

Report Specific Notes

1) Recovery for chlorothalonil was high in the 21 024 LCS sample likely due to an increased response due to matrix induced effects on the GC/MS/MS inlet. Samples preceding 21 024 LCS contained high amounts of matrix. All Continuing Calibration Verification (CCV) samples for chlorothalonil were acceptable throughout the run. Recoveries for propiconazole and surrogates in this sample are also acceptable.

Laboratory Report Definitions

AH – Abnormally high recovery of spiked analyte/surrogate due to presence in the sample
F – Fungicide
LCS – Laboratory Control Sample – prepared from analyte free water or sand and spiked with known amount of analytes for the purpose of measuring the effect of the reagents used in extraction or analysis
LCSD – Laboratory Control Sample Duplicate
MS – Matrix Spike – prepared from additional sample and spiked with known amount of analytes for the purpose of measuring the effect of the sample matrix on analysis
MSD – Matrix Spike Duplicate
MB – Method Blank – shows any interference in extraction method
nd – non detect – substance not found above the reporting limit
ppb – parts per billion
ppm – parts per million
RL – Reporting Limit – the minimum amount of a substance that can be reported with confidence
RM – High recovery due to matrix effects

Results provided relate to submitted samples only. Unless otherwise noted, samples were received in good condition and all Quality Control samples met acceptance criteria. Quality Control data is available upon request. This report shall not be reproduced, except in full, without the permission of Synergistic Pesticide Laboratory, LLC.

Authorized by:_____ Date:_____

Camille Holladay
Lab Director

Pace Analytical®
ENVIRONMENTAL SCIENCES
MOBILE LAB SERVICES

2525 Advance Road
Madison, WI 53718
608.221.8700 Phone
608.221.4889 Fax

April 29, 2021

Jason Stegenga
Pace Analytical
1700 Elm Street, Suite 200
Minneapolis, MN 55414
RE: B1904484.00

Enclosed are the analytical results for the samples received by the laboratory on 04/22/2021.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. These results are in compliance with the 2009 NELAC Standards and the appropriate agencies listed below, unless otherwise noted in the case narrative. This analytical report should be reproduced in its entirety.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jessica Esser For Molly Palzkill
Project Manager

Certification List			Expires
DODELAP	DOD ELAP Accreditation (A2LA)	3269.01	03/31/2022
ILEPA	Illinois Secondary NELAP Accreditation	004366	04/30/2021
KDHE	Kansas Secondary NELAP Accreditation	E-10384	04/30/2021
LELAP	Louisiana Primary NELAP Accreditation	04165	06/30/2021
NJDEP	New Jersey Secondary NELAP Accreditation	WI004	06/30/2021
NYDOH	New York Department of Health	12110	04/01/2022
TCEQ	Texas Secondary NELAP Accreditation	T104704504-20-11	11/30/2021
WDNR	Wisconsin Certification under NR 149	113289110	08/31/2021

Pace Analytical
ENVIRONMENTAL SCIENCES
MOBILE LAB SERVICES

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Madison, WI 53718
608.221.8700 Phone
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Pace Analytical	Project: B1904484.00
1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AG-1 (0-0.5) (10556143001)	A211613-01	Soil	04/19/2021	04/22/2021
AG-1 (2-2.5) (10556143002)	A211613-02	Soil	04/19/2021	04/22/2021
AG-2 (0-0.5) (10556143007)	A211613-03	Soil	04/19/2021	04/22/2021
AG-2 (2-2.5) (10556143008)	A211613-04	Soil	04/19/2021	04/22/2021
AG-5 (2-2.5) (10556143020)	A211613-05	Soil	04/19/2021	04/22/2021
AGSW-1 (10556143022)	A211613-06	Water	04/19/2021	04/22/2021
DUP-1 (10556143023)	A211613-07	Water	04/19/2021	04/22/2021
AGSW-2 (10556143024)	A211613-08	Water	04/21/2021	04/22/2021

CASE NARRATIVE

Sample Receipt Information:
Eight samples were received on 04/22/2021. Samples were received in acceptable condition.

Please see the chain of custody (COC) document at the end of this report for additional information.

Pace Analytical
ENVIRONMENTAL SCIENCES
MOBILE LAB SERVICES

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Madison, WI 53718
608.221.8700 Phone
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Pace Analytical	Project: B1904484.00
1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

AG-1 (0-0.5) (10556143001)

A211613-01 (Soil)

Date Sampled
04/19/2021 12:25

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Wet Chemistry							**Preparation Batch: [CALC]**		
Nitrate as N	ND		6.00	mg/kg dry	1	04/27/2021	04/28/2021 16:27	EPA 353.2	
Nitrate + Nitrite as N	ND		6.00	mg/kg dry	1	04/27/2021	04/28/2021 13:30	EPA 353.2	
Nitrite as N	ND		6.00	mg/kg dry	1	04/27/2021	04/28/2021 16:27	EPA 353.2	
Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry							**Preparation Batch: A104168**		
Acetochlor	ND	0.011	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Alachlor	ND	0.016	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Atrazine	ND	0.0085	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Chlorpyrifos	ND	0.0090	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Cyanazine	ND	0.022	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Desethylatrazine	ND	0.013	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Deisopropylatrazine	ND	0.027	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Dimethenamid	ND	0.0084	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
EPTC	ND	0.012	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Ethalfluralin	ND	0.023	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Fonofos	ND	0.011	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Metolachlor	ND	0.011	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Metribuzin	ND	0.0099	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Pendimethalin	ND	0.011	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Phorate	ND	0.024	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Prometon	ND	0.019	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Propachlor	ND	0.012	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Propazine	ND	0.011	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Simazine	ND	0.011	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Terbufos	ND	0.0042	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Triallate	ND	0.016	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Trifluralin	ND	0.013	0.060	mg/kg dry	1	04/23/2021	04/23/2021 14:36	EPA 8270D	
Surrogate: Atrazine-d5			*107 %*	*57-128*		*04/23/2021*	*04/23/2021 14:36*	*EPA 8270D*	
Surrogate: Parathion-d10			*112 %*	*45.7-133*		*04/23/2021*	*04/23/2021 14:36*	*EPA 8270D*	
Surrogate: Triphenyl phosphate			*133 %*	*43.2-151*		*04/23/2021*	*04/23/2021 14:36*	*EPA 8270D*	
Classical Chemistry Parameters							**Preparation Batch: A104165**		
% Solids	**83.3**		0.00	% by Weight	1	04/23/2021	04/25/2021 08:00	SM 2540B	

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2525 Advance Road
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Pace Analytical	Project: B1904484.00
1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

AG-1 (2-2.5) (10556143002)

A211613-02 (Soil)

Date Sampled
04/19/2021 12:45

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Wet Chemistry							**Preparation Batch: [CALC]**		
Nitrate as N	ND		6.10	mg/kg dry	1	04/27/2021	04/28/2021 16:29	EPA 353.2	
Nitrate + Nitrite as N	ND		6.10	mg/kg dry	1	04/27/2021	04/28/2021 13:31	EPA 353.2	
Nitrite as N	ND		6.10	mg/kg dry	1	04/27/2021	04/28/2021 16:29	EPA 353.2	
Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry							**Preparation Batch: A104168**		
Acetochlor	ND	0.012	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Alachlor	ND	0.016	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Atrazine	ND	0.0087	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Chlorpyrifos	ND	0.0091	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Cyanazine	ND	0.022	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Desethylatrazine	ND	0.013	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Deisopropylatrazine	ND	0.028	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Dimethenamid	ND	0.0085	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
EPTC	ND	0.012	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Ethalfluralin	ND	0.023	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Fonofos	ND	0.011	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Metolachlor	ND	0.012	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Metribuzin	ND	0.010	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Pendimethalin	ND	0.011	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Phorate	ND	0.024	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Prometon	ND	0.020	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Propachlor	ND	0.012	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Propazine	ND	0.011	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Simazine	ND	0.011	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Terbufos	ND	0.0043	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Triallate	ND	0.016	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Trifluralin	ND	0.013	0.061	mg/kg dry	1	04/23/2021	04/23/2021 12:32	EPA 8270D	
Surrogate: Atrazine-d5			*105 %*	*57-128*		*04/23/2021*	*04/23/2021 12:32*	*EPA 8270D*	
Surrogate: Parathion-d10			*99.4 %*	*45.7-133*		*04/23/2021*	*04/23/2021 12:32*	*EPA 8270D*	
Surrogate: Triphenyl phosphate			*112 %*	*43.2-151*		*04/23/2021*	*04/23/2021 12:32*	*EPA 8270D*	
Classical Chemistry Parameters							**Preparation Batch: A104165**		
% Solids	**82.0**		0.00	% by Weight	1	04/23/2021	04/25/2021 08:00	SM 2540B	

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Pace Analytical	Project: B1904484.00
1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

AG-2 (0-0.5) (10556143007)

A211613-03 (Soil)

Date Sampled
04/19/2021 13:55

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Pace Analytical - Madison									
Wet Chemistry						**Preparation Batch: [CALC]**			
Nitrate as N	**6.32**		6.32	mg/kg dry	1	04/27/2021	04/28/2021 16:30	EPA 353.2	
Nitrate + Nitrite as N	**6.32**		6.32	mg/kg dry	1	04/27/2021	04/28/2021 13:32	EPA 353.2	
Nitrite as N	ND		6.32	mg/kg dry	1	04/27/2021	04/28/2021 16:30	EPA 353.2	
Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry						**Preparation Batch: A104168**			
Acetochlor	ND	0.012	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Alachlor	ND	0.016	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Atrazine	ND	0.0089	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Chlorpyrifos	ND	0.0094	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Cyanazine	ND	0.023	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Desethylatrazine	ND	0.014	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Deisopropylatrazine	ND	0.029	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Dimethenamid	ND	0.0088	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
EPTC	ND	0.013	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Ethalfluralin	ND	0.024	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Fonofos	ND	0.012	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Metolachlor	**0.033**	0.012	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	J
Metribuzin	ND	0.010	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Pendimethalin	ND	0.012	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Phorate	ND	0.025	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Prometon	ND	0.020	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Propachlor	ND	0.013	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Propazine	ND	0.012	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Simazine	ND	0.011	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Terbufos	ND	0.0044	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Triallate	ND	0.016	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Trifluralin	ND	0.014	0.063	mg/kg dry	1	04/23/2021	04/23/2021 13:03	EPA 8270D	
Surrogate: Atrazine-d5			*106 %*	*57-128*		*04/23/2021*	*04/23/2021 13:03*	*EPA 8270D*	
Surrogate: Parathion-d10			*115 %*	*45.7-133*		*04/23/2021*	*04/23/2021 13:03*	*EPA 8270D*	
Surrogate: Triphenyl phosphate			*122 %*	*43.2-151*		*04/23/2021*	*04/23/2021 13:03*	*EPA 8270D*	
Classical Chemistry Parameters						**Preparation Batch: A104165**			
% Solids	**79.1**		0.00	% by Weight	1	04/23/2021	04/25/2021 08:00	SM 2540B	

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Pace Analytical	Project: B1904484.00
1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

AG-2 (2-2.5) (10556143008)

A211613-04 (Soil)

Date Sampled
04/19/2021 14:10

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Wet Chemistry							**Preparation Batch: [CALC]**		
Nitrate as N	ND		6.20	mg/kg dry	1	04/27/2021	04/28/2021 16:31	EPA 353.2	
Nitrate + Nitrite as N	ND		6.20	mg/kg dry	1	04/27/2021	04/28/2021 13:33	EPA 353.2	
Nitrite as N	ND		6.20	mg/kg dry	1	04/27/2021	04/28/2021 16:31	EPA 353.2	
Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry							**Preparation Batch: A104168**		
Acetochlor	ND	0.012	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Alachlor	ND	0.016	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Atrazine	ND	0.0087	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Chlorpyrifos	ND	0.0092	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Cyanazine	ND	0.022	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Desethylatrazine	ND	0.014	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Deisopropylatrazine	ND	0.028	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Dimethenamid	ND	0.0086	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
EPTC	ND	0.012	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Ethalfluralin	ND	0.023	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Fonofos	ND	0.011	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Metolachlor	**0.094**	0.012	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Metribuzin	ND	0.010	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Pendimethalin	ND	0.012	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Phorate	ND	0.025	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Prometon	ND	0.020	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Propachlor	ND	0.012	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Propazine	ND	0.011	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Simazine	ND	0.011	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Terbufos	ND	0.0043	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Triallate	ND	0.016	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Trifluralin	ND	0.014	0.061	mg/kg dry	1	04/23/2021	04/23/2021 13:34	EPA 8270D	
Surrogate: Atrazine-d5			*91.0 %*	*57-128*		*04/23/2021*	*04/23/2021 13:34*	*EPA 8270D*	
Surrogate: Parathion-d10			*113 %*	*45.7-133*		*04/23/2021*	*04/23/2021 13:34*	*EPA 8270D*	
Surrogate: Triphenyl phosphate			*120 %*	*43.2-151*		*04/23/2021*	*04/23/2021 13:34*	*EPA 8270D*	
Classical Chemistry Parameters							**Preparation Batch: A104165**		
% Solids	**80.6**		0.00	% by Weight	1	04/23/2021	04/25/2021 08:00	SM 2540B	

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Pace Analytical	Project: B1904484.00
1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

AG-5 (2-2.5) (10556143020)

A211613-05 (Soil)

Date Sampled
04/19/2021 16:05

Pace Analytical - Madison

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Wet Chemistry							**Preparation Batch: [CALC]**		
Nitrate as N	ND		6.47	mg/kg dry	1	04/27/2021	04/28/2021 16:32	EPA 353.2	
Nitrate + Nitrite as N	ND		6.47	mg/kg dry	1	04/27/2021	04/28/2021 13:34	EPA 353.2	
Nitrite as N	ND		6.47	mg/kg dry	1	04/27/2021	04/28/2021 16:32	EPA 353.2	
Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry							**Preparation Batch: A104168**		
Acetochlor	ND	0.012	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Alachlor	ND	0.017	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Atrazine	ND	0.0091	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Chlorpyrifos	ND	0.0096	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Cyanazine	ND	0.023	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Desethylatrazine	ND	0.014	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Deisopropylatrazine	ND	0.029	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Dimethenamid	ND	0.0090	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
EPTC	ND	0.013	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Ethalfluralin	ND	0.024	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Fonofos	ND	0.012	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Metolachlor	ND	0.012	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Metribuzin	ND	0.011	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Pendimethalin	ND	0.012	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Phorate	ND	0.026	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Prometon	ND	0.020	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Propachlor	ND	0.013	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Propazine	ND	0.012	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Simazine	ND	0.011	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Terbufos	ND	0.0045	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Triallate	ND	0.017	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Trifluralin	ND	0.014	0.064	mg/kg dry	1	04/23/2021	04/23/2021 14:05	EPA 8270D	
Surrogate: Atrazine-d5			*100 %*	*57-128*		*04/23/2021*	*04/23/2021 14:05*	*EPA 8270D*	
Surrogate: Parathion-d10			*107 %*	*45.7-133*		*04/23/2021*	*04/23/2021 14:05*	*EPA 8270D*	
Surrogate: Triphenyl phosphate			*119 %*	*43.2-151*		*04/23/2021*	*04/23/2021 14:05*	*EPA 8270D*	
Classical Chemistry Parameters							**Preparation Batch: A104165**		
% Solids	**77.3**		0.00	% by Weight	1	04/23/2021	04/25/2021 08:00	SM 2540B	

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Pace Analytical	Project: B1904484.00
1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

AGSW-1 (10556143022)

A211613-06 (Water)

Date Sampled
04/19/2021 16:50

Pace Analytical - Madison

Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry — **Preparation Batch: A104167**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Acetochlor	ND	0.027	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Alachlor	ND	0.054	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Atrazine	ND	0.027	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Chlorpyrifos	ND	0.041	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Cyanazine	ND	0.065	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Desethylatrazine	ND	0.024	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Deisopropylatrazine	ND	0.042	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Dimethenamid	ND	0.027	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
EPTC	ND	0.025	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Ethalfluralin	ND	0.10	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Fonofos	ND	0.050	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Metolachlor	ND	0.033	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Metribuzin	ND	0.021	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Pendimethalin	ND	0.030	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Phorate	ND	0.060	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Prometon	ND	0.036	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Propachlor	ND	0.050	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Propazine	ND	0.047	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Simazine	ND	0.025	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Terbufos	ND	0.043	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Triallate	ND	0.071	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Trifluralin	ND	0.030	0.14	ug/L	1	04/23/2021	04/27/2021 01:13	EPA 8270D	
Surrogate: Atrazine-d5			*98.1 %*	*55.8-131*		*04/23/2021*	*04/27/2021 01:13*	*EPA 8270D*	
Surrogate: Parathion-d10			*105 %*	*26-171*		*04/23/2021*	*04/27/2021 01:13*	*EPA 8270D*	
Surrogate: Triphenyl phosphate			*119 %*	*59.1-148*		*04/23/2021*	*04/27/2021 01:13*	*EPA 8270D*	

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1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

DUP-1 (10556143023)

A211613-07 (Water)

Date Sampled
04/19/2021 12:00

Pace Analytical - Madison

Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry — **Preparation Batch: A104167**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Acetochlor	ND	0.030	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Alachlor	ND	0.061	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Atrazine	ND	0.030	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Chlorpyrifos	ND	0.046	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Cyanazine	ND	0.073	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Desethylatrazine	ND	0.027	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Deisopropylatrazine	ND	0.048	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Dimethenamid	ND	0.030	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
EPTC	ND	0.028	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Ethalfluralin	ND	0.12	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Fonofos	ND	0.056	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Metolachlor	ND	0.037	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Metribuzin	ND	0.023	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Pendimethalin	ND	0.034	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Phorate	ND	0.067	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Prometon	ND	0.040	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Propachlor	ND	0.056	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Propazine	ND	0.052	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Simazine	ND	0.028	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Terbufos	ND	0.049	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Triallate	ND	0.079	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Trifluralin	ND	0.034	0.15	ug/L	1	04/23/2021	04/27/2021 01:44	EPA 8270D	
Surrogate: Atrazine-d5			*96.1 %*	*55.8-131*		*04/23/2021*	*04/27/2021 01:44*	*EPA 8270D*	
Surrogate: Parathion-d10			*106 %*	*26-171*		*04/23/2021*	*04/27/2021 01:44*	*EPA 8270D*	
Surrogate: Triphenyl phosphate			*120 %*	*59.1-148*		*04/23/2021*	*04/27/2021 01:44*	*EPA 8270D*	

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1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

AGSW-2 (10556143024)

A211613-08 (Water)

Date Sampled
04/21/2021 08:20

Pace Analytical - Madison

Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry — **Preparation Batch: A104167**

Analyte	Result	Limit of Detection	Limit of Quantitation	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Acetochlor	ND	0.026	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Alachlor	ND	0.053	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Atrazine	ND	0.026	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Chlorpyrifos	ND	0.040	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Cyanazine	ND	0.063	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Desethylatrazine	ND	0.023	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Deisopropylatrazine	ND	0.041	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Dimethenamid	ND	0.026	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
EPTC	ND	0.024	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Ethalfluralin	ND	0.10	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Fonofos	ND	0.048	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Metolachlor	ND	0.032	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Metribuzin	ND	0.020	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Pendimethalin	ND	0.029	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Phorate	ND	0.058	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Prometon	ND	0.035	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Propachlor	ND	0.048	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Propazine	ND	0.045	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Simazine	ND	0.024	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Terbufos	ND	0.042	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Triallate	ND	0.068	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Trifluralin	ND	0.029	0.13	ug/L	1	04/23/2021	04/26/2021 22:07	EPA 8270D	
Surrogate: Atrazine-d5			*102 %*	*55.8-131*		*04/23/2021*	*04/26/2021 22:07*	*EPA 8270D*	
Surrogate: Parathion-d10			*115 %*	*26-171*		*04/23/2021*	*04/26/2021 22:07*	*EPA 8270D*	
Surrogate: Triphenyl phosphate			*115 %*	*59.1-148*		*04/23/2021*	*04/26/2021 22:07*	*EPA 8270D*	

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Minneapolis MN, 55414	Project Manager: Jason Stegenga

Wet Chemistry - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A104178 - KCl Extraction per Method										
Blank (A104178-BLK1)				Prepared: 04/27/2021	Analyzed: 04/28/2021 13:03					
Nitrate + Nitrite as N	ND	5.00	mg/kg wet							
Blank (A104178-BLK2)				Prepared: 04/27/2021	Analyzed: 04/28/2021 16:00					
Nitrite as N	ND	5.00	mg/kg wet							
LCS (A104178-BS1)				Prepared: 04/27/2021	Analyzed: 04/28/2021 13:44					
Nitrate + Nitrite as N	42.7	5.00	mg/kg wet	50.00		85.4	84.9-100			
LCS (A104178-BS2)				Prepared: 04/27/2021	Analyzed: 04/28/2021 16:01					
Nitrite as N	49.2	5.00	mg/kg wet	50.00		98.4	84.3-105			
Duplicate (A104178-DUP1)	**Source: A211608-14**			Prepared: 04/27/2021	Analyzed: 04/28/2021 13:06					
Nitrate + Nitrite as N	91.0	5.45	mg/kg dry		102			11.8	30	
Duplicate (A104178-DUP2)	**Source: A211608-24**			Prepared: 04/27/2021	Analyzed: 04/28/2021 13:26					
Nitrate + Nitrite as N	144	6.03	mg/kg dry		141			2.54	30	
Duplicate (A104178-DUP3)	**Source: A211608-14**			Prepared: 04/27/2021	Analyzed: 04/28/2021 16:03					
Nitrite as N	1.21	5.45	mg/kg dry		1.19			1.36	30	
Duplicate (A104178-DUP4)	**Source: A211608-24**			Prepared: 04/27/2021	Analyzed: 04/28/2021 16:23					
Nitrite as N	1.45	6.03	mg/kg dry		1.41			2.96	30	
Matrix Spike (A104178-MS1)	**Source: A211608-14**			Prepared: 04/27/2021	Analyzed: 04/28/2021 13:07					
Nitrate + Nitrite as N	145	5.45	mg/kg dry	54.49	102	78.0	62.1-123			
Matrix Spike (A104178-MS2)	**Source: A211608-14**			Prepared: 04/27/2021	Analyzed: 04/28/2021 16:04					
Nitrite as N	52.3	5.45	mg/kg dry	54.49	1.19	93.8	81.1-102			

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Minneapolis MN, 55414	Project Manager: Jason Stegenga

Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A104167 - EPA 3510C										
Blank (A104167-BLK1)				Prepared: 04/23/2021 Analyzed: 04/26/2021 21:36						
Acetochlor	ND	0.13	ug/L							
Alachlor	ND	0.13	ug/L							
Atrazine	ND	0.13	ug/L							
Chlorpyrifos	ND	0.13	ug/L							
Cyanazine	ND	0.13	ug/L							
Desethylatrazine	ND	0.13	ug/L							
Deisopropylatrazine	ND	0.13	ug/L							
Dimethenamid	ND	0.13	ug/L							
EPTC	ND	0.13	ug/L							
Ethalfluralin	ND	0.13	ug/L							
Fonofos	ND	0.13	ug/L							
Metolachlor	ND	0.13	ug/L							
Metribuzin	ND	0.13	ug/L							
Pendimethalin	ND	0.13	ug/L							
Phorate	ND	0.13	ug/L							
Prometon	ND	0.13	ug/L							
Propachlor	ND	0.13	ug/L							
Propazine	ND	0.13	ug/L							
Simazine	ND	0.13	ug/L							
Terbufos	ND	0.13	ug/L							
Triallate	ND	0.13	ug/L							
Trifluralin	ND	0.13	ug/L							
Surrogate: Atrazine-d5	*0.444*		*ug/L*	*0.5000*		*88.8*	*55.8-131*			
Surrogate: Parathion-d10	*0.509*		*ug/L*	*0.5000*		*102*	*26-171*			
Surrogate: Triphenyl phosphate	*0.510*		*ug/L*	*0.5000*		*102*	*59.1-148*			
LCS (A104167-BS1)				Prepared: 04/23/2021 Analyzed: 04/26/2021 19:00						
Acetochlor	0.902	0.13	ug/L	1.000		90.2	71.4-120			
Alachlor	0.921	0.13	ug/L	1.000		92.1	72.1-119			
Atrazine	0.828	0.13	ug/L	1.000		82.8	71.7-118			
Chlorpyrifos	0.887	0.13	ug/L	1.000		88.7	70-118			
Cyanazine	0.967	0.13	ug/L	1.000		96.7	68.7-133			
Desethylatrazine	0.862	0.13	ug/L	1.000		86.2	72.8-116			
Deisopropylatrazine	0.641	0.13	ug/L	1.000		64.1	50.6-106			
Dimethenamid	0.876	0.13	ug/L	1.000		87.6	73.4-118			
EPTC	0.801	0.13	ug/L	1.000		80.1	58.9-105			
Ethalfluralin	0.917	0.13	ug/L	1.000		91.7	54.8-133			
Fonofos	0.877	0.13	ug/L	1.000		87.7	55.4-137			
Metolachlor	0.948	0.13	ug/L	1.000		94.8	69.7-126			
Metribuzin	0.965	0.13	ug/L	1.000		96.5	70.4-118			
Pendimethalin	0.943	0.13	ug/L	1.000		94.3	66.5-118			
Phorate	0.585	0.13	ug/L	1.000		58.5	39.6-114			
Prometon	0.920	0.13	ug/L	1.000		92.0	77.6-118			
Propachlor	0.849	0.13	ug/L	1.000		84.9	61.8-137			
Propazine	0.871	0.13	ug/L	1.000		87.1	71.8-119			
Simazine	0.931	0.13	ug/L	1.000		93.1	74.9-118			
Terbufos	0.632	0.13	ug/L	1.000		63.2	35.3-119			
Triallate	0.881	0.13	ug/L	1.000		88.1	54-138			

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1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A104167 - EPA 3510C										
LCS (A104167-BS1)				Prepared: 04/23/2021 Analyzed: 04/26/2021 19:00						
Trifluralin	0.879	0.13	ug/L	1.000		87.9	56.2-117			
Surrogate: Atrazine-d5	*0.454*		*ug/L*	*0.5000*		*90.9*	*55.8-131*			
Surrogate: Parathion-d10	*0.550*		*ug/L*	*0.5000*		*110*	*26-171*			
Surrogate: Triphenyl phosphate	*0.535*		*ug/L*	*0.5000*		*107*	*59.1-148*			
Matrix Spike (A104167-MS1)	**Source: A211615-04**			Prepared: 04/23/2021 Analyzed: 04/26/2021 17:58						
Acetochlor	1.03	0.12	ug/L	0.9524	ND	108	70.1-125			
Alachlor	4.35	0.12	ug/L	0.9524	3.18	123	72-125			
Atrazine	1.54	0.12	ug/L	0.9524	0.595	99.0	76.4-113			
Chlorpyrifos	0.923	0.12	ug/L	0.9524	ND	96.9	73.2-115			
Cyanazine	1.10	0.12	ug/L	0.9524	0.0612	109	76.7-131			
Desethylatrazine	1.13	0.12	ug/L	0.9524	0.231	94.9	72.6-115			
Deisopropylatrazine	0.829	0.12	ug/L	0.9524	0.127	73.7	49.5-111			
Dimethenamid	1.59	0.12	ug/L	0.9524	0.635	99.9	77.7-114			
EPTC	0.746	0.12	ug/L	0.9524	ND	78.4	61.2-104			
Ethalfluralin	0.868	0.12	ug/L	0.9524	ND	91.1	60.1-125			
Fonofos	0.850	0.12	ug/L	0.9524	ND	89.3	59.9-125			
Metolachlor	25.4	0.12	ug/L	0.9524	23.9	150	58.4-134			M1, E
Metribuzin	1.02	0.12	ug/L	0.9524	ND	107	73.3-117			
Pendimethalin	1.16	0.12	ug/L	0.9524	0.183	102	71.8-115			
Phorate	0.604	0.12	ug/L	0.9524	ND	63.4	57.4-110			
Prometon	1.84	0.12	ug/L	0.9524	0.847	105	77.3-118			
Propachlor	0.825	0.12	ug/L	0.9524	ND	86.7	67.6-123			
Propazine	0.896	0.12	ug/L	0.9524	ND	94.1	74.3-116			
Simazine	0.973	0.12	ug/L	0.9524	ND	102	78.9-114			
Terbufos	0.649	0.12	ug/L	0.9524	ND	68.1	49.4-114			
Triallate	0.870	0.12	ug/L	0.9524	ND	91.3	62.8-121			
Trifluralin	1.55	0.12	ug/L	0.9524	0.688	90.0	63.1-114			
Surrogate: Atrazine-d5	*0.495*		*ug/L*	*0.4762*		*104*	*55.8-131*			
Surrogate: Parathion-d10	*0.573*		*ug/L*	*0.4762*		*120*	*26-171*			
Surrogate: Triphenyl phosphate	*0.590*		*ug/L*	*0.4762*		*124*	*59.1-148*			
Matrix Spike Dup (A104167-MSD1)	**Source: A211615-04**			Prepared: 04/23/2021 Analyzed: 04/26/2021 18:29						
Acetochlor	0.895	0.12	ug/L	0.9524	ND	94.0	70.1-125	13.8	20	
Alachlor	3.95	0.12	ug/L	0.9524	3.18	81.2	72-125	9.52	20	
Atrazine	1.38	0.12	ug/L	0.9524	0.595	82.6	76.4-113	10.7	20	
Chlorpyrifos	0.848	0.12	ug/L	0.9524	ND	89.1	73.2-115	8.46	20	
Cyanazine	1.02	0.12	ug/L	0.9524	0.0612	101	76.7-131	7.55	20	
Desethylatrazine	1.06	0.12	ug/L	0.9524	0.231	86.9	72.6-115	6.94	20	
Deisopropylatrazine	0.818	0.12	ug/L	0.9524	0.127	72.5	49.5-111	1.37	20	
Dimethenamid	1.43	0.12	ug/L	0.9524	0.635	83.4	77.7-114	10.5	20	
EPTC	0.762	0.12	ug/L	0.9524	ND	80.0	61.2-104	2.06	20	
Ethalfluralin	0.919	0.12	ug/L	0.9524	ND	96.5	60.1-125	5.68	20	
Fonofos	0.840	0.12	ug/L	0.9524	ND	88.2	59.9-125	1.19	20	
Metolachlor	22.9	0.12	ug/L	0.9524	23.9	NR	58.4-134	10.1	20	M1, E
Metribuzin	0.933	0.12	ug/L	0.9524	ND	98.0	73.3-117	8.49	20	
Pendimethalin	1.05	0.12	ug/L	0.9524	0.183	91.1	71.8-115	9.57	20	
Phorate	0.511	0.12	ug/L	0.9524	ND	53.6	57.4-110	16.7	20	M

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Minneapolis MN, 55414	Project Manager: Jason Stegenga

Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A104167 - EPA 3510C										
Matrix Spike Dup (A104167-MSD1)	**Source: A211615-04**		Prepared: 04/23/2021 Analyzed: 04/26/2021 18:29							
Prometon	1.68	0.12	ug/L	0.9524	0.847	87.0	77.3-118	9.61	20	
Propachlor	0.822	0.12	ug/L	0.9524	ND	86.3	67.6-123	0.445	20	
Propazine	0.849	0.12	ug/L	0.9524	ND	89.1	74.3-116	5.43	20	
Simazine	0.887	0.12	ug/L	0.9524	ND	93.1	78.9-114	9.23	20	
Terbufos	0.549	0.12	ug/L	0.9524	ND	57.7	49.4-114	16.6	20	
Triallate	0.856	0.12	ug/L	0.9524	ND	89.9	62.8-121	1.64	20	
Trifluralin	1.43	0.12	ug/L	0.9524	0.688	77.4	63.1-114	8.11	20	
Surrogate: Atrazine-d5	*0.424*		*ug/L*	*0.4762*		*89.0*	*55.8-131*			
Surrogate: Parathion-d10	*0.526*		*ug/L*	*0.4762*		*110*	*26-171*			
Surrogate: Triphenyl phosphate	*0.512*		*ug/L*	*0.4762*		*107*	*59.1-148*			
Batch A104168 - EPA 3570										
Blank (A104168-BLK1)			Prepared: 04/23/2021 Analyzed: 04/23/2021 12:01							
Acetochlor	ND	0.050	mg/kg wet							
Alachlor	ND	0.050	mg/kg wet							
Atrazine	ND	0.050	mg/kg wet							
Chlorpyrifos	ND	0.050	mg/kg wet							
Cyanazine	ND	0.050	mg/kg wet							
Desethylatrazine	ND	0.050	mg/kg wet							
Deisopropylatrazine	ND	0.050	mg/kg wet							
Dimethenamid	ND	0.050	mg/kg wet							
EPTC	ND	0.050	mg/kg wet							
Ethalfluralin	ND	0.050	mg/kg wet							
Fonofos	ND	0.050	mg/kg wet							
Metolachlor	ND	0.050	mg/kg wet							
Metribuzin	ND	0.050	mg/kg wet							
Pendimethalin	ND	0.050	mg/kg wet							
Phorate	ND	0.050	mg/kg wet							
Prometon	ND	0.050	mg/kg wet							
Propachlor	ND	0.050	mg/kg wet							
Propazine	ND	0.050	mg/kg wet							
Simazine	ND	0.050	mg/kg wet							
Terbufos	ND	0.050	mg/kg wet							
Triallate	ND	0.050	mg/kg wet							
Trifluralin	ND	0.050	mg/kg wet							
Surrogate: Atrazine-d5	*0.204*		*mg/kg wet*	*0.1996*		*102*	*57-128*			
Surrogate: Parathion-d10	*0.194*		*mg/kg wet*	*0.1996*		*97.2*	*45.7-133*			
Surrogate: Triphenyl phosphate	*0.218*		*mg/kg wet*	*0.1996*		*109*	*43.2-151*			

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Pace Analytical	Project: B1904484.00
1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A104168 - EPA 3570										
LCS (A104168-BS1)				Prepared: 04/23/2021 Analyzed: 04/23/2021 16:09						
Acetochlor	0.365	0.050	mg/kg wet	0.3968		92.0	77.8-118			
Alachlor	0.374	0.050	mg/kg wet	0.3968		94.2	77.8-117			
Atrazine	0.379	0.050	mg/kg wet	0.3968		95.6	77.9-119			
Chlorpyrifos	0.386	0.050	mg/kg wet	0.3968		97.3	79.3-118			
Cyanazine	0.407	0.050	mg/kg wet	0.3968		103	73.7-125			
Desethylatrazine	0.376	0.050	mg/kg wet	0.3968		94.8	80.1-115			
Deisopropylatrazine	0.355	0.050	mg/kg wet	0.3968		89.5	75.4-114			
Dimethenamid	0.391	0.050	mg/kg wet	0.3968		98.5	79.6-117			
EPTC	0.383	0.050	mg/kg wet	0.3968		96.6	79.2-110			
Ethalfluralin	0.429	0.050	mg/kg wet	0.3968		108	64.9-128			
Fonofos	0.371	0.050	mg/kg wet	0.3968		93.6	72.9-117			
Metolachlor	0.388	0.050	mg/kg wet	0.3968		97.8	78.3-118			
Metribuzin	0.407	0.050	mg/kg wet	0.3968		103	76.5-118			
Pendimethalin	0.395	0.050	mg/kg wet	0.3968		99.5	72.5-119			
Phorate	0.363	0.050	mg/kg wet	0.3968		91.4	77-116			
Prometon	0.373	0.050	mg/kg wet	0.3968		93.9	67.6-117			
Propachlor	0.368	0.050	mg/kg wet	0.3968		92.7	80.1-112			
Propazine	0.380	0.050	mg/kg wet	0.3968		95.7	75.3-120			
Simazine	0.376	0.050	mg/kg wet	0.3968		94.8	75-120			
Terbufos	0.377	0.050	mg/kg wet	0.3968		95.0	76.7-117			
Triallate	0.390	0.050	mg/kg wet	0.3968		98.2	73.1-119			
Trifluralin	0.403	0.050	mg/kg wet	0.3968		102	75.1-119			
Surrogate: Atrazine-d5	*0.210*		*mg/kg wet*	*0.1984*		*106*	*57-128*			
Surrogate: Parathion-d10	*0.212*		*mg/kg wet*	*0.1984*		*107*	*45.7-133*			
Surrogate: Triphenyl phosphate	*0.219*		*mg/kg wet*	*0.1984*		*110*	*43.2-151*			
Matrix Spike (A104168-MS1)	**Source: A211613-01**			Prepared: 04/23/2021 Analyzed: 04/23/2021 15:07						
Acetochlor	0.470	0.059	mg/kg dry	0.4753	ND	98.9	73.8-122			
Alachlor	0.449	0.059	mg/kg dry	0.4753	ND	94.5	70.1-127			
Atrazine	0.444	0.059	mg/kg dry	0.4753	ND	93.3	69.8-121			
Chlorpyrifos	0.483	0.059	mg/kg dry	0.4753	ND	102	78.2-120			
Cyanazine	0.474	0.059	mg/kg dry	0.4753	ND	99.8	44.6-137			
Desethylatrazine	0.399	0.059	mg/kg dry	0.4753	ND	84.0	34-128			
Deisopropylatrazine	0.332	0.059	mg/kg dry	0.4753	ND	69.8	10.7-126			
Dimethenamid	0.472	0.059	mg/kg dry	0.4753	ND	99.3	75.2-119			
EPTC	0.464	0.059	mg/kg dry	0.4753	ND	97.6	75-116			
Ethalfluralin	0.457	0.059	mg/kg dry	0.4753	ND	96.1	64.4-134			
Fonofos	0.463	0.059	mg/kg dry	0.4753	ND	97.5	68-124			
Metolachlor	0.477	0.059	mg/kg dry	0.4753	ND	100	68-131			
Metribuzin	0.493	0.059	mg/kg dry	0.4753	ND	104	67.4-121			
Pendimethalin	0.495	0.059	mg/kg dry	0.4753	ND	104	69.5-131			
Phorate	0.427	0.059	mg/kg dry	0.4753	ND	89.8	77-119			
Prometon	0.470	0.059	mg/kg dry	0.4753	ND	98.9	65.8-121			
Propachlor	0.428	0.059	mg/kg dry	0.4753	ND	90.0	71.3-114			
Propazine	0.448	0.059	mg/kg dry	0.4753	ND	94.2	73.9-120			
Simazine	0.450	0.059	mg/kg dry	0.4753	ND	94.7	60.8-123			
Terbufos	0.462	0.059	mg/kg dry	0.4753	ND	97.3	74.2-122			
Triallate	0.424	0.059	mg/kg dry	0.4753	ND	89.1	70.2-125			

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Pace Analytical	Project: B1904484.00
1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

Base Neutral Pesticides by Gas Chromatography/Mass Spectrometry - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A104168 - EPA 3570										
Matrix Spike (A104168-MS1)	**Source: A211613-01**		Prepared: 04/23/2021	Analyzed: 04/23/2021 15:07						
Trifluralin	0.493	0.059	mg/kg dry	0.4753	ND	104	71.9-126			
Surrogate: Atrazine-d5	*0.244*		*mg/kg dry*	*0.2376*		*103*	*57-128*			
Surrogate: Parathion-d10	*0.271*		*mg/kg dry*	*0.2376*		*114*	*45.7-133*			
Surrogate: Triphenyl phosphate	*0.280*		*mg/kg dry*	*0.2376*		*118*	*43.2-151*			
Matrix Spike Dup (A104168-MSD1)	**Source: A211613-01**		Prepared: 04/23/2021	Analyzed: 04/23/2021 15:38						
Acetochlor	0.491	0.060	mg/kg dry	0.4800	ND	102	73.8-122	4.33	20	
Alachlor	0.473	0.060	mg/kg dry	0.4800	ND	98.6	70.1-127	5.28	20	
Atrazine	0.458	0.060	mg/kg dry	0.4800	ND	95.5	69.8-121	3.29	20	
Chlorpyrifos	0.487	0.060	mg/kg dry	0.4800	ND	101	78.2-120	0.774	20	
Cyanazine	0.537	0.060	mg/kg dry	0.4800	ND	112	44.6-137	12.4	20	
Desethylatrazine	0.416	0.060	mg/kg dry	0.4800	ND	86.6	34-128	4.08	20	
Deisopropylatrazine	0.333	0.060	mg/kg dry	0.4800	ND	69.3	10.7-126	0.355	20	
Dimethenamid	0.496	0.060	mg/kg dry	0.4800	ND	103	75.2-119	4.96	20	
EPTC	0.479	0.060	mg/kg dry	0.4800	ND	99.8	75-116	3.27	20	
Ethalfluralin	0.482	0.060	mg/kg dry	0.4800	ND	100	64.4-134	5.36	20	
Fonofos	0.469	0.060	mg/kg dry	0.4800	ND	97.8	68-124	1.31	20	
Metolachlor	0.490	0.060	mg/kg dry	0.4800	ND	102	68-131	2.67	20	
Metribuzin	0.507	0.060	mg/kg dry	0.4800	ND	106	67.4-121	2.83	20	
Pendimethalin	0.510	0.060	mg/kg dry	0.4800	ND	106	69.5-131	2.95	20	
Phorate	0.447	0.060	mg/kg dry	0.4800	ND	93.0	77-119	4.48	20	
Prometon	0.489	0.060	mg/kg dry	0.4800	ND	102	65.8-121	3.95	20	
Propachlor	0.442	0.060	mg/kg dry	0.4800	ND	92.1	71.3-114	3.30	20	
Propazine	0.469	0.060	mg/kg dry	0.4800	ND	97.6	73.9-120	4.54	20	
Simazine	0.472	0.060	mg/kg dry	0.4800	ND	98.2	60.8-123	4.65	20	
Terbufos	0.462	0.060	mg/kg dry	0.4800	ND	96.2	74.2-122	0.142	20	
Triallate	0.469	0.060	mg/kg dry	0.4800	ND	97.8	70.2-125	10.2	20	
Trifluralin	0.503	0.060	mg/kg dry	0.4800	ND	105	71.9-126	2.07	20	
Surrogate: Atrazine-d5	*0.252*		*mg/kg dry*	*0.2400*		*105*	*57-128*			
Surrogate: Parathion-d10	*0.285*		*mg/kg dry*	*0.2400*		*119*	*45.7-133*			
Surrogate: Triphenyl phosphate	*0.309*		*mg/kg dry*	*0.2400*		*129*	*43.2-151*			

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Pace Analytical	Project: B1904484.00
1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

Classical Chemistry Parameters - Quality Control

Pace Analytical - Madison

Analyte	Result	Limit of Quantitation	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A104165 - % Solids										
Duplicate (A104165-DUP1)	**Source: A211525-04**		Prepared: 04/23/2021	Analyzed: 04/25/2021 08:00						
% Solids	91.4	0.00	% by Weight		93.1			1.83	20	

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1700 Elm Street, Suite 200	Project Number: 10556143
Minneapolis MN, 55414	Project Manager: Jason Stegenga

Notes and Definitions

M1	Spike recoveries were not evaluated because of elevated levels of the spiked analyte in the parent sample.
M	The matrix spike and/or matrix spike duplicate recovery was outside of the laboratory control limits.
J	Analyte was detected but is below the reporting limit. The concentration is estimated.
E	The concentration indicated is above the instrument calibration range. This value is an estimated concentration.
ND	Analyte NOT DETECTED at or above the reporting limit or limit of detection (if listed).
NR	Not Reported
dry	Sample results reported on a dry weight basis. Detection limits (if listed) and reporting limits have been adjusted for the solids content. If the word 'dry' does not appear after the units, results are reported on an as-is basis.
RPD	Relative Percent Difference

Detection limits (if listed) and reporting limits have been adjusted for dilutions, if reported.

Internal Transfer Chain of Custody

A211613

☐ Samples Pre-Logged into eCOC.

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State Of Origin: MN
Cert. Needed: [x] Yes [ ] No
Owner Received Date: 4/20/2021 Results Requested By: 4/29/2021

Workorder: 10556143 **Workorder Name:** B1904484.00

Report To	Subcontract To
Jason Stegenga Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612)607-1700	Pace Analytical Madison 2525 Advance Road Madison, WI 53718 Phone (608)221-8700

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers JGFU	Preserved Containers AG1U	Requested Analysis: MDA List 1 (Pace Madison)	Requested Analysis: Nitrate (Pace Madison)	LAB USE ONLY
1	AG-1 (0-0.5)	PS	4/19/2021 12:25	10556143001	Solid	2		X	X	01
2	AG-1 (2-2.5)	PS	4/19/2021 12:45	10556143002	Solid	2		X	X	02
3	AG-2 (0-0.5)	PS	4/19/2021 13:55	10556143007	Solid	2		X	X	03
4	AG-2 (2-2.5)	PS	4/19/2021 14:10	10556143008	Solid	2		X	X	04
5	AG-5 (2-2.5)	PS	4/19/2021 16:05	10556143020	Solid	2		X	X	05
6	AGSW-1	PS	4/19/2021 16:50	10556143022	Water		1	X		06
7	DUP-1	PS	4/19/2021 12:00	10556143023	Water		1	X		07
8	AGSW-2	PS	4/21/2021 08:20	10556143024	Water		1	X		08

Transfers	Released By	Date/Time	Received By	Date/Time
1	Jason Stegenga/Pace	4/21/21 1545	[illegible]	04-22-21
2				1200
3				

Comments

Cooler Temperature on Receipt 1.9 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

SIN 1600142274
Exp - 06-20-21

Chain of Custody

PASI Minnesota Laboratory

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Workorder: 10556143 **Workorder Name:** B1904484.00 **Results Requested By:** 4/29/2021

Report / Invoice To	Subcontract To
Jason Stegenga Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612)607-1700 Email: jason.stegenga@pacelabs.com	Synergistic Pesicide Lab 2700 N Hayden Island Dr Bldg B Portland, OR 97217 P.O. 10556143

State of Sample Origin: MN

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: JGCU	Preserved Containers: AG1U	Requested Analysis: Chlorothalonil & Propiconazole	LAB USE ONLY
1	AG-1 (0-0.5)	4/19/2021 12:25	10556143001	Solid	1		X	21 017 01
2	AG-1 (2-2.5)	4/19/2021 12:45	10556143002	Solid	1		X	02
3	AG-2 (0-0.5)	4/19/2021 13:55	10556143007	Solid	1		X	03
4	AG-2 (2-2.5)	4/19/2021 14:10	10556143008	Solid	1		X	04
5	AG-5 (2-2.5)	4/19/2021 16:05	10556143020	Solid	1		X	05
6	AGSW-1	4/19/2021 16:50	10556143022	Water		2	X	06
7	DUP-1	4/19/2021 12:00	10556143023	Water		2	X	07
8	AGSW-2	4/21/2021 08:20	10556143024	Water		2	X	08
9								
10								
11								
12								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible] Pace	4/22/21 1600	[illegible]	4/24/21 1015
2				
3				

Comments

Cooler Temperature on Receipt 2.6 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact Y or N

Synergistic Pesticide Laboratory, LLC
Sample Receipt Checklist

Project # 21017
Date 4/22/21
Initials CH

Client Pace Analytical

Method of Arrival: UPS (FedEx) USPS client delivered courier lab other
Tracking # 9371 9292 6467

Custody Seals Present: (Y) N
If yes: (transport container) sample container Signed: see back
Date: 4/21

Temperature (°C): 2.6 (IR) digital

Type of coolant: (ice) blue/gel ice other none

Are all samples present?	(Y)	N
Are samples intact?	(Y)	N
Documentation provided?	(COC)	SS Form Email Letter PO None Other:_____
Does sample information match documentation?	Y	(N) NA see below
Is the documentation signed?	(Y)	N NA
Are the samples within hold time?	(Y)	N NA
Is the sampling date provided?	(Y)	N
Is there sufficient sample volume?	(Y)	N
Are the samples in appropriate containers?	(Y)	N
Do the containers originate from SPL?	Y	(N)

Sample Description:

#	Matrix	#	Container
5	BB CHRY FRESH EXT PREP OTHER:_____ RBB BLK IQF FLR H2O (SOIL) STRW RSP CANNED OIL FOLIAGE/TISSUE:_____	1	ZL-GAL WP-LG MY-LG POLY VIAL 1L AMB (8OZ JAR) ZL-SM WP-SM MY-SM GL VIAL 1 GAL POLY 4OZ JAR OTHER:_____ SYR WAX CENT TUBE SOIL BAG
3	BB CHRY FRESH EXT PREP OTHER:_____ RBB BLK IQF FLR (H2O) SOIL STRW RSP CANNED OIL FOLIAGE/TISSUE:_____	2	ZL-GAL WP-LG MY-LG POLY VIAL (1L AMB) 8OZ JAR ZL-SM WP-SM MY-SM GL VIAL 1 GAL POLY 4OZ JAR OTHER:_____ SYR WAX CENT TUBE SOIL BAG
	BB CHRY FRESH EXT PREP OTHER:_____ RBB BLK IQF FLR H2O SOIL STRW RSP CANNED OIL FOLIAGE/TISSUE:_____		ZL-GAL WP-LG MY-LG POLY VIAL 1L AMB 8OZ JAR ZL-SM WP-SM MY-SM GL VIAL 1 GAL POLY 4OZ JAR OTHER:_____ SYR WAX CENT TUBE SOIL BAG

Comments: (SPL 21017 08) While the Sample ID (AGSW-2) and Collect Date/Time (4/21/21, 08:20) match from container label to COC, the lab ID on the container says 10556231-001 and the COC says 10556143024. Client contacted 4/22/21 to confirm sample is correct. CH.

Attachment 6: Schedule for the planned corrective action implementation

Proposed Corrective Action Schedule
Former Holyldale golf Course
Hollydale Golf Course
Plymouth, Minnesota
Project B1904484.00

Task	Planned Start	Planned End
Bidding and Contractor Selection	5/28/2012	6/14/2021
Mobilization	6/28/2021	6/30/2021
Stormwater and erosion control measures installation	6/28/2021	6/30/2021
Site clearing	6/30/2021	7/2/2021
Soil excavation/disposal	7/5/2021	7/23/20210
Confirmation sampling and analysis	7/5/2021	7/23/20210
Demobilization	7/26/2021	7/27/2021
Final Reporting	8/1/2021	9/1/2021

Attachment 7: Corrective action volume calculations

Estimated Contaminated Soil Volumes
Former Hollydale Golf Course
Plymouth, Minnesota

Location Description	Primary Future Land Use	Area (SF)	Depth (FT)	Volume (CY)	Volume (TN)
Practice Green	Residential	7,600	1	281	394
Hole 1	Residential	4,700	1	174	244
Hole 2	Residential	4,800	1	178	249
Hole 3	Residential	3,820	1	141	198
Hole 4	Residential	3,850	1	143	200
Hole 5	Residential	5,200	1	193	270
Hole 6	Residential	5,130	1	190	266
Hole 7	Residential	5,450	1	202	283
Hole 8	Residential	5,000	1	185	259
Hole 9	Residential	5,100	1	189	264
Hole 10	Residential	5,510	1	204	286
Hole 11	Residential	6,025	1	223	312
Hole 12	Residential	6,150	1	228	319
Hole 13	Residential	6,600	1	244	342
Hole 14	Residential	7,700	1	285	399
Hole 15	Residential	6,450	1	239	334
Hole 16	Residential	5,900	1	219	306
Hole 17	Residential	5,500	1	204	285
Hole 18	Residential	6,200	1	230	344
AST Tanks	Residential	550	3	61	92
Mixing Area #1	Residential	410	4	61	91
Mixing Area #2	Residential	2,500	4	370	556
			Totals	**4,444**	**6,221**