

APPENDIX D

Field Forms, Boring Logs, Well Construction Logs, and Groundwater Sampling Forms

SOIL BORING LOG

BORING/PIT NO: SB-001

SHEET 1 OF 16

DATE: 10/11/21

PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

BORING PIT/SITE LOCATION PLAN:

SEC: TWN: RGE: LAT: LONG:

SB-001



DRILLING CO: E2CR

DRILL CREW: Daryl Donald + Kyle

DRILLING/TRENCHING METHOD: *dyper* ~~GEOPROBE~~

PIT DIMENSIONS: LENGTH WIDTH 8" DEPTH 28'

GROUNDWATER LEVELS *avg 19.5'*

DATE	ACTUAL TIME	DEPTH BLS
10/11/21		19 1/2'

10/11/21

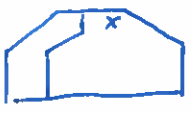
19 1/2'

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/>	USCS	REMARKS	Moisture (M/W)
				PID <input type="checkbox"/>			
				(PPM)			
5			high plastic silt + sand				
10							
15			gravel				
20			~19.5' GWL				
25			} encountered river rocks				
* 28			end of boring				

PREPARED BY:

SOIL BORING LOG

BORING/PIT NO: SB-004
 SHEET 2 OF 16

DATE: 10/12/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100
 BORING PIT/SITE LOCATION PLAN: SB-004

 SEC: _____ TWN: _____ RGE: _____ LAT: _____ LONG: _____
 DRILLING CO: E2CR
 DRILL CREW: _____
 DRILLING/TRENCHING METHOD: GEOPROBE hollow stem
 PIT DIMENSIONS: LENGTH _____ WIDTH 8" DEPTH 33'
 GROUNDWATER LEVELS
 DATE _____ ACTUAL TIME _____ DEPTH BLS _____

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/>	USCS	REMARKS	Moisture (M/W)
				PID <input type="checkbox"/>			
				(PPM)			
3'			} encountered hard pan mainly silty sand (dark brown) petroleum odor				
5'							
10'							
15'			GWh ~ 19.5'				
20'							
38'			Bedrock ~ 38'				

PREPARED BY: 

SOIL BORING LOG

BORING/PIT NO: SB-002

SHEET 3 OF 16

DATE: 10/13/21

PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

BORING/PIT/SITE
LOCATION PLAN:

SB-002



SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: Darryl + Ronald

DRILLING/TRENCHING METHOD: hollow stem GEOPROBE

PIT DIMENSIONS: LENGTH WIDTH 8" DEPTH

GROUNDWATER LEVELS

DATE	ACTUAL TIME	DEPTH BLS
10/13/21		~20'

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/>	USCS	REMARKS	Moisture (M/V)
				PID <input type="checkbox"/>			
				(PPM)			
0			Dark brown silty sand w/ gravel				
5			some bricks encountered				
10			} some bricks @ ~13'-15'				
15							
20			~GWL @ 20'				
25							
29			end of boring @ 28'				

PREPARED BY:

[Signature]

SOIL BORING LOG

BORING/PIT NO: **SB-003**

SHEET **4** OF **16**

DATE: **10/14/21**

PROJECT NAME: **WMATA Northern Bus Station** PROJECT NO: **0444100**

BORING PIT/SITE
LOCATION PLAN:



SEC: TWN: RGE: LAT: LONG:

DRILLING CO: **E2CR**

DRILL CREW: **Daryl + Bruce**

DRILLING/TRENCHING METHOD: **follow stem** **GEOPROBE**

PIT DIMENSIONS: LENGTH **8'** WIDTH DEPTH **28'**

GROUNDWATER LEVELS

DATE	ACTUAL TIME	DEPTH BLS
10/14/21		20'

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (M/W)
5			7" x 5" concrete core 4" gravel				
10							
15			dark brown silty sand				
20			ngwl = 20				
25							
28			end of boring				

PREPARED BY:

SOIL BORING LOG

BORING/PIT NO: **SB-0045**

SHEET **5** OF **16**

DATE: **10/15/21**

PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

BORING PIT/SITE
LOCATION PLAN:



SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: **Mary + Bruce**

DRILLING/TRENCHING METHOD: GEOPROBE

PIT DIMENSIONS: LENGTH WIDTH **2'4"** DEPTH **26'**

GROUNDWATER LEVELS

DATE	ACTUAL TIME	DEPTH BLS
10/15/21		4.8'

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (M/W)
0			3" 7" concrete "3" gravel				
5			light brown silty sand + gravel				
10			↓			staining	
15			FGS @ 15' (moist FGS + some gravel)				
20		4.8'	↓				
25			sandy silt + FGS				
26			26' - 26' FOR				

PREPARED BY:

[Handwritten Signature]

SOIL BORING LOG

BORING/PIT NO: SB-004D

SHEET 6 OF 16

DATE: 10/14/21

PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

BORING PIT/SITE LOCATION PLAN:



SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

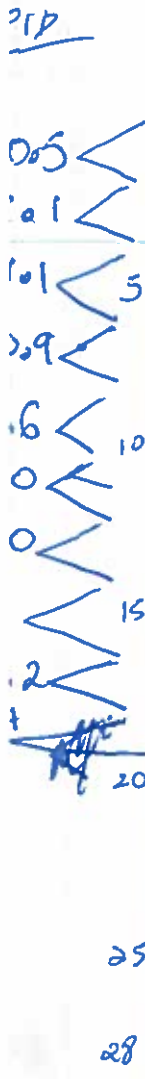
DRILL CREW: Bruce + Michael Moray

DRILLING/TRENCHING METHOD: GEOPROBE

PIT DIMENSIONS: LENGTH WIDTH 2" DEPTH 28'

GROUNDWATER LEVELS

DATE	ACTUAL TIME	DEPTH BLS
10/14/21		~18'




DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input checked="" type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (M/V)
0-0.5			3" concrete				
0.5-1			2" gravel				
1-5			2-5 - brown silty sand + gravel			staining @ ~ 3 1/2'	
5-9			grey / yellow silty sand			staining @ ~ 18'	
9-10	SB-004SS (8'-10')						
10-15			gravel + silty sand (grey + yellow)				
15-16			15-16 - silty sand			odor + staining	
16-18			16-18 - interface (shear) silty sand				
18-19	GWL @ 18'		↓ wet				
19-20			high plastic silt + FGs				
20-25							
25-28			26-28 = weathered rock + brown FGs + mica				
28			ROD @ 28' Hard refusal				

PREPARED BY:

SOIL BORING LOG

BORING/PIT NO: **SB-006D**
 SHEET **7** OF **16**

DATE: 10/15/21	PROJECT NAME: WMATA Northern Bus Station	PROJECT NO: 0444100
BORING PIT/SITE LOCATION PLAN:	SEC: _____ TWN: _____ RGE: _____	LAT: _____ LONG: _____
	DRILLING CO: E2CR	
	DRILL CREW: Manoj + Bruce	
	DRILLING/TRENCHING METHOD: GEOPROBE	
	PIT DIMENSIONS: LENGTH _____ WIDTH 2 1/4" DEPTH 33'	
GROUNDWATER LEVELS		
DATE	ACTUAL TIME	DEPTH BLS
10/15/21	10	~ 18 1/2



DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input checked="" type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (M/W)
0			8" core.				
0			2" gravel.				
0-5			brown/yellow silty sand.				
0-5			+ FGS mix			staining @ 6-8	
0-10			~ 8-9 → quartz + gravel			8-10	
10-15			brown/grey silty sand.				
10-15			mica pieces				
10-15	SB-006SS (14-16)		~ 15' (moist)				
15-20			very low recovery (~10%)				
15-20			FGS + mica (moist)				
20-25			sandy silt (wet)			stain + odor	
20-25			23' FGS.				
25-30			2 FGS (grey) + sandy silt mix.			stain + odor	
25-30			wet weathered rock				
30							

PREPARED BY: 

↓
 mica, weathered rocks + FGS
 33' RGS - refusal.

SOIL BORING LOG

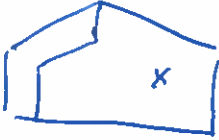
BORING/PIT NO: SB-0055/

SHEET 8 OF 15

DATE: 10/15/21

PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

BORING PIT/SITE LOCATION PLAN:



SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: Manoj + Bruce

DRILLING/TRENCHING METHOD: GEOPROBE

PIT DIMENSIONS: LENGTH WIDTH 24" DEPTH 13 1/2'

GROUNDWATER LEVELS

DATE	ACTUAL TIME	DEPTH BLS

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/>	USCS	REMARKS	Moisture (M/V)
				PID <input checked="" type="checkbox"/> (PPM)			
35.0							
70.3							
5	<u>SB-0055 (2-4')</u>		<u>7-8" core 2" gravel FGS (brown) + silty sand</u>			<u>odor (gas) + odor @ 3' + 5'</u>	
10						<u>odor</u>	
15			<u>11' wet soil @ 11" 11-13' = pea gravel wet</u>			<u>odor</u>	
			<u>EOD @ 13.5' refusal.</u>				
			<u>* Did not encounter groundwater</u>				
20							
25							

35.0
70.3
5A07
00.1
4A07
5A.3
00.15

PREPARED BY:

SOIL BORING LOG

BORING/PIT NO: *SB-00285*

SHEET *9* OF *15*

DATE: *10/19/21*

PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

BORING PIT/SITE LOCATION PLAN:



SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: *Mary + Bruce*

DRILLING/TRENCHING METHOD: GEOPROBE

PIT DIMENSIONS: LENGTH WIDTH *2 1/4"* DEPTH *15'*

GROUNDWATER LEVELS

DATE	ACTUAL TIME	DEPTH BLS
<i>10/19</i>		

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/>	USCS	REMARKS	Moisture (M/W)
				PID <input type="checkbox"/> (PPM)			
<i>0.1</i>			<i>6" core</i>				
<i>0.3</i>			<i>2" gravel</i>				
<i>0.3</i>			<i>grey FGS with small gravel</i>				
<i>0.3</i>			<i>silty sand + FGS (yellow)</i>				
<i>1.3</i>	<i>SB-002851 (8-10)</i>		<i>min w/mica</i>				
<i>0.1</i>			<i>FGS w/ gravel</i>				
<i>0.4</i>			<i>weathered weathered rock & gravel</i>				
<i>0.6</i>			<i>ROB @ 15' refusal</i>				
			<i>* Did not encounter groundwater</i>				

PREPARED BY: *[Signature]*

SOIL BORING LOG

BORING/PIT NO: SB-0020

SHEET 10 OF 16

DATE: 10/18/21

PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

BORING PIT/SITE LOCATION PLAN:



SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: Mary + Bruce

DRILLING/TRENCHING METHOD: GEOPROBE

PIT DIMENSIONS: LENGTH WIDTH 2 1/4" DEPTH

GROUNDWATER LEVELS

DATE	ACTUAL TIME	DEPTH BLS

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/>	USCS	REMARKS	Moisture (M/W)
				PID <input checked="" type="checkbox"/> (PPM)			
0.1			~6" concrete				
0.4			1" gravel				
0.2	5		FGS + gravel + mica (yellow)				
0.5			6-8 (wet) - FGS + gravel				
0.6	10		8-10 = pea gravel				
0.6			↓ 12' FGS + pea gravel				
0.1			silty sand + pea gravel				
0.9	15		pea gravel				
823	SB-002551 (16-18)		16' silty sand (black color)			gas odor + heavy stain @ ~17 to 18'	
	SB-002552 (19 1/2 - 19 1/2)		@ 19 wet product			@ 19' (heavy stain - product)	
20			19-20: weathered rock				

PREPARED BY:

SOIL BORING LOG

BORING/PIT NO: SB-001

SHEET 0011 OF 16

DATE: 10/18/21

PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

BORING PIT/SITE LOCATION PLAN:



SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: Manoj & Bruce

DRILLING/TRENCHING METHOD: GEOPROBE

PIT DIMENSIONS: LENGTH WIDTH 2 1/4" DEPTH 6'

GROUNDWATER LEVELS

DATE	ACTUAL TIME	DEPTH BLS

26.0
2.0
3.3

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/>	USCS	REMARKS	Moisture (MMV)
				PID <input type="checkbox"/> (PPM)			
0.0 - 0.5			6" concrete				
0.5 - 1.0			6" gravel				
1.0 - 1.5			8" concrete				
1.5 - 2.0	SB-00155 (1-6)		reddish/grey silty sand + weathered rock				
2.0 - 2.5							
2.5 - 3.0							
3.0 - 3.5			Refusal		EOB @ 6'		

PREPARED BY:

SOIL BORING LOG

BORING/PIT NO: *SB-001*

SHEET *# 12* OF *16*

DATE: *10/18/21*

PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

BORING PIT/SITE LOCATION PLAN:



SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: *Marioj + Bruce*

DRILLING/TRENCHING METHOD: GEOPROBE

PIT DIMENSIONS: LENGTH WIDTH *2 1/4"* DEPTH *5'*

GROUNDWATER LEVELS

DATE	ACTUAL TIME	DEPTH BLS

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/>	USCS	REMARKS	Moisture (M/W)
				PID <input checked="" type="checkbox"/> (PPM)			
0.5			6" core				
0.0			6" gravel				
0.4 - 5'			8" core red + grey FGS				
			4-5' - weathered rock / crushed rocks				
			EOB @ 5'				

PREPARED BY: *[Signature]*

SOIL BORING LOG

BORING/PIT NO: SB-003D

SHEET 13 OF 16

DATE: 10/19/21

PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

BORING PIT/SITE LOCATION PLAN:



SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: Marcy

DRILLING/TRENCHING METHOD: GEOPROBE

PIT DIMENSIONS: LENGTH WIDTH DEPTH

GROUNDWATER LEVELS

DATE	ACTUAL TIME	DEPTH BLS

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (M/W)
<p>1.5</p> <p>2.1</p> <p>3.5</p> <p>5.4</p>	<p>5</p> <p>SB-003SS (6-85)</p>		<p>6" - concrete</p> <p>6" - gravel</p> <p>8" - concrete</p> <p>↓ silty sand</p> <p>4-5 → crushed quartz</p> <p>↓ silty sand</p> <p>7 gravel + FGS + weathered rock</p> <p>8 1/2' ROB - Refusal</p>				

PREPARED BY:

SOIL BORING LOG

BORING/PIT NO: *SB-0035*

SHEET *14* OF *16*

DATE: *10/19/21*

PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

BORING PIT/SITE LOCATION PLAN:



SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: *Manej*

DRILLING/TRENCHING METHOD: GEOPROBE

PIT DIMENSIONS: LENGTH WIDTH DEPTH

GROUNDWATER LEVELS

DATE	ACTUAL TIME	DEPTH BLS

1.6
1.3
1.02
1.4

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input checked="" type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (M/W)
5			<i>6" - concrete</i> <i>6" - gravel</i> <i>8" concrete</i> <i>silly sand + quartz.</i>				
8			<i>6'</i> <i>weathered rock</i> <i>EOBC @ 8' refusal</i>				

PREPARED BY:

SOIL BORING LOG

BORING/PIT NO: ^{SB-}007 D
 SHEET 15 OF 16

DATE: 10/19/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100
 BORING PIT/SITE LOCATION PLAN: SEC: TWN: RGE: LAT: LONG:
 DRILLING CO: E2CR
 DRILL CREW:
 DRILLING/TRENCHING METHOD: GEOPROBE
 PIT DIMENSIONS: LENGTH WIDTH 2 1/4" DEPTH 46"
 GROUNDWATER LEVELS
 DATE ACTUAL TIME DEPTH BLS



DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/>	USCS	REMARKS	Moisture (M/W)
				PID <input type="checkbox"/>			
Moisture (M/W)							
0-7 2-3			7" core + 4 1/2" gravel FGS + silty sand w/ mica				
5	SB-007SS (4-6)		↓ @6' crushed rocks w/ mica			EOB @ 6' refusal	

0-7
2-3
1350
6

PREPARED BY:

SOIL BORING LOG

BORING/PIT NO: **SB-008**
SHEET **1** OF

DATE: 12/6/21	PROJECT NAME: WMATA Northern Bus Station		PROJECT NO: 0444100
BORING PIT/SITE LOCATION PLAN:	SEC: TWN: RGE: LAT: LONG:		
	DRILLING CO: E2CR		
	DRILL CREW:		
	DRILLING/TRENCHING METHOD:	GEOPROBE	
	PIT DIMENSIONS: LENGTH WIDTH DEPTH		
	GROUNDWATER LEVELS		
	DATE	ACTUAL TIME	DEPTH BLS

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (M/W)
0.2			silty sand (dark brown) " 1' of organic layer. brown silty sand.			0-4' - very low recovery.	
0.3							
0.4							
0.2							
0.6							
0.4							
0.6							
0.4			↓ 16'				
0.7			" 16.5 wet				
0.6	Sample SB-008-5 20-22'		↓ reddish/yellow high plastic silt				
1.0							
0.5			↓ red/orange sandy silt w/ med				
0.2			↓ grey FGS (wet) @ " 23				
0.1			↓ } - red/orange sandy silt w/ med				
0.1			↓ 28'				
0.1			↓ refusal @ 30'				

weathered
rock @ top

PREPARED BY:

[Signature]

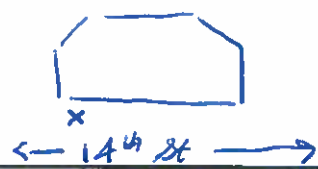
MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: **SB-008D**

PERMIT NO:

DATE: PROJECT NAME: **WMATA Northern Bus Station** PROJECT NO: **0444100**

WELL SITE LOCATION PLAN: SEC: TWN: RGE: LAT: LONG:

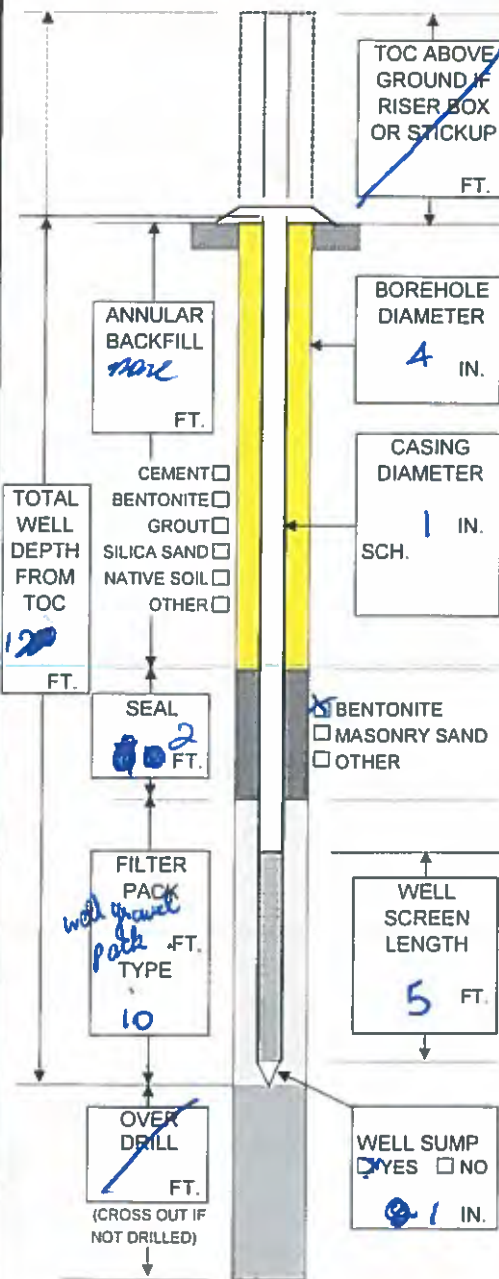


DRILLING CO: **E2CR**

DRILL CREW: **Darryl, Donald & Kyle**

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER 1 IN
 SLOT: 0.010 0.020 OTHER IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO
 OTHER

PAD: 2'X2' 4'X4' OTHER none

CUTTINGS: DRUMMED SPREAD NUMBER OF DRUMS
 OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER
 TIME: 10 MIN 20 MIN OTHER MIN
 AMOUNT: 5 GAL 10 GAL OTHER GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR

EVIDENT ODOR: YES NO TYPE

DEVELOPMENT WATER: DRUMMED SPREAD NUMBER OF DRUMS
 TREATED POTW OTHER

WATER LEVEL: INITIAL _____ FT BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).

PREPARED BY: *[Signature]*

MONITORING WELL CONSTRUCTION DATA

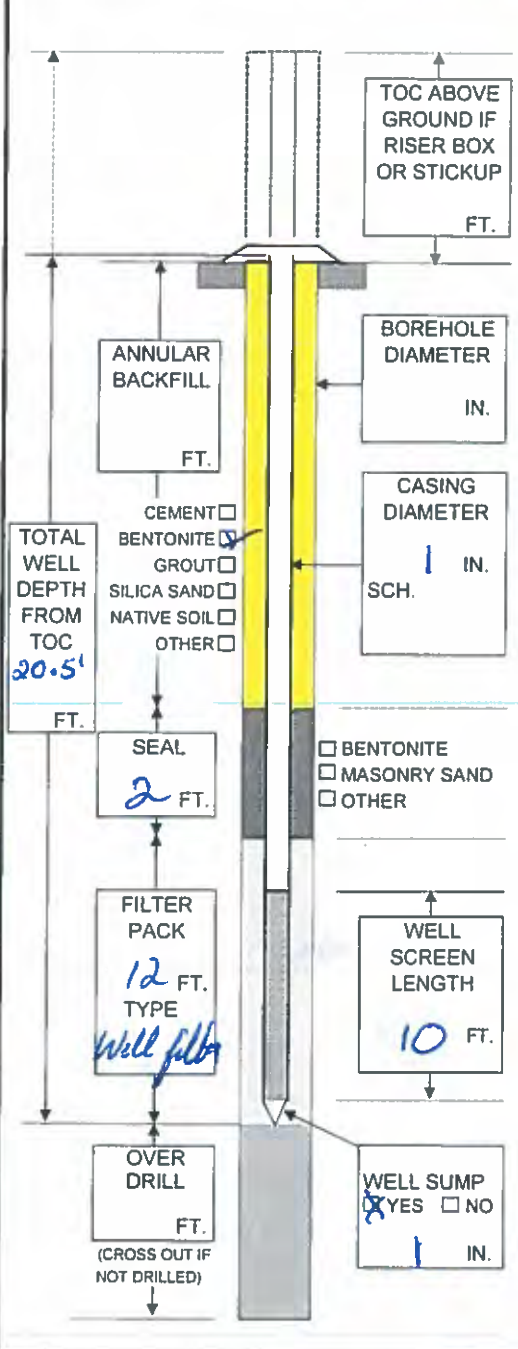
WELL/BORING NO: SB-0085

PERMIT NO:

DATE: PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

WELL SITE LOCATION PLAN: SEC: TWN: RGE: LAT: LONG:
 DRILLING CO: E2CR
 DRILL CREW: Daryl, Donald & Kyle
 WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER IN
 SLOT: 0.010 0.020 OTHER IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO
 OTHER none

PAD: 2'X2' 4'X4' OTHER none

CUTTINGS: DRUMMED NUMBER OF DRUMS
 SPREAD OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER
 TIME: 10 MIN 20 MIN OTHER MIN
 AMOUNT: 5 GAL 10 GAL OTHER GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR

EVIDENT ODOR: YES NO TYPE

DEVELOPMENT WATER: DRUMMED NUMBER OF DRUMS
 SPREAD TREATED POTW OTHER

WATER LEVEL: INITIAL FT 8TOC BLS

DATE: FT BELOW TOC
 DATE: FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only)

PREPARED BY:

MONITORING WELL CONSTRUCTION DATA

TMW/

WELL/BORING NO: SB-009D

PERMIT NO:

DATE: 12/7/21

PROJECT NAME: WMATA Northern Bus Station

PROJECT NO: 0444100

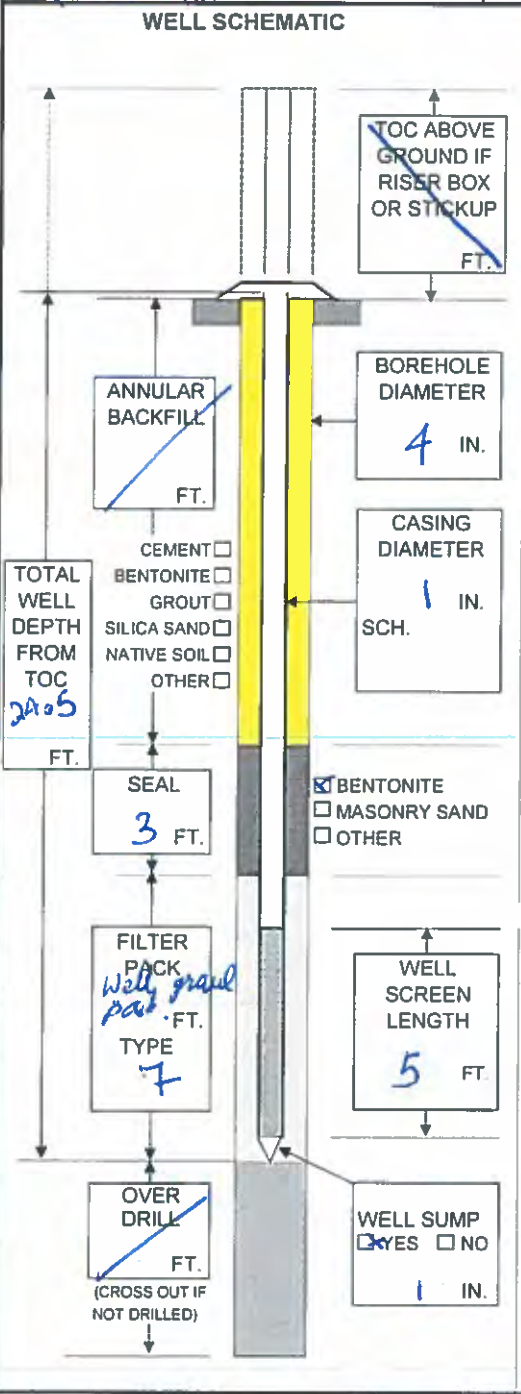


SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: Donnell + [unclear] Donald

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 4" 6" OTHER 1 IN
 SLOT: 0.010 0.020 OTHER IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO
 OTHER

PAD: 2'X2' 4'X4' OTHER none

CUTTINGS: DRUMMED SPREAD NUMBER OF DRUMS OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER

TIME: 10 MIN 20 MIN OTHER MIN
 AMOUNT: 5 GAL 10 GAL OTHER GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR

EVIDENT ODOR: YES NO TYPE

DEVELOPMENT WATER: DRUMMED SPREAD NUMBER OF DRUMS TREATED POTW OTHER

WATER LEVEL: INITIAL _____ FT BTOC BLS

DATE: _____ FT BELOW TOC

DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

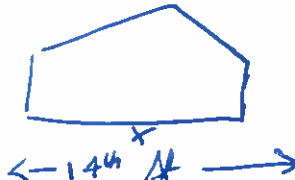
Well removed from site upon completion of sampling (temp wells only).

PREPARED BY: [Signature]

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: 01 MW/SB-009
 PERMIT NO:

DATE: 12/7/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

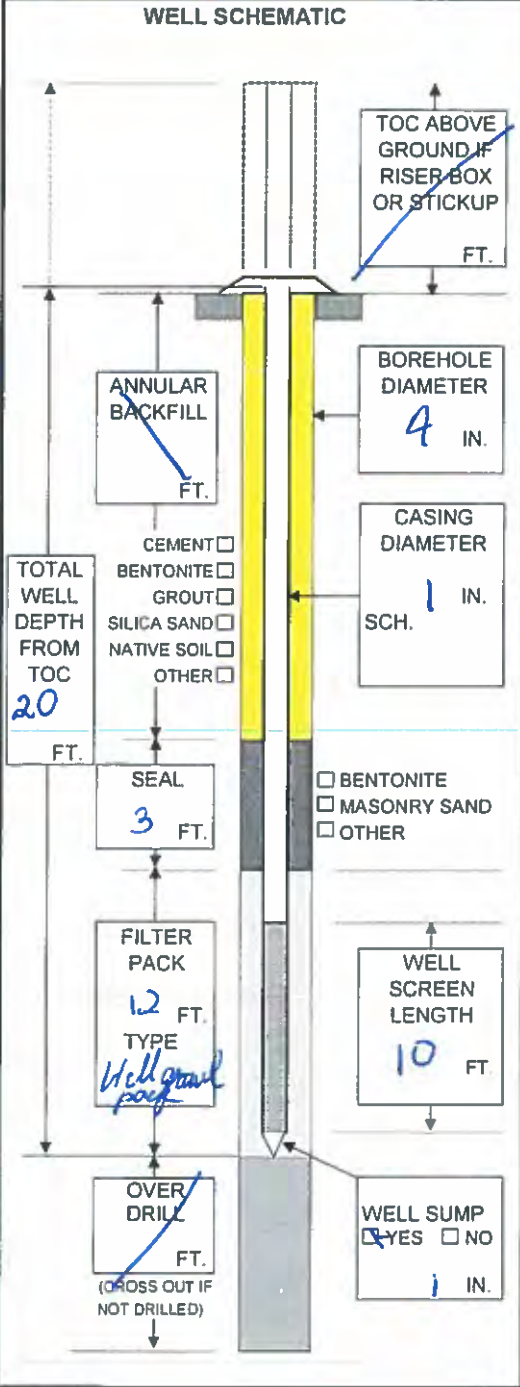
WELL SITE LOCATION PLAN: 

SEC: _____ TWN: _____ RGE: _____ LAT: _____ LONG: _____

DRILLING CO: E2CR

DRILL CREW: Darrell + Donald

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER



INSTALLATION DATA

DECON: STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE _____

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER 1 IN
 SLOT: 0.010 0.020 OTHER _____ IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER _____ IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO _____
 OTHER

PAD: 2'X2' 4'X4' OTHER _____

CUTTINGS: DRUMMED SPREAD NUMBER OF DRUMS _____
 OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER

TIME: 10 MIN 20 MIN OTHER _____ MIN
 AMOUNT: 5 GAL 10 GAL OTHER _____ GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR
 EVIDENT ODOR: YES NO TYPE _____

DEVELOPMENT WATER: DRUMMED SPREAD NUMBER OF DRUMS _____
 TREATED POTW OTHER

WATER LEVEL: INITIAL _____ FT BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).

PREPARED BY: [Signature]

SOIL BORING LOG

BORING/PIT NO: *SB-010*

SHEET *3* OF

DATE: <i>12/7/21</i>	PROJECT NAME: WMATA Northern Bus Station	PROJECT NO: 0444100
BORING PIT/SITE LOCATION PLAN:	SEC: TWN: RGE: LAT: LONG:	
	DRILLING CO: E2CR	
	DRILL CREW: <i>Narrell + Donald</i>	
	DRILLING/TRENCHING METHOD: GEOPROBE	
	PIT DIMENSIONS: LENGTH WIDTH DEPTH	
GROUNDWATER LEVELS		
DATE	ACTUAL TIME	DEPTH BLS

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/>	USCS	REMARKS	Moisture (M/W)
				PID <input type="checkbox"/> (PPM)			
0.3	<i>SB-01055 (4-6)</i>		<i>w/ of top soil</i>				
0.2			<i>↓ 4' } silty sand w/ quartz</i>				
1.8			<i>↓ 3' } red sandy silt w/ quartz</i>				
0.3			<i>↓ 2' } grey sandy silt</i>				
0.2			<i>↓ 13' weathered rock + quartz</i>				
0.2			<i>ROB @ 13'</i>				
0.2							
10							
15							
20							
25							
30							

PREPARED BY:

MONITORING WELL CONSTRUCTION DATA

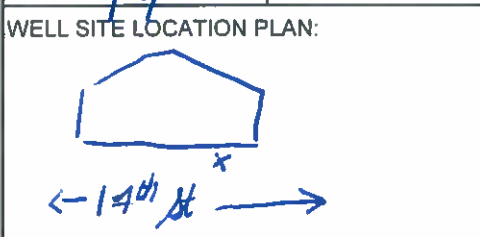
WELL/BORING NO:

PERMIT NO: *SB/TMW-0105*

DATE: *12/7/21*

PROJECT NAME: WMATA Northern Bus Station

PROJECT NO: 0444100



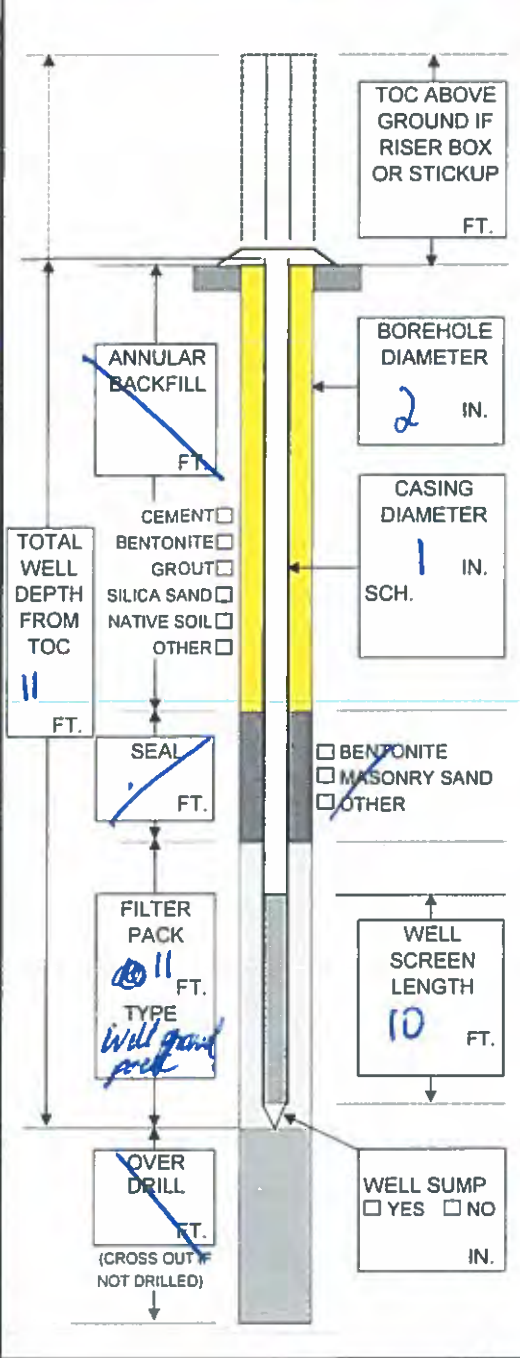
SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW:

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER *1* IN
 SLOT: 0.010 0.020 OTHER

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO
 OTHER *none*

PAD: 2'X2' 4'X4' OTHER *none*

CUTTINGS: DRUMMED SPREAD NUMBER OF DRUMS
 OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER
 TIME: 10 MIN 20 MIN OTHER MIN
 AMOUNT: 5 GAL 10 GAL OTHER GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR
 EVIDENT ODOR: YES NO TYPE

DEVELOPMENT WATER: DRUMMED SPREAD NUMBER OF DRUMS
 TREATED POTW OTHER

WATER LEVEL: INITIAL _____ FT BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).


NO GW encountered

PREPARED BY:

SOIL BORING LOG

BORING/PIT NO: SB-011

SHEET OF

DATE: <u>12/7/21</u>	PROJECT NAME: <u>WMATA Northern Bus Station</u>	PROJECT NO: <u>0444100</u>
BORING PIT/SITE LOCATION PLAN: 	SEC: <u> </u> TWN: <u> </u> RGE: <u> </u> LAT: <u> </u> LONG: <u> </u>	
	DRILLING CO: <u>E2CR</u>	
	DRILL CREW: <u>Danell + Donald</u>	
	DRILLING/TRENCHING METHOD: <u> </u>	GEOPROBE
	PIT DIMENSIONS: LENGTH <u> </u> WIDTH <u> </u> DEPTH <u> </u>	
GROUNDWATER LEVELS		
	DATE	ACTUAL TIME
		DEPTH BLS

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input checked="" type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (M/W)
1.7			w/ organic soil 0-4' brown silty sand w/ quality				
0.7							
1.3	5		4-8' : brown silty sand + FGS thin low recovery				
1.2							
1228 1668			8-12' = plastic silt (moist) * gasoline odor noted @ 10' + staining } low recovery				
1668	SB-011SS (10-12')						
473			12-14' - plastic silt + USGS rock layers - moist + heavy odor FOB @ 14' refusal				
15							
20							
25							
30							


PREPARED BY:

MONITORING WELL CONSTRUCTION DATA

TMW 11

WELL/BORING NO: SB-002
 PERMIT NO:

DATE: 12/7/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

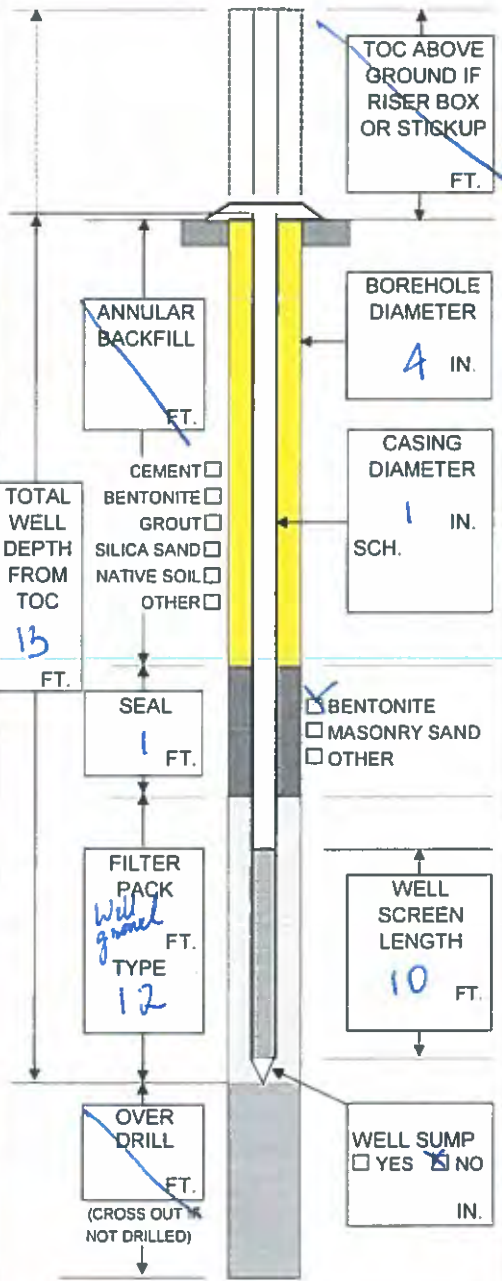
WELL SITE LOCATION PLAN: 

SEC: _____ TWN: _____ RGE: _____ LAT: _____ LONG: _____

DRILLING CO: E2CR

DRILL CREW: _____


WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER

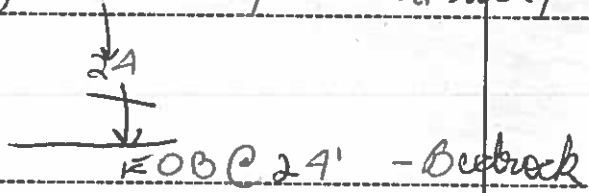
WELL SCHEMATIC		INSTALLATION DATA	
		<p>DECON: <input checked="" type="checkbox"/> STEAM CLEAN <input type="checkbox"/> HIGH PRESSURE WASH <input type="checkbox"/> SOAP WASH <input type="checkbox"/> OTHER</p> <p>CASING TYPE: <input checked="" type="checkbox"/> PVC <input checked="" type="checkbox"/> STAINLESS <input type="checkbox"/> TEFLON <input type="checkbox"/> OTHER JOINTS: <input checked="" type="checkbox"/> THREADED <input type="checkbox"/> WELDED <input type="checkbox"/> COUPLED <input type="checkbox"/> SCREWED <input type="checkbox"/> OTHER</p> <p>PIT CASING: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> DESCRIBE _____</p> <p>WELL SCREEN: <input checked="" type="checkbox"/> PVC <input checked="" type="checkbox"/> STAINLESS <input type="checkbox"/> TEFLON <input type="checkbox"/> OTHER DIAMETER: <input type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER <u>1</u> IN SLOT: <input checked="" type="checkbox"/> 0.010 <input type="checkbox"/> 0.020 <input type="checkbox"/> OTHER _____ IN</p> <p>DRILLING METHOD: <input type="checkbox"/> SOLID STEM <input type="checkbox"/> HOLLOW STEM <input type="checkbox"/> MUD ROTARY <input type="checkbox"/> AIR ROTARY <input checked="" type="checkbox"/> DIRECT PUSH <input type="checkbox"/> HAND AUGER <input type="checkbox"/> OTHER</p> <p>BIT SIZE: <input type="checkbox"/> 2" <input checked="" type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> 8" <input type="checkbox"/> 12" <input type="checkbox"/> OTHER _____ IN</p> <p>DRILLING MUD: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> WATER <input type="checkbox"/> BENTONITE <input type="checkbox"/> OTHER</p> <p>CENTRALIZER: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>COMPLETION: <input type="checkbox"/> FLUSH MOUNT <input type="checkbox"/> STICKUP <input type="checkbox"/> RISER BOX LOCK TYPE: <input type="checkbox"/> DOLPHIN <input type="checkbox"/> MASTER KEY NO _____ <input type="checkbox"/> OTHER</p> <p>PAD: <input type="checkbox"/> 2'X2' <input type="checkbox"/> 4'X4' <input type="checkbox"/> OTHER _____</p> <p>CUTTINGS: <input type="checkbox"/> DRUMMED NUMBER OF DRUMS _____ <input type="checkbox"/> SPREAD <input type="checkbox"/> OTHER _____</p> <p>DEVELOPMENT METHOD: <input type="checkbox"/> NONE <input type="checkbox"/> BAILING <input type="checkbox"/> PUMPING <input type="checkbox"/> AIR LIFT <input type="checkbox"/> SURGE & BLOCK <input type="checkbox"/> OTHER _____ TIME: <input type="checkbox"/> 10 MIN <input type="checkbox"/> 20 MIN <input type="checkbox"/> OTHER _____ MIN AMOUNT: <input type="checkbox"/> 5 GAL <input type="checkbox"/> 10 GAL <input type="checkbox"/> OTHER _____ GAL</p> <p>WATER BEFORE: <input type="checkbox"/> SILTY <input type="checkbox"/> TURBID <input type="checkbox"/> OPAQUE <input type="checkbox"/> CLEAR WATER AFTER: <input type="checkbox"/> SILTY <input type="checkbox"/> TURBID <input type="checkbox"/> OPAQUE <input type="checkbox"/> CLEAR</p> <p>EVIDENT ODOR: <input type="checkbox"/> YES <input type="checkbox"/> NO TYPE _____</p> <p>DEVELOPMENT WATER: <input type="checkbox"/> DRUMMED NUMBER OF DRUMS _____ <input type="checkbox"/> SPREAD <input type="checkbox"/> TREATED <input type="checkbox"/> POTW <input type="checkbox"/> OTHER</p> <p>WATER LEVEL: INITIAL _____ FT <input type="checkbox"/> BTOC <input type="checkbox"/> BLS</p> <p>DATE: _____ FT BELOW TOC DATE: _____ FT BELOW TOC</p> <p>NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS) <input type="checkbox"/> Well removed from site upon completion of sampling (temp wells only).</p>	

PREPARED BY: _____

SOIL BORING LOG

BORING/PIT NO: **SB-012**
 SHEET **OF**

DATE: 12/8/21	PROJECT NAME: WMATA Northern Bus Station	PROJECT NO: 0444100
BORING PIT/SITE LOCATION PLAN: 	SEC: TWN: _____ RGE: _____ LAT: _____ LONG: _____	
	DRILLING CO: E2CR	
	DRILL CREW: Dannell + Donald	
	DRILLING/TRENCHING METHOD: GEOPROBE	
	PIT DIMENSIONS: LENGTH _____ WIDTH _____ DEPTH _____	
GROUNDWATER LEVELS		
	DATE	ACTUAL TIME
		DEPTH BLS

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input checked="" type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (M/W)	
0-1			} 0-2 dark organic soil } -sandy silt (dark brown)			} low recovery		
0-1								
0-1								
0-2	SB-012SS 6-8'		- FGS + sandy silt (moist) - low recovery wet layer @ 7'					
0-5			} 8-12 - low recovery - silty sand (black/brown) - moist					
0-7								
1-0			} 12-16 - silty sand / FGS (moist)					
1-5								
2-0			} 16-20 wet / grey FGS + gravel } 20 moist / weathered rock / rock (grey)					
2-5								
3-0			<div style="text-align: center;">  </div>					

PREPARED BY: 

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: TMW/SB - 0125
 PERMIT NO:

DATE: 12/8/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

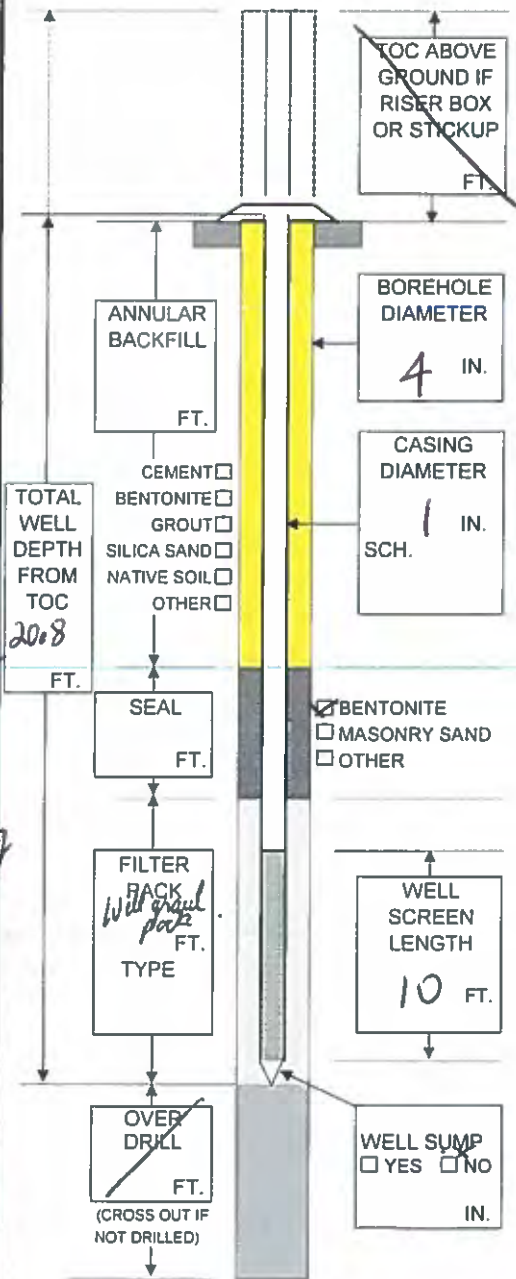
WELL SITE LOCATION PLAN: SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: Harrell + Donald

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECON: STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER 1 IN
 SLOT: 0.010 0.020 OTHER IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO
 OTHER

PAD: 2'X2' 4'X4' OTHER

CUTTINGS: DRUMMED SPREAD NUMBER OF DRUMS
 OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER

TIME: 10 MIN 20 MIN OTHER MIN
 AMOUNT: 5 GAL 10 GAL OTHER GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR

EVIDENT ODOR: YES NO TYPE

DEVELOPMENT WATER: DRUMMED SPREAD NUMBER OF DRUMS
 TREATED POTW OTHER

WATER LEVEL: INITIAL 13 FT BTOC BLS

DATE: FT BELOW TOC
 DATE: FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).

PREPARED BY:

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: TMW/512-0121

PERMIT NO:

DATE: 12/8/21 PROJECT NAME: WMATA Northern Bus Station

PROJECT NO: 0444100

WELL SITE LOCATION PLAN:

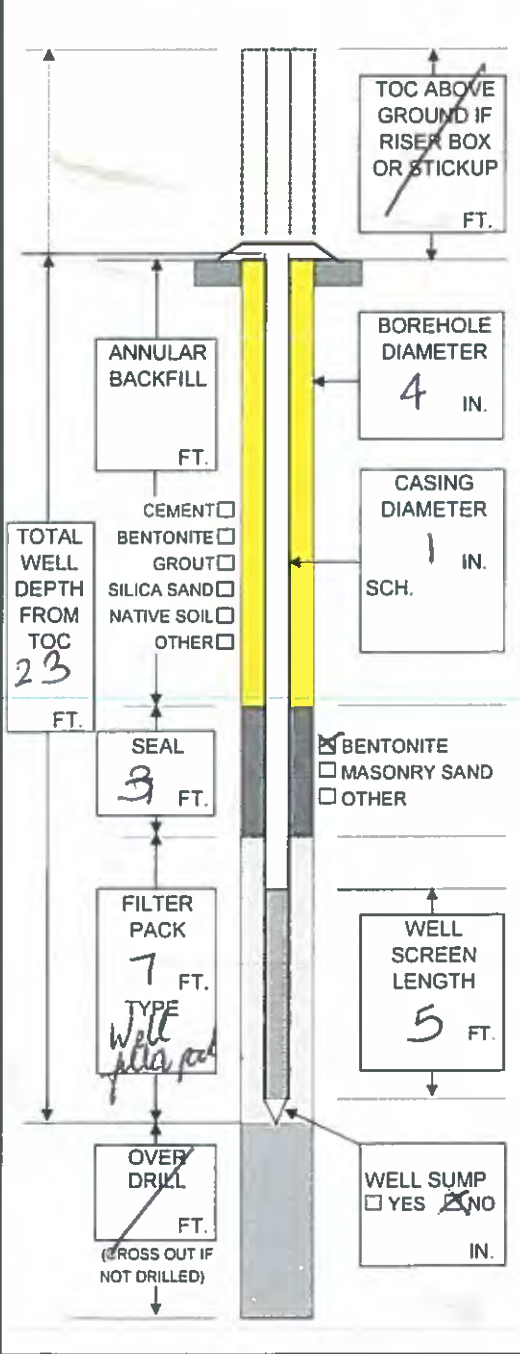
SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: Darrell + Donald

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER 1 IN
 SLOT: 0.010 0.020 OTHER IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO
 OTHER

PAD: 2'X2' 4'X4' OTHER

CUTTINGS: DRUMMED SPREAD OTHER NUMBER OF DRUMS

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER
 TIME: 10 MIN 20 MIN OTHER MIN
 AMOUNT: 5 GAL 10 GAL OTHER GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR
 EVIDENT ODOR: YES NO TYPE

DEVELOPMENT WATER: DRUMMED SPREAD TREATED POTW OTHER NUMBER OF DRUMS

WATER LEVEL: INITIAL 13 FT BTOC BLS

DATE: FT BELOW TOC
 DATE: FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only)

PREPARED BY: [Signature]

SOIL BORING LOG

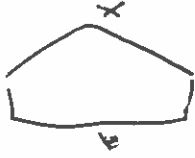
BORING/PIT NO: SB-013

SHEET OF

DATE: 12/8/21

PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

BORING PIT/SITE LOCATION PLAN:



SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW:

DRILLING/TRENCHING METHOD: GEOPROBE

PIT DIMENSIONS: LENGTH WIDTH DEPTH

GROUNDWATER LEVELS

DATE	ACTUAL TIME	DEPTH BLS

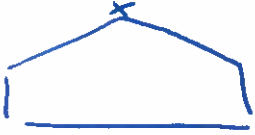
DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (M/W)	
0-1			} 0-2 organic soil + gravel			} low recovery		
0-2				} 2-4 red silty sand (yellow + brown)				
0.6	S							
3-1	Sample SB-013SS 8-10'		} 4-8 - silty sand & brick @ 7' strong det. odor + wet @ 7'-8' - staining					
13-1		10						
0.8			} 8-12 grey FGS + silty sand wet @ 8'-9' - odor					
0.5	B							
1.0			} 12-15 - grey high plastic silt + FGS } 12-16 16- quarts + fine gravel + fine coarse sand (wet)					
			} @ 16-19 - plastic silt + coarse sand (wet)					
20								
			} to 22' - weathered rock					
25								
			EOB / Refusal @ 22' (Bedrock)					
30								

PREPARED BY:

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: SB/TMW-013D
 PERMIT NO:

DATE: 12/9/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

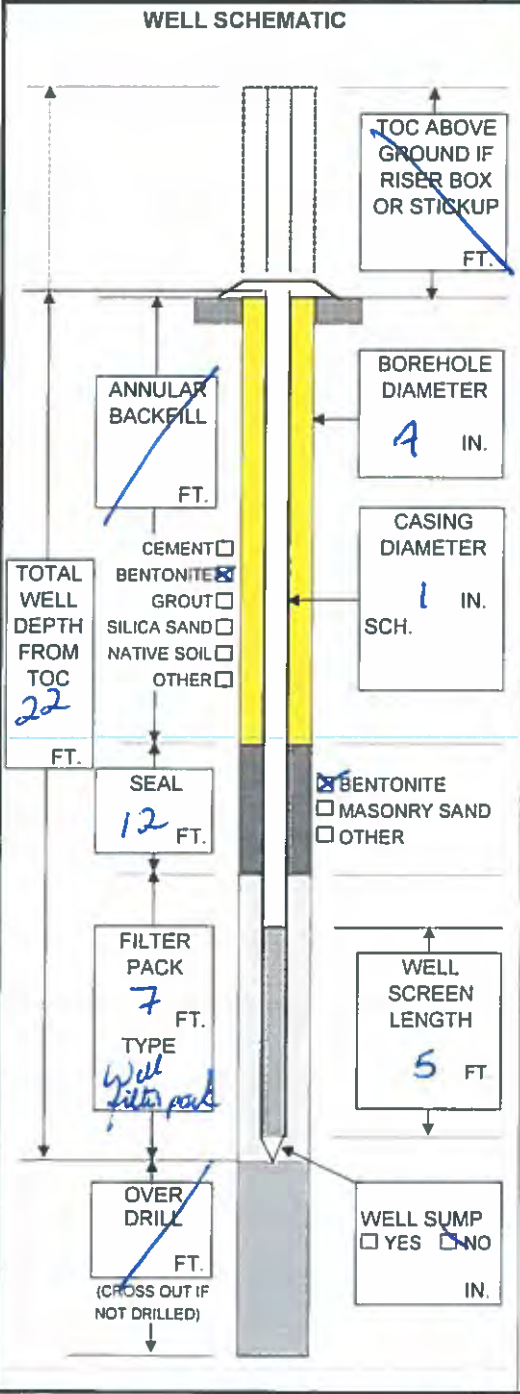
WELL SITE LOCATION PLAN: 

SEC: _____ TWN: _____ RGE: _____ LAT: _____ LONG: _____

DRILLING CO: E2CR

DRILL CREW: Dorrell + Donald

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE _____

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER 1 IN
 SLOT: 0.010 0.020 OTHER _____ IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER _____ IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO. _____
 OTHER none

PAD: 2'X2' 4'X4' OTHER none

CUTTINGS: DRUMMED NUMBER OF DRUMS _____
 SPREAD OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER

TIME: 10 MIN 20 MIN OTHER _____ MIN
 AMOUNT: 5 GAL 10 GAL OTHER _____ GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR
 EVIDENT ODOR: YES NO TYPE _____

DEVELOPMENT WATER: DRUMMED NUMBER OF DRUMS _____
 SPREAD TREATED POTW OTHER

WATER LEVEL: INITIAL 13 FT BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).

PREPARED BY:

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: *SB/TMW-0135*

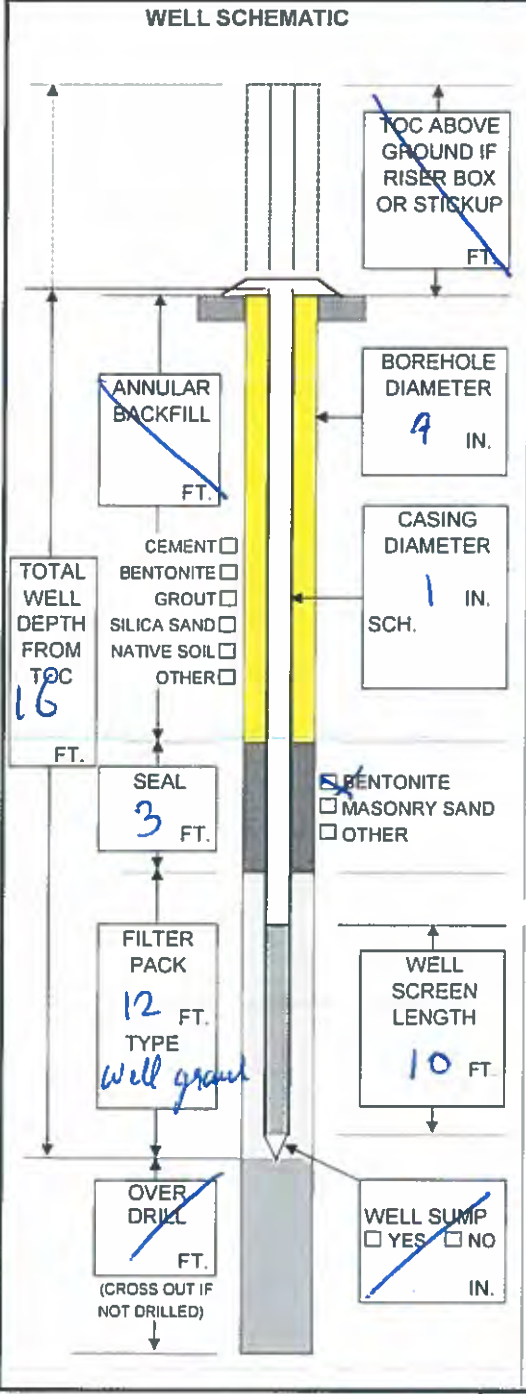
DATE: *12/9/21* PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

WELL SITE LOCATION PLAN: SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: *Darrell + Donald*

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER 1 IN
 SLOT: 0.010 0.020 OTHER IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO.
 OTHER

PAD: 2'X2' 4'X4' OTHER *none*

CUTTINGS: DRUMMED NUMBER OF DRUMS
 SPREAD OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER
 TIME: 10 MIN 20 MIN OTHER MIN
 AMOUNT: 5 GAL 10 GAL OTHER GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR

EVIDENT ODOR: YES NO TYPE

DEVELOPMENT WATER: DRUMMED NUMBER OF DRUMS
 SPREAD TREATED POTW OTHER

WATER LEVEL: INITIAL *wt3* FT. BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

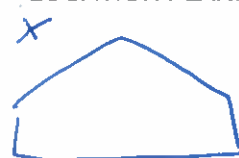
Well removed from site upon completion of sampling (temp wells only).

PREPARED BY:

SOIL BORING LOG

BORING/PIT NO: **SB-014**

SHEET **OF**

DATE: 12/9/21	PROJECT NAME: WMATA Northern Bus Station	PROJECT NO: 0444100
BORING PIT/SITE LOCATION PLAN: 	SEC: TWN:	RGE: LAT:
	DRILLING CO: E2CR	LONG:
	DRILL CREW: Barrett + Donald	
	DRILLING/TRENCHING METHOD: GEOPROBE	
	PIT DIMENSIONS: LENGTH	WIDTH 4" DEPTH
GROUNDWATER LEVELS		
DATE	ACTUAL TIME	DEPTH BLS

Saw Ave

0.1
0.1
0.1
0.2
0.8
1.2
1.70
63

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (M/W)
0-1			0-1 - "6" of top soil 1-3 - FGS + silty sand + concrete bits 3-4 - silty sand + gravel (red)				
0.1							
0.1							
0.2			1-8: Red silty sand - low recovery				
0.8	SB-014 SS		8-10 = red silty sand + crushed bricks				
1.2	8-10'		10-12 = product encasement (sheer + wet) heavy odor				
1.70	SS 10.5		12-16 = tip plastic silt (grey) - very wet + alot of product (sheer) - strong odor				
63			@ 16' - yellow clear wet coarse silty sand + river rocks				
			16-19 - coarse sand				
			@ 20-21 - weathered rock / grey / mica				
			EOB @ 21'				
			Bedrock				
25							
30							

PREPARED BY:

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: SB/TMW-014D

PERMIT NO:

DATE: 12/9/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

WELL SITE LOCATION PLAN: SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

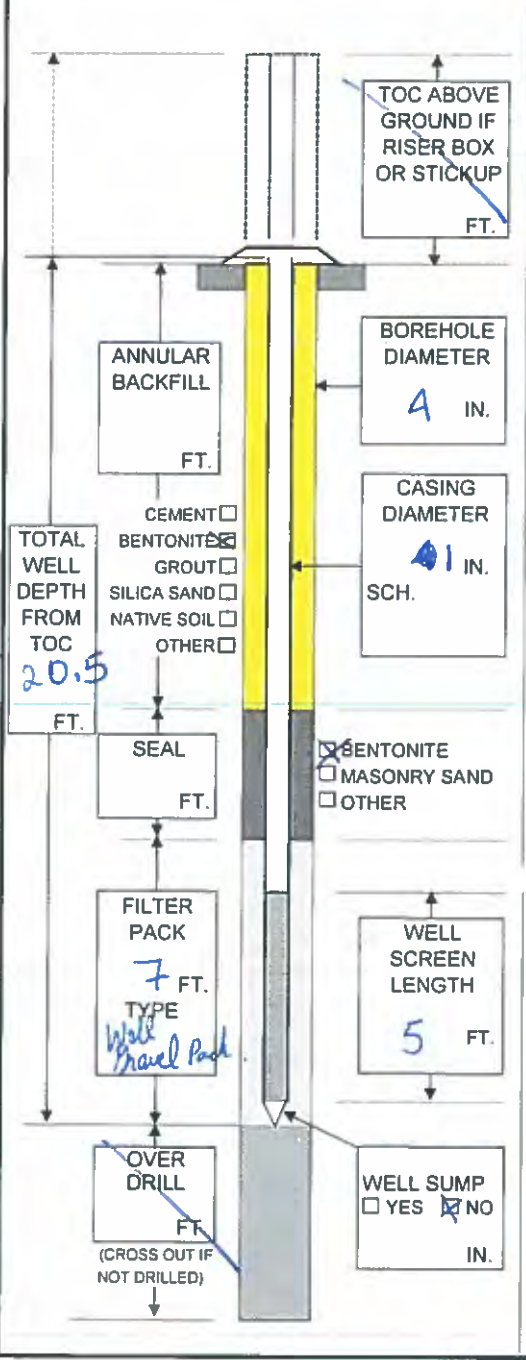
DRILL CREW: Darrell + Donald

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER

Source Ave



WELL SCHEMATIC



INSTALLATION DATA

DECON: STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER 1 IN
 SLOT: 0.010 0.020 OTHER IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO.
 OTHER

PAD: 2'X2' 4'X4' OTHER

CUTTINGS: DRUMMED NUMBER OF DRUMS
 SPREAD OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER
 TIME: 10 MIN 20 MIN OTHER MIN
 AMOUNT: 5 GAL 10 GAL OTHER GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR

EVIDENT ODOR: YES NO TYPE

DEVELOPMENT WATER: DRUMMED NUMBER OF DRUMS
 SPREAD TREATED POTW OTHER

WATER LEVEL: INITIAL 10 1/2 FT BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).

PREPARED BY: *[Signature]*

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: SB/TMW-0145
 PERMIT NO:

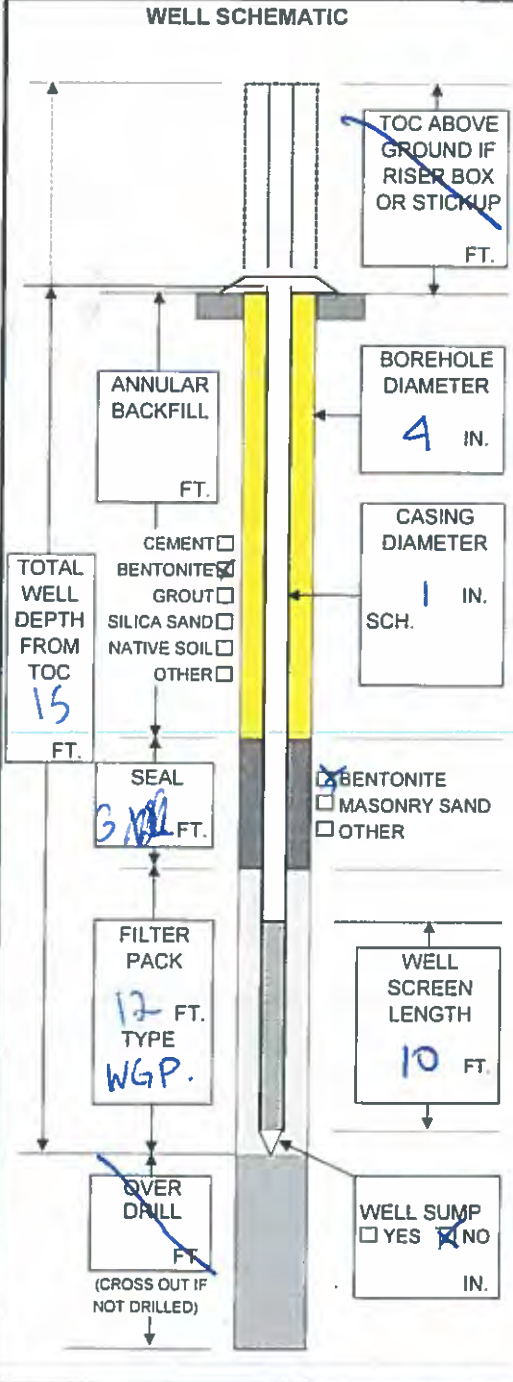
DATE: 12/9/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

WELL SITE LOCATION PLAN: SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: Darrell + Donale

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED SCREWED OTHER

PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER 1 IN
 SLOT: 0.010 0.020 OTHER IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY AIR ROTARY DIRECT PUSH HAND AUGER OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER IN

DRILLING MUD: NONE WATER BENTONITE OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO OTHER

PAD: 2'X2' 4'X4' OTHER none

CUTTINGS: DRUMMED SPREAD NUMBER OF DRUMS _____
 OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT SURGE & BLOCK OTHER
 TIME: 10 MIN 20 MIN OTHER MIN
 AMOUNT: 5 GAL 10 GAL OTHER GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR
 EVIDENT ODOR: YES NO TYPE

DEVELOPMENT WATER: DRUMMED SPREAD NUMBER OF DRUMS _____
 TREATED POTW OTHER

WATER LEVEL: INITIAL -10 1/2 FT BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)
 Well removed from site upon completion of sampling (temp wells only).

PREPARED BY: [Signature]

SOIL BORING LOG

BORING/PIT NO: **SB-017**

SHEET **OF**

DATE: 12/16/21	PROJECT NAME: WMATA Northern Bus Station	PROJECT NO: 0444100
BORING PIT/SITE LOCATION PLAN:	SEC: _____ TWN: _____ RGE: _____	LAT: _____ LONG: _____
	DRILLING CO: E2CR	
	DRILL CREW: _____	
	DRILLING/TRENCHING METHOD: _____	GEOPROBE
	PIT DIMENSIONS: LENGTH _____ WIDTH _____	DEPTH _____
GROUNDWATER LEVELS		
DATE	ACTUAL TIME	DEPTH BLS
12/16/21		~10'

Arkansas Ave

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input checked="" type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (M/W)
0-4			no recovery				
5			yellow silty sand. slight stain @ ~7' GW ~10' (coarse grain sand)				
0.2							
0.4							
10			wet = quartz, gravel + sand, river rocks				
0.2							
15			16-17 - silty sand / weathered rock. EOB @ 17'				
20							

330 PFS
(6-8)

PREPARED BY:

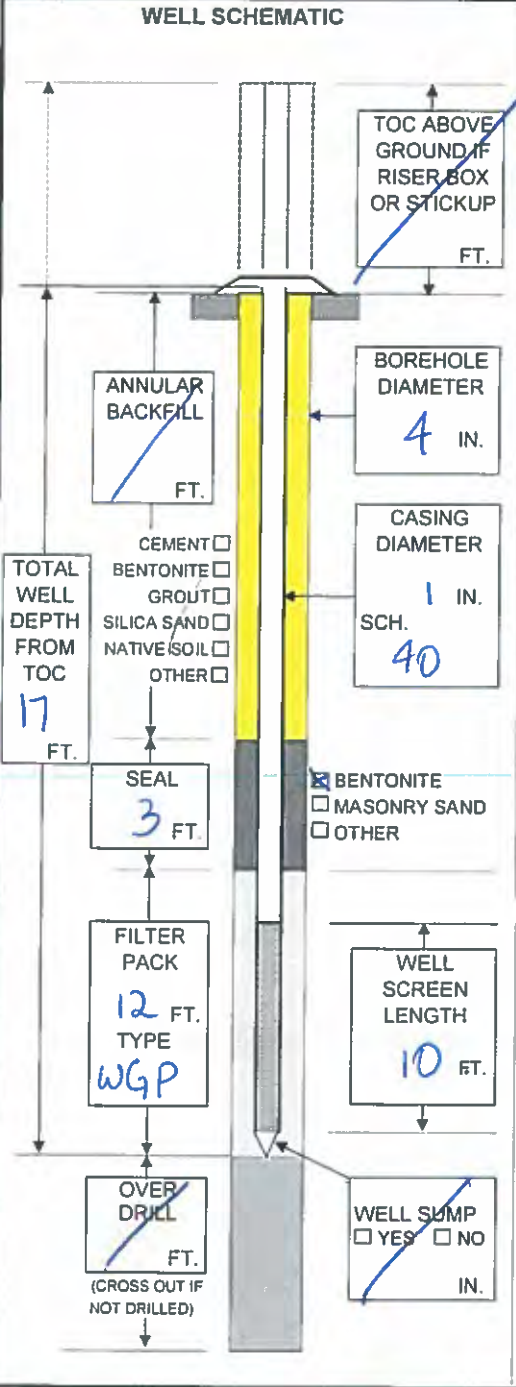
MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: TMW/SB-0175
 PERMIT NO:

DATE: 12/16/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

WELL SITE LOCATION PLAN: SB/TMW-017
Participate

SEC: TWN: RGE: LAT: LONG:
 DRILLING CO: E2CR
 DRILL CREW: Danell + Donald
 WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER



INSTALLATION DATA

DECON: STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER
 PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER 1 IN
 SLOT: 0.010 0.020 OTHER IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER
 BIT SIZE: 2" 4" 6" 8" 12" OTHER IN
 DRILLING MUD: NONE WATER BENTONITE
 OTHER
 CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO
 OTHER
 PAD: 2'X2' 4'X4' OTHER none

CUTTINGS: DRUMMED NUMBER OF DRUMS
 SPREAD OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER
 TIME: 10 MIN 20 MIN OTHER MIN
 AMOUNT: 5 GAL 10 GAL OTHER GAL
 WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR
 EVIDENT ODOR: YES NO TYPE

DEVELOPMENT WATER: DRUMMED NUMBER OF DRUMS
 SPREAD TREATED POTW OTHER

WATER LEVEL: INITIAL 110 FT BTOC BLS
 DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)
 Well removed from site upon completion of sampling (temp wells only).

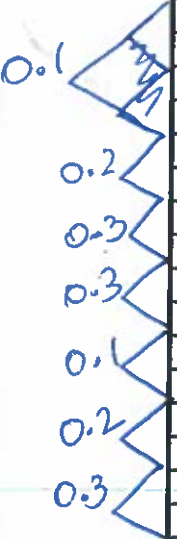
PREPARED BY:

SOIL BORING LOG

BORING/PIT NO: **SB-018**
 SHEET **OF**

DATE: 12/16/21	PROJECT NAME: WMATA Northern Bus Station	PROJECT NO: 0444100
BORING PIT/SITE LOCATION PLAN: SB-018	SEC: _____ TWN: _____ RGE: _____ LAT: _____ LONG: _____	
	DRILLING CO: E2CR	
	DRILL CREW: Darrell + Donald	
	DRILLING/TRENCHING METHOD: _____	GEOPROBE
	PIT DIMENSIONS: LENGTH _____ WIDTH 4" DEPTH 16 1/2'	
GROUNDWATER LEVELS		
	DATE	ACTUAL TIME
	12/16/21	~ 13'

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (MMW)
0-4			<i>very</i> 0-4 - low recovery - dark organic soil				
4-12	SB-018 SS 8'-10'		4-12 silty sand - light brown				
~13			~13 - silty sand (grey)				
~14-16			~14-16 - river rocks				
~16.5			weathered rock + quartz (dry) ~16.5				
← EOB 16.5' →			refusal				



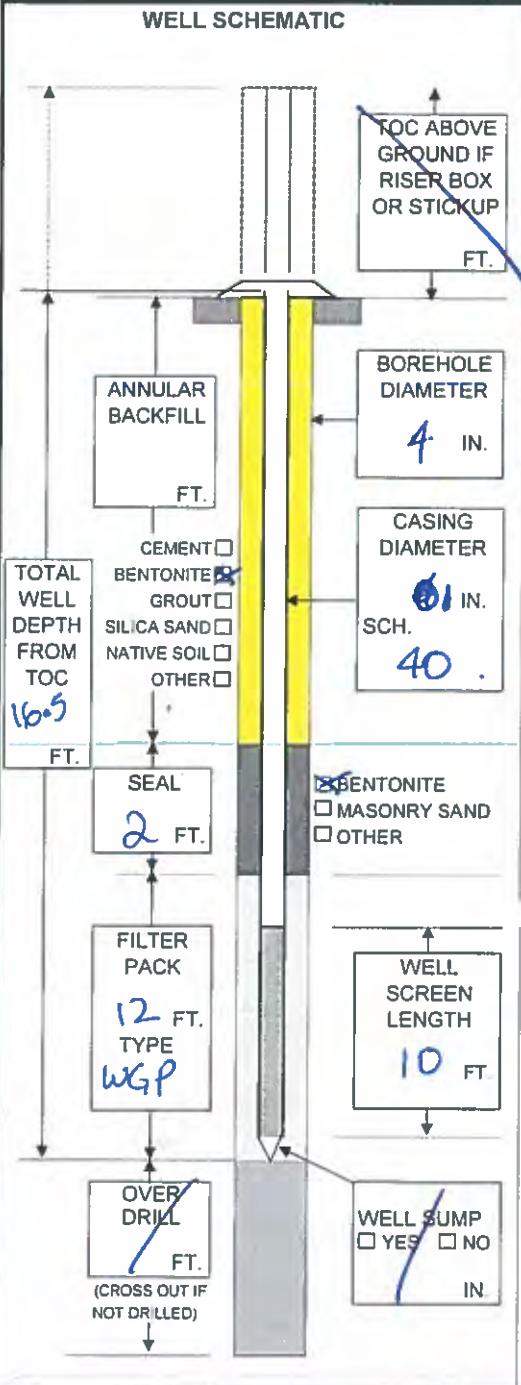
PREPARED BY: 

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: SB/TMW-018

PERMIT NO:

DATE: <u>12/16/21</u>	PROJECT NAME: <u>WMATA Northern Bus Station</u>	PROJECT NO: <u>0444100</u>
WELL SITE LOCATION PLAN: <u>SB/TMW-018</u>		
SEC:	TWN:	RGE: LAT: LONG:
DRILLING CO: <u>E2CR</u>		
DRILL CREW: <u>Darrell + Donald</u>		
WELL TYPE: <input checked="" type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> SINGLE CASED <input checked="" type="checkbox"/> MONITORING		
<input type="checkbox"/> PERMANENT <input type="checkbox"/> INTERMEDIATE <input type="checkbox"/> DOUBLE CASED <input type="checkbox"/> RECOVERY		
<input checked="" type="checkbox"/> TEMPORARY <input type="checkbox"/> DEEP <input type="checkbox"/> OTHER <input type="checkbox"/> OTHER		



INSTALLATION DATA

DECON: STEAM CLEAN HIGH PRESSURE WASH SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER

JOINTS: THREADED WELDED COUPLED SCREWED OTHER

PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER

DIAMETER: 2" 4" 6" OTHER 1 IN

SLOT: 0.010 0.020 OTHER IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY AIR ROTARY DIRECT PUSH HAND AUGER OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER IN

DRILLING MUD: NONE WATER BENTONITE OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX

LOCK TYPE: DOLPHIN MASTER KEY NO OTHER

PAD: 2'X2' 4'X4' OTHER none

CUTTINGS: DRUMMED SPREAD NUMBER OF DRUMS

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT SURGE & BLOCK OTHER

TIME: 10 MIN 20 MIN OTHER MIN

AMOUNT: 5 GAL 10 GAL OTHER GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR

WATER AFTER: SILTY TURBID OPAQUE CLEAR

EVIDENT ODOR: YES NO TYPE

DEVELOPMENT WATER: DRUMMED TREATED POTW OTHER

WATER LEVEL: INITIAL _____ FT. BTOC BLS

DATE: _____ FT BELOW TOC

DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).

PREPARED BY:

SOIL BORING LOG

BORING/PIT NO: **SB-016**
SHEET _____ OF _____

DATE: 12/16/21 BORING PIT/SITE LOCATION PLAN: <div style="font-size: 2em; font-weight: bold; text-align: center;">SB-016</div>	PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100 SEC: TWN: RGE: LAT: LONG: DRILLING CO: E2CR DRILL CREW: <i>Darrell + Donald</i> DRILLING/TRENCHING METHOD: GEOPROBE PIT DIMENSIONS: LENGTH WIDTH DEPTH GROUNDWATER LEVELS <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 33%;">DATE</th> <th style="width: 33%;">ACTUAL TIME</th> <th style="width: 33%;">DEPTH BLS</th> </tr> <tr> <td style="text-align: center;">12/16/21</td> <td></td> <td style="text-align: center;">~ 14'</td> </tr> </table>	DATE	ACTUAL TIME	DEPTH BLS	12/16/21		~ 14'
DATE	ACTUAL TIME	DEPTH BLS					
12/16/21		~ 14'					

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input checked="" type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (M/W)
0.0 0.0 0.0 0.1 0.3 0.1 0.4 0.3 0.3 20			~2' of organic soil 2-8 = red/yellow silty sand. 8-14 = grey silty clay (moist) GWL ~ 14' wet silty sand / weathered rock / gravel EOB @ 18 1/2' (Refusal / Bedrock)				
	SB-016SS (8-10)						

PREPARED BY: *[Signature]*

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: SB/TMW-016

PERMIT NO:

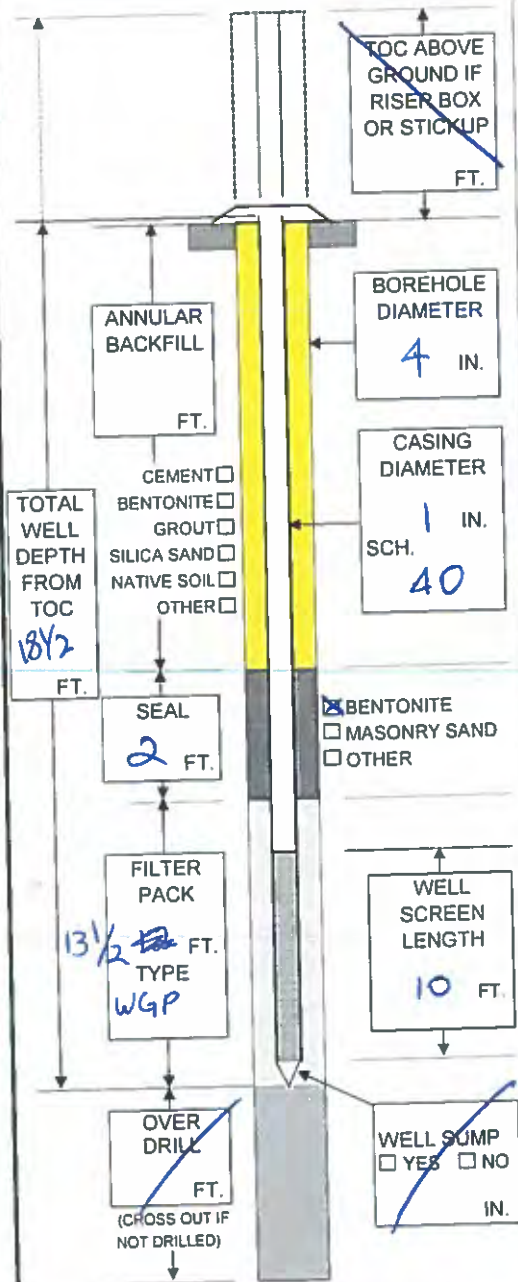
DATE: 12/16/21 PROJECT NAME: WMATA Northern Bus Station

PROJECT NO: 0444100

WELL SITE LOCATION PLAN:
SB/TMW-016

SEC: TWN: RGE: LAT: LONG:
DRILLING CO: E2CR
DRILL CREW: Darrell + Donald
WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER
DIAMETER: 2" 4" 6" OTHER 1 IN
SLOT: 0 010 0 020 OTHER IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
LOCK TYPE: DOLPHIN MASTER KEY NO
 OTHER

PAD: 2'X2' 4'X4' OTHER none

CUTTINGS: DRUMMED SPREAD OTHER
NUMBER OF DRUMS

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER
TIME: 10 MIN 20 MIN OTHER MIN
AMOUNT: 5 GAL 10 GAL OTHER GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
WATER AFTER: SILTY TURBID OPAQUE CLEAR
EVIDENT ODOR: YES NO TYPE

DEVELOPMENT WATER: DRUMMED SPREAD TREATED POTW OTHER
NUMBER OF DRUMS

WATER LEVEL: INITIAL _____ FT. BTOC BLS

DATE: 14 12/16/21 FT BELOW TOC
DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).

PREPARED BY: [Signature]

SOIL BORING LOG

BORING/PIT NO: SB-015
 SHEET OF

DATE: <u>12/17/21</u> BORING PIT/SITE LOCATION PLAN: <div style="font-size: 2em; font-weight: bold; text-align: center;">SB-015</div>	PROJECT NAME: <u>WMATA Northern Bus Station</u> PROJECT NO: <u>0444100</u> SEC: TWN: RGE: LAT: LONG: DRILLING CO: <u>E2CR</u> DRILL CREW: <u>Donell + Donald</u> DRILLING/TRENCHING METHOD: GEOPROBE PIT DIMENSIONS: LENGTH WIDTH DEPTH GROUNDWATER LEVELS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">DATE</th> <th style="width: 50%;">ACTUAL TIME</th> <th style="width: 25%;">DEPTH BLS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	DATE	ACTUAL TIME	DEPTH BLS									
DATE	ACTUAL TIME	DEPTH BLS											

DEPTH	SAMPLE NO.	WATER TABLE	DESCRIPTION	FID <input type="checkbox"/> PID <input type="checkbox"/> (PPM)	USCS	REMARKS	Moisture (MWV)
0.2			0.1 top soil				
1.0			} - sandy silt				
4.0			-4				
16.1	SB-015SS (6-8)		} no plastic silt (moist) - light brown				
10			8'				
			no recovery				
0.7			12'				
15			1 - GWL = 13' } wet river rocks, silty sand + coarse sand				
20			16' } sandy silt, weathered rock + mica				
			20' } EOB @ 20' (Refusal)				
25							

PREPARED BY:

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: SB/TMW-015

PERMIT NO:

DATE: 12/17/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

WELL SITE LOCATION PLAN: SB/TMW-015

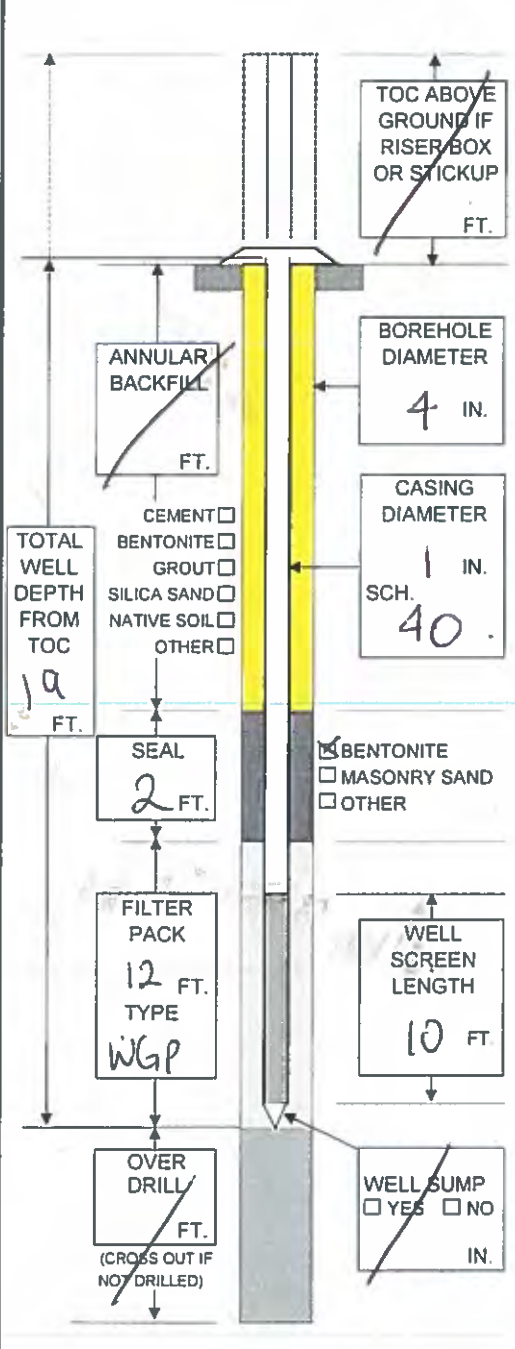
SEC: _____ TWN: _____ RGE: _____ LAT: _____ LONG: _____

DRILLING CO: E2CR

DRILL CREW: Darrell + Donald

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE _____

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER _____ IN
 SLOT: 0.010 0.020 OTHER _____ IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER _____ IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO _____
 OTHER

PAD: 2'X2' 4'X4' OTHER none

CUTTINGS: DRUMMED NUMBER OF DRUMS _____
 SPREAD OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER
 TIME: 10 MIN 20 MIN OTHER _____ MIN
 AMOUNT: 5 GAL 10 GAL OTHER _____ GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR

EVIDENT ODOR: YES NO TYPE _____

DEVELOPMENT WATER: DRUMMED NUMBER OF DRUMS _____
 SPREAD TREATED POTW OTHER

WATER LEVEL: INITIAL _____ FT BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).

PREPARED BY: [Signature]

General Field Testing and Measurement

Field Instrument Calibration Records

PSI PROJECT NAME: WMATA Northern Bus Station

0444100

INSTRUMENT (MAKE/MODEL#) HANNA 3000 INSTRUMENT # PGM7320

PARAMETER(S) (check only one):

- TEMPERATURE CONDUCTIVITY SALINITY pH
 TURBIDITY RESIDUAL CI DO OTHER PID ORP

STANDARDS: [Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]

Standard A Isobutylene 100ppm lot # 304-402060907-1 exp 3/18/25
 Standard B H 304-402210876-1 exp 9/2/25
 Standard C

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
10/14/21	7:58	A	100	115	15%	Yes	Cont	RR
10/14/21	13:27	A	100	116	16%	Yes	Cont	RR
10/15/21	9:09	A	100	129	29%	Yes	Cont	RR
10/15/21	1447	A	100	114	14%	Yes	Cont	RR
10/18/21	0740	A	100	113	13%	Yes	Cont	RR
10/18/21	1605	A	100	107	7%	Yes	Cont	RR
10/19/21	0820	A	100	103	3%	Yes	Cont	RR
12/6/21	1030	A	100	104	4%	Yes	Cont	RR
12/6/21	1600	A	100	101	1%	Yes	Cont	RR
12/7/21	0900	A	100	107	7%	Yes	Cont	RR
12/7/21	1600	A	100	112	12%	Yes	Cont	RR
12/8/21	0830	A	100	110	10%	Yes	Cont	RR
12/8/21	1530	A	100	107	7%	Yes	Cont	RR
12/9/21	0945	A	100	121	21%	Yes	Cont	RR
12/9/21	1300	A	100	111	11%	Yes	Cont	RR
12/16/21	0830	A	100	117	17%	Yes	Cont	RR
12/16/21	1350	A	100	109	9%	Yes	Cont	RR
12/17/21	0830	A	100	103	3%	Yes	Cont	RR
12/17/21	1100	A	100	108	8%	Yes	Cont	RR

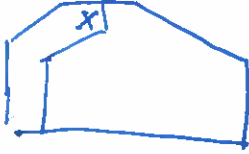
1/8

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: SB-001 / MW

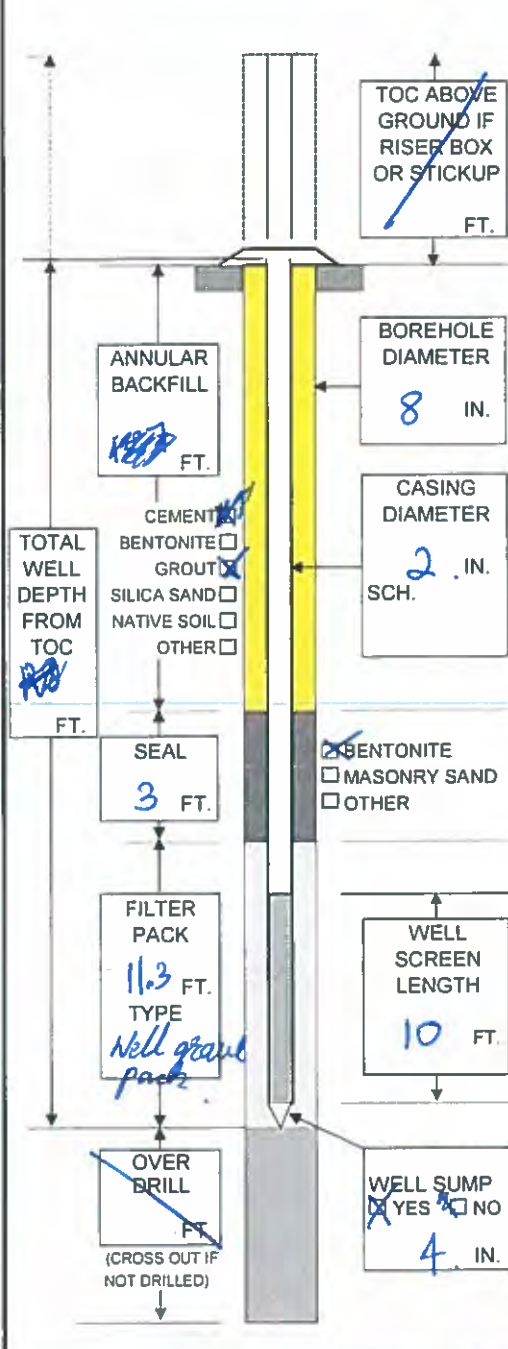
DATE: 10/12/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

WELL SITE LOCATION PLAN: SEC: TWN: RGE: LAT: LONG:



DRILLING CO: E2CR
DRILL CREW: Daryl, Ronald
WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECON: STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER
CASING TYPE: PVC STAINLESS TEFLON OTHER
JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER
PIT CASING: YES NO DESCRIBE
WELL SCREEN: PVC STAINLESS TEFLON OTHER
DIAMETER: 2" 4" 6" OTHER IN
SLOT: 0.010 0.020 OTHER IN
DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER
BIT SIZE: 2" 4" 6" 8" 12" OTHER IN
DRILLING MUD: NONE WATER BENTONITE
 OTHER
CENTRALIZER: YES NO
COMPLETION: FLUSH MOUNT STICKUP RISER BOX
LOCK TYPE: DOLPHIN MASTER KEY NO
 OTHER
PAD: 2'X2' 4'X4' OTHER 8 in
CUTTINGS: DRUMMED SPREAD NUMBER OF DRUMS
DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER
TIME: 10 MIN 20 MIN OTHER MIN
AMOUNT: 5 GAL 10 GAL OTHER GAL
WATER BEFORE: SILTY TURBID OPAQUE CLEAR
WATER AFTER: SILTY TURBID OPAQUE CLEAR
EVIDENT ODOR: YES NO TYPE
DEVELOPMENT WATER: DRUMMED SPREAD NUMBER OF DRUMS
 TREATED POTW OTHER
WATER LEVEL: INITIAL 19.5 FT BTOC BLS
DATE: _____ FT BELOW TOC
DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)
 Well removed from site upon completion of sampling (temp wells only).

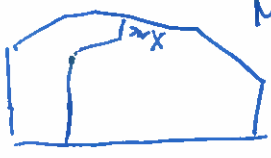
PREPARED BY: [Signature]

2/8

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: SB-004 / MW
 PERMIT NO:

DATE: 10/13/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

WELL SITE LOCATION PLAN:  MM-004

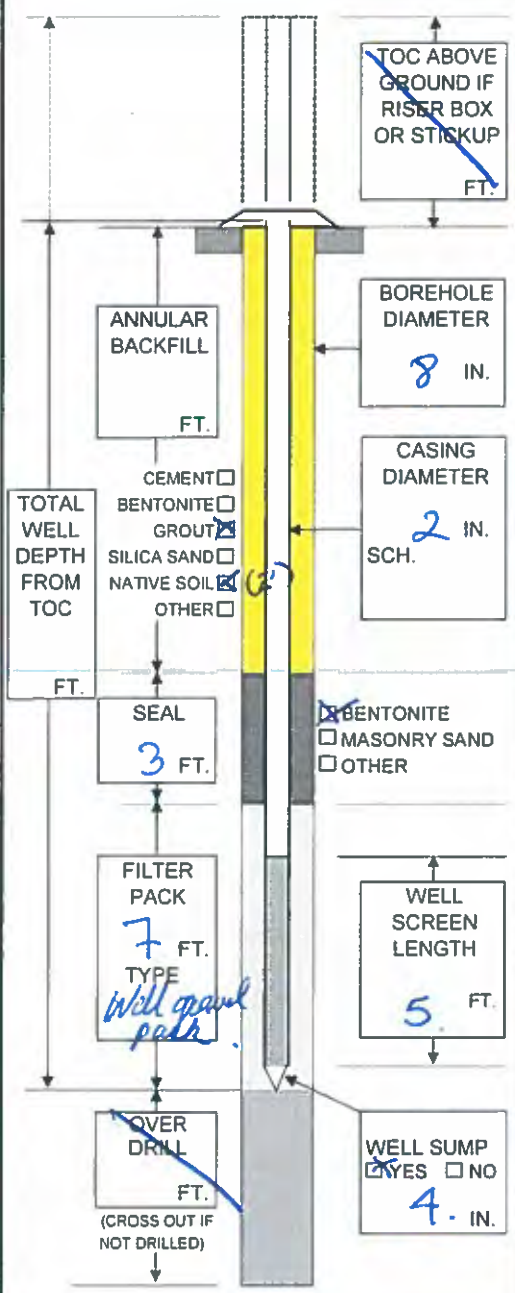
SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: Daryl + Donald

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER

WELL SCHEMATIC



28
 ↑ gravel
 31
 ↑ sand.
 38

INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER IN
 SLOT: 0.010 0.020 OTHER IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO.
 OTHER

PAD: 2'X2' 4'X4' OTHER 8 in

CUTTINGS: DRUMMED NUMBER OF DRUMS
 SPREAD OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER

TIME: 10 MIN 20 MIN OTHER MIN
 AMOUNT: 5 GAL 10 GAL OTHER GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR

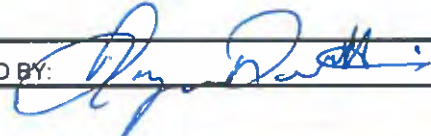
EVIDENT ODOR: YES NO TYPE

DEVELOPMENT WATER: DRUMMED NUMBER OF DRUMS
 SPREAD TREATED POTW OTHER

WATER LEVEL: INITIAL ~19 FT BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)
 Well removed from site upon completion of sampling (temp wells only).

PREPARED BY: 

3/8

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: MW-002/SB-002
PERMIT NO:

DATE: 10/13/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

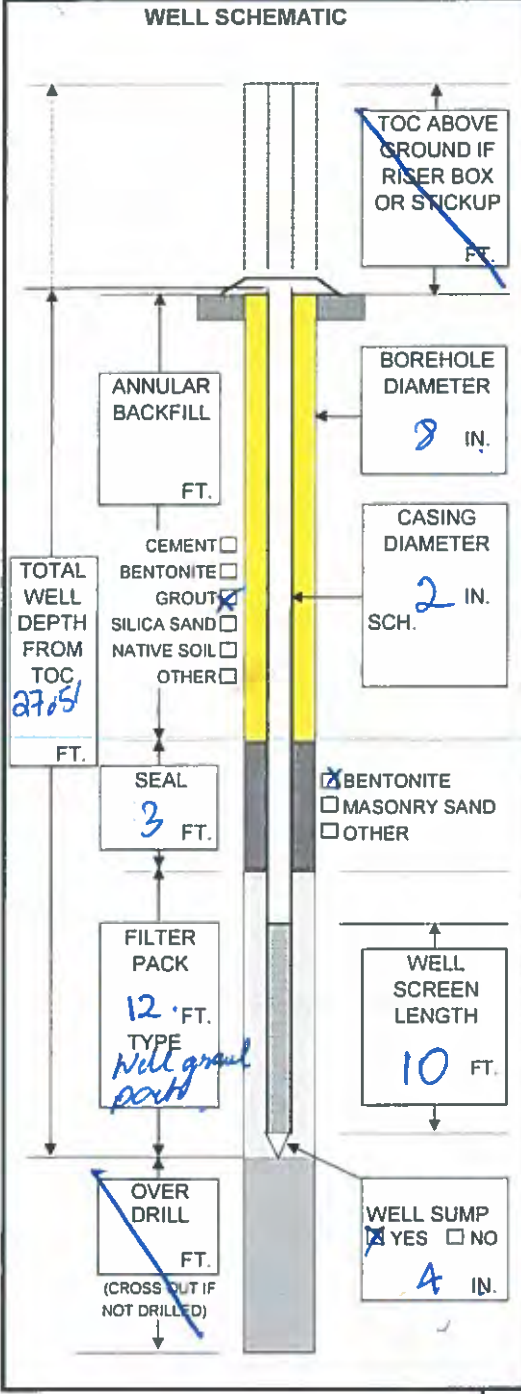
WELL SITE LOCATION PLAN: SB-002/MW-002

SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: Royl + Donald

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER



INSTALLATION DATA

DECON: STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE _____

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER _____ IN
 SLOT: 0 010 0 020 OTHER _____ IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER _____ IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO
 OTHER

PAD: 2'X2' 4'X4' OTHER _____

CUTTINGS: DRUMMED SPREAD NUMBER OF DRUMS _____
 OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER

TIME: 10 MIN 20 MIN OTHER _____ MIN
 AMOUNT: 5 GAL 10 GAL OTHER _____ GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR

EVIDENT ODOR: YES NO TYPE _____

DEVELOPMENT WATER: DRUMMED SPREAD NUMBER OF DRUMS _____
 TREATED POTW OTHER

WATER LEVEL: INITIAL: 20 FT BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).

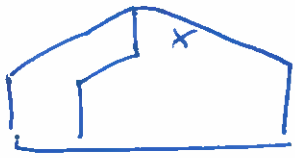
PREPARED BY: *[Signature]*

4/8

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: SB-003/MW-003

DATE: 10/14/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

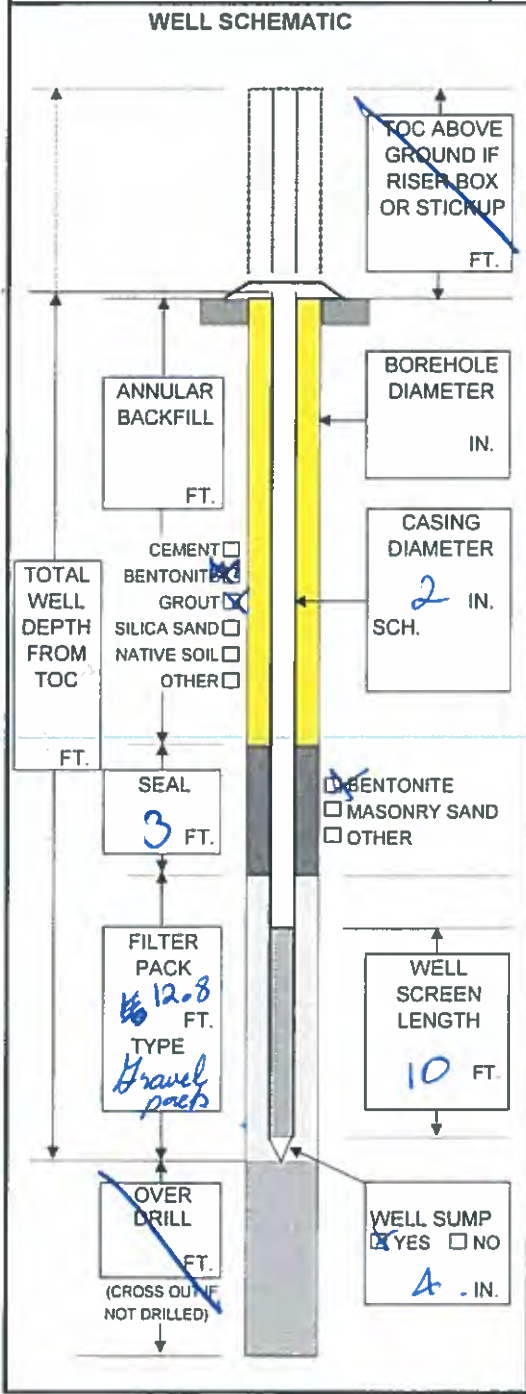
WELL SITE LOCATION PLAN: 

SEC: _____ TWN: _____ RGE: _____ LAT: _____ LONG: _____

DRILLING CO: E2CR

DRILL CREW: Rayl + Donald

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE _____

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER _____ IN
 SLOT: 0.010 0.020 OTHER _____ IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER _____ IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO. _____
 OTHER

PAD: 2'X2' 4'X4' OTHER 8'

CUTTINGS: DRUMMED SPREAD NUMBER OF DRUMS _____
 OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER
 TIME: 10 MIN 20 MIN OTHER _____ MIN
 AMOUNT: 5 GAL 10 GAL OTHER _____ GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR

EVIDENT ODOR: YES NO TYPE _____

DEVELOPMENT WATER: DRUMMED SPREAD NUMBER OF DRUMS _____
 TREATED POTW OTHER

WATER LEVEL: INITIAL ~20 FT BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).


PREPARED BY: 

5/8

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: SB-0045/TMW-02
PERMIT NO:

DATE: 10/15/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

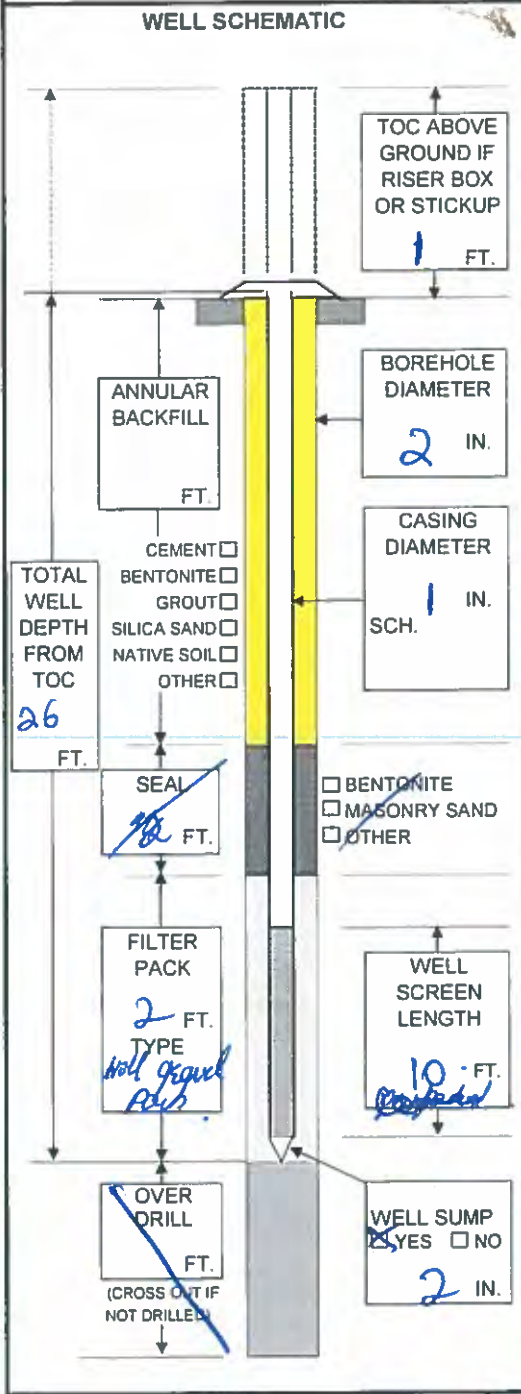
WELL SITE LOCATION PLAN: 

SEC: _____ TWN: _____ RGE: _____ LAT: _____ LONG: _____

DRILLING CO: E2CR

DRILL CREW: Marcy + Bruce

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER



INSTALLATION DATA

DECON: STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER _____

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER _____

PIT CASING: YES NO DESCRIBE _____

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER 1 IN
 SLOT: 0.010 0.020 OTHER _____ IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER _____

BIT SIZE: 2" 4" 6" 8" 12" OTHER _____ IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER _____

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO _____
 OTHER _____

PAD: 2'X2' 4'X4' OTHER _____

CUTTINGS: DRUMMED SPREAD NUMBER OF DRUMS _____

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER _____

TIME: 10 MIN 20 MIN OTHER _____ MIN
 AMOUNT: 5 GAL 10 GAL OTHER _____ GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR

EVIDENT ODOR: YES NO TYPE _____

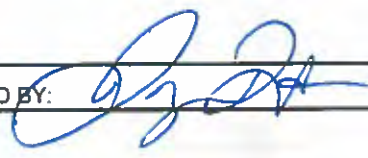
DEVELOPMENT WATER: DRUMMED SPREAD NUMBER OF DRUMS _____
 TREATED POTW OTHER _____

WATER LEVEL: INITIAL 18 FT. BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).


PREPARED BY: 

MONITORING WELL CONSTRUCTION DATA

6/8

WELL/BORING NO: SB-0010/TMW-1
 PERMIT NO:

DATE: 10/15/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

WELL SITE LOCATION PLAN: 

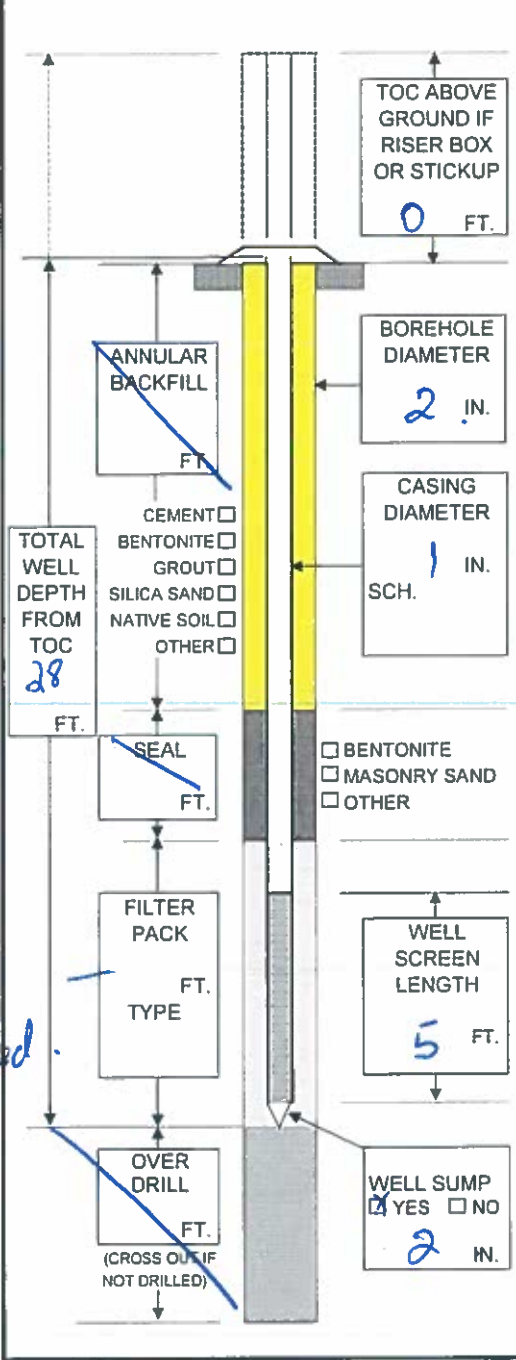
SEC: _____ TWN: _____ RGE: _____ LAT: _____ LONG: _____

DRILLING CO: E2CR

DRILL CREW: _____

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER _____

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER _____

PIT CASING: YES NO DESCRIBE _____

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER 1 IN
 SLOT: 0.010 0.020 OTHER _____ IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER _____

BIT SIZE: 2" 4" 6" 8" 12" OTHER _____ IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER _____

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO. _____
 OTHER _____

PAD: 2'X2' 4'X4' OTHER _____

CUTTINGS: DRUMMED NUMBER OF DRUMS _____
 SPREAD OTHER _____

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER _____

TIME: 10 MIN 20 MIN OTHER _____ MIN
 AMOUNT: 5 GAL 10 GAL OTHER _____ GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR

EVIDENT ODOR: YES NO TYPE _____

DEVELOPMENT WATER: DRUMMED NUMBER OF DRUMS _____
 SPREAD TREATED POTW OTHER _____

WATER LEVEL: INITIAL -18 FT BTOC BLS

DATE: _____ FT BELOW TOC 845 Ti

DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).


PREPARED BY: 

7/8

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: 3B-0068/TMW-C
PERMIT NO:

DATE: 10/19/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

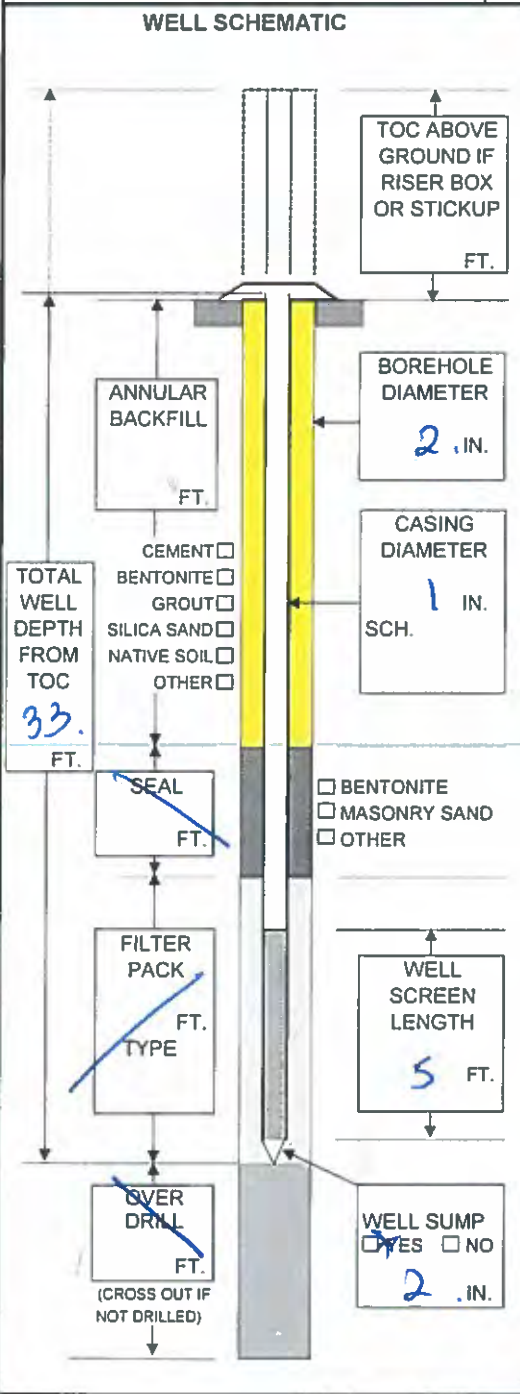
WELL SITE LOCATION PLAN: 

SEC: TWN: RGE: LAT: LONG:

DRILLING CO: E2CR

DRILL CREW: Manoj + Bruce

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER

PIT CASING: YES NO DESCRIBE

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER IN
 SLOT: 0.010 0.020 OTHER IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER

BIT SIZE: 2" 4" 6" 8" 12" OTHER IN

DRILLING MUD: NONE WATER BENTONITE
 OTHER

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO
 OTHER (*none*)

PAD: 2'X2' 4'X4' OTHER

CUTTINGS: DRUMMED NUMBER OF DRUMS
 SPREAD OTHER

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER
 TIME: 10 MIN 20 MIN OTHER MIN
 AMOUNT: 5 GAL 10 GAL OTHER GAL

WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR
 EVIDENT ODOR: YES NO TYPE

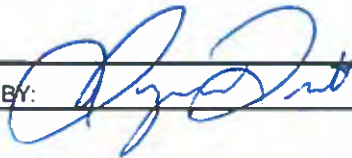
DEVELOPMENT WATER: DRUMMED NUMBER OF DRUMS
 SPREAD TREATED POTW OTHER

WATER LEVEL: INITIAL 185 FT BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).

PREPARED BY: 

3/8

MONITORING WELL CONSTRUCTION DATA

WELL/BORING NO: 58-0065/FORM-0065

DATE: 10/15/21 PROJECT NAME: WMATA Northern Bus Station PROJECT NO: 0444100

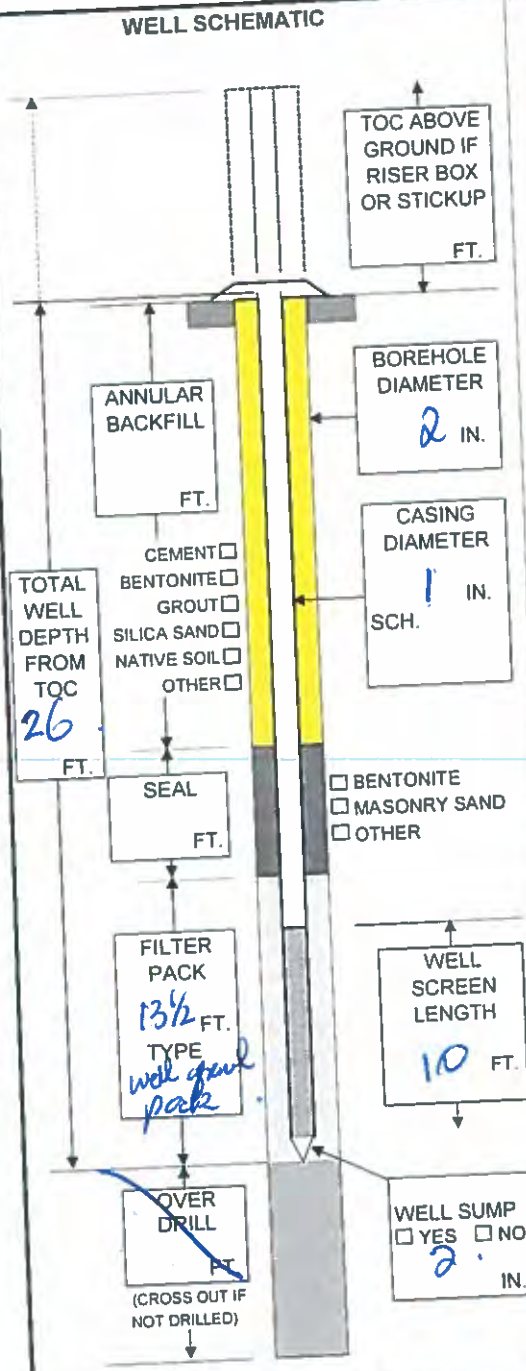


SEC: _____ TWN: _____ RGE: _____ LAT: _____ LONG: _____

DRILLING CO: E2CR

DRILL CREW: Manoj + Bruce

WELL TYPE: SHALLOW SINGLE CASED MONITORING
 PERMANENT INTERMEDIATE DOUBLE CASED RECOVERY
 TEMPORARY DEEP OTHER OTHER



INSTALLATION DATA

DECON. STEAM CLEAN HIGH PRESSURE WASH
 SOAP WASH OTHER _____

CASING TYPE: PVC STAINLESS TEFLON OTHER
 JOINTS: THREADED WELDED COUPLED
 SCREWED OTHER _____

PIT CASING: YES NO DESCRIBE _____

WELL SCREEN: PVC STAINLESS TEFLON OTHER
 DIAMETER: 2" 4" 6" OTHER _____ IN
 SLOT: 0.010 0.020 OTHER _____ IN

DRILLING METHOD: SOLID STEM HOLLOW STEM MUD ROTARY
 AIR ROTARY DIRECT PUSH HAND AUGER
 OTHER _____

BIT SIZE: 2" 4" 6" 8" 12" OTHER _____ IN
 DRILLING MUD: NONE WATER BENTONITE
 OTHER _____

CENTRALIZER: YES NO

COMPLETION: FLUSH MOUNT STICKUP RISER BOX
 LOCK TYPE: DOLPHIN MASTER KEY NO. _____
 OTHER (none)

PAD: 2'X2' 4'X4' OTHER none

CUTTINGS: DRUMMED SPREAD NUMBER OF DRUMS _____
 OTHER _____

DEVELOPMENT METHOD: NONE BAILING PUMPING AIR LIFT
 SURGE & BLOCK OTHER _____

TIME: 10 MIN 20 MIN OTHER _____ MIN
 AMOUNT: 5 GAL 10 GAL OTHER _____ GAL
 WATER BEFORE: SILTY TURBID OPAQUE CLEAR
 WATER AFTER: SILTY TURBID OPAQUE CLEAR
 EVIDENT ODOR: YES NO TYPE _____

DEVELOPMENT WATER: DRUMMED SPREAD NUMBER OF DRUMS _____
 TREATED POTW OTHER _____

WATER LEVEL: INITIAL 418 1/2 FT BTOC BLS

DATE: _____ FT BELOW TOC
 DATE: _____ FT BELOW TOC

NOTES: (DESCRIBE ALL NON-STANDARD METHODS & MATERIALS)

Well removed from site upon completion of sampling (temp wells only).

PREPARED BY: [Signature]

General Field Testing and Measurement

Field Instrument Calibration Records

PSI PROJECT NAME: WMATA

PSI PROJECT NO: _____

INSTRUMENT (MAKE/MODEL#) DRAE-3

INSTRUMENT # PGM-2500

PARAMETER(S) (check only one):

- TEMPERATURE CONDUCTIVITY SALINITY pH
 TURBIDITY RESIDUAL CI DO OTHER 4 Gas ORP

STANDARDS: [Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]

Standard A CO - 50 ppm D: O₂ - 18% Lot # 304-401743647-1

Standard B H₂S - 10 ppm exp - 2/27/2022

Standard C CH₄ - 50% v/v

DATE <small>(yy/mm/dd)</small>	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
10/11/21	10:04	A	50 ppm	47	6%	yes	cont	RR
		B	10 ppm	8.0	20%			
		C	50%	39	22%			
		D	18%	17.9	5.1%			
	15:46	A	50	47	6%	yes	cont	RR
		B	10	8.0	16%			
		C	50%	42	16%			
		D	18%	18.0	0			
10/12/21	9:04	A	50 50	49	2%			
		B	10 10	8.4	16%			
		C	50	33	34%			
		D	18% 18%	17.6	3%			
10/13/21	7:59	A	50	49				
		B	10	10				
		C	50%	33				
		D	18%	18.0				
	17:35	A	50	49				
		B	10	9.8				
		C	50%	32				
		D	18%	18.2				
10/14/21	8:01	A	50	45				
		B	10	8.5				
		C	50%	29				
		D	18%	18.3				

General Field Testing and Measurement

Field Instrument Calibration Records

PSI PROJECT NAME: WMATA Northern Bus Station

0444100

INSTRUMENT (MAKE/MODEL#) _____ INSTRUMENT # _____

PARAMETER(S) (check only one):

- TEMPERATURE CONDUCTIVITY SALINITY pH
 TURBIDITY RESIDUAL CI DO OTHER Algo ORP

STANDARDS: [Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]

Standard A _____

Standard B _____

Standard C _____

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
10/14/21	1800	A	50	47.				
		B	10	9.3				
		C	50%	30				
		D	18%	18.2				
10/15/21	0911	A	50	4.6				
		B	10	8.2				
		C	50%	31				
		D	18%	18.2				
	1445	A	50	48				
		B	10	9.8				
		C	50%	33				
		D	18%	17.9				
10/18/21	0740	A	50	49.				
		B	10	9.9.				
		C	50%	32.%				
		D	18%	18.1%				
	1610	A	50	19				
		B	10	9.7				
		C	50%	32				
		D	18%	18.3				
		A						
		B						
		C						
		D						

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO: 0141100 0141100
WELL NO: MW-001	SAMPLE ID: MW-001	DATE: 1/6/22

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.1875	WELL SCREEN INTERVAL DEPTH: 27.35' to 17.35'	STATIC DEPTH TO WATER (feet): 16.3'	PURGE PUMP TYPE OR BAILER: PP
---------------------------	----------------------------------	--	-------------------------------------	-------------------------------

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= 10.0' feet - 16.3' feet X 0.16 gallons/foot = 1.8 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 5.83 gallons + (0.13 gallons/foot X 16.3 feet) + 0.13 gallons = 5.83 gallons

NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 21	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 21	PURGING INITIATED AT: 11:20	PURGING ENDED AT: 12:14	TOTAL VOLUME PURGED (gallons): 5.83
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units) ± 0.1	TEMP. (°C) ± 3%	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN mg/L / % saturation	TURBIDITY (NTUs) 10% 75	ORP (mV)	COLOR/ODOR (describe)
11:22	0.5 gal	0.5	0.13	16.3'	7.06	14.68°	1875	28.2%	38	-113	opaque
11:30	1.0 gal	1.54	0.13	16.3'	7.28	14.17°	1871	31.8%	40.1	-114	slight haze
11:44	0.78	2.32	0.13	16.3'	7.37	14.57°	1880	40.8%	29.8	-118	
11:48	0.52	2.84	0.13	16.3'	7.37	14.99°	1889	33.7%	77.8	-127	
11:54	0.78	3.62	0.13	16.3'	7.38	15°	1877	29.8%	78.6	-129	
12:02	1.0 gal	4.66	0.13	16.3'	7.37	13.8	1889	27.8%	76.3	-118	
12:08	0.78	5.44	0.13	16.3'	7.35	13.25	1876	26.1%	78.1	-117	
12:11	0.39	5.83	0.13	16.3'	7.35	13.38	1870	24.6	78.6	-115	

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010, 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailor, BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RR	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 21	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N TUBING <input checked="" type="checkbox"/> N (replaced) OTHER (specify) Y N DUPLICATE Y N DUP ID			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TPH-029	5	AG, CG	20 mL	HCl	2120 mL		TPH-DRO/600/020	RFP	500 mL/min
VTR	3	CG	40 mL	HCl	120 mL		8260 VOC	RFPP	↓
BVOC	2	AG	1 L	none	2000 mL		8270 SVOC	↓	↓
BAVA	1	PE	1 L	HNO ₃	1000 mL		4 RCRA Met.	↓	↓

5 WELL VOLUMES: 9 gal.

REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump, B = Bailor, BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, WM = Water Level Meter

EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap, O = Other (Specify); LP = Lab Preserved

- NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
 pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized; ORP: + 10 mV
- 2 Standard decontamination procedures includes DI water rinse, Luminol solution wash, DI water final rinse & air dry
- 3 1 gpm = 3,785 mL/min

1/4

GROUNDWATER SAMPLING LOG

SITE NAME WMATA Northern Bus Station	SITE LOCATION 4615 14th Street NW Washington D.C. 20011	PROJECT NO.: 0144100
WELL NO MW-002	SAMPLE ID MW-002	DATE: 1/6/02

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.1875	WELL SCREEN INTERVAL DEPTH 28 feet to 16'	STATIC DEPTH TO WATER (feet) 14.7'	PURGE PUMP TYPE OR BAILER: PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (28.3' feet - 14.7' feet) X 0.16 gallons/foot = 2.176 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) NOTE YSI 558MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL) = _____ gallons + (_____ gallons/foot X _____ feet) + _____ gallons = _____ gallons				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet) 21'	FINAL PUMP OR TUBING DEPTH IN WELL (feet) 21'	PURGING INITIATED AT 14:15	PURGING ENDED AT: 14:35	TOTAL VOLUME PURGED (gallons): 3.56 gal.
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN mg/L / % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
14:17	0.5	0.5	0.17	14.7'	7.61	15.15°	715	10.3%	10	-101	Clear of petroleum smell
14:25	1.36	1.86	0.17	14.7	7.42	15.42	717	14.5	8	-118	
14:30	0.85	2.71	0.17	14.7	7.38	15.39	714	10.3	9	-123	
14:33	0.51	3.22	0.17	14.7	7.37	15.41	713	8.8	11	-124	
14:35	0.34	3.56	0.17	14.7	7.35	15.39	713	6.7	9.4	-125	

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010 0.75" = 0.02; 1" = 0.04 1.25" = 0.06 2" = 0.16; 3" = 0.37, 4" = 0.65, 5" = 1.02 6" = 1.47, 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006 3/16" = 0.0014 1/4" = 0.0026 5/16" = 0.004 3/8" = 0.006 1/2" = 0.010 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RINZO. R	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING INITIATED AT: 14:35	SAMPLING ENDED AT: 14:50
PUMP OR TUBING DEPTH IN WELL (feet) 21'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/>	FILTER SIZE _____ μm
FIELD DECONTAMINATION: PUMP <input checked="" type="radio"/> N <input type="radio"/>	TUBING <input checked="" type="radio"/> N (replaced) <input type="radio"/>	OTHER (specify) _____	DUPLICATE: Y <input type="radio"/> N <input type="radio"/>

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-002	5	AG, CG	1L, 40mL	HCl	2120 mL		TPH - DRO/GAO/ DRO	RFPP	614 mL/min
↓	3	CG	40mL	HCl	120 mL		8260 VUC	↓	↓
↓	2	AG	1L	none	2000 mL		8270 SUC	↓	↓
↓	1	DF	1L	HNO3	1000 mL		4 RCRA	↓	↓

5 WELL VOLUMES: 10.88 gal.	REMARKS: * Samples placed on ice subsequent to collection
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MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene; S = Silicone, T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump, B = Bailor, BP = Bladder Pump, ESP = Electric Submersible Pump; PP = Peristaltic Pump; WM = Water Level Meter

EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump SM = Straw Method (Tubing Gravity Drain), VT = Vacuum Trap, O = Other (Specify); LP = Lab Preserved

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4

pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized. ORP: + 10 mV

2 Standard decontamination procedures includes DI water rinse, Luminox solution wash, DI water final rinse, & air dry.

3 1 gpm = 3,785.4 mL/min

2/4

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO.: 0144100 0144100
WELL NO: MW-004	SAMPLE ID: MW-004	DATE: 1/6/02

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.1875	WELL SCREEN INTERVAL DEPTH: 38.31 feet to 33.21 feet	STATIC DEPTH TO WATER (feet): 18.2'	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (38.61' feet - 18.2' feet) X 0.16 gallons/foot = 4.87 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)
= _____ gallons + (_____ gallons/foot X _____ feet) + _____ gallons = _____ gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27'	PURGING INITIATED AT: 15:20	PURGING ENDED AT: 15:53	TOTAL VOLUME PURGED (gallons):
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN mg/L / % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
15:20	0.5	0.5	0.13	27'	7.53	14.5°	1352	5.2%	2.24	-100	Clear
15:25	0.65	1.15	0.13	27'	7.50	14.64°	1355	3.8%	1.49	-107	Petroleum odor
15:30	0.65	1.80	0.13	27'	7.49	14.6°	1359	3.1%	1.87	-115.8	
15:36	0.78	2.58	0.13	27'	7.29	14.62°	1430	4.7%	1.63	-100	
15:40	0.65	3.23	0.13	27'	6.96	14.60°	1471	4.1%	1.37	-83.8	
15:45	0.65	3.88	0.13	27'	6.81	14.59°	1480	3.7%	1.90	-78.4	
15:50	0.65	4.53	0.13	27'	6.73	14.57°	1483	3.8%	1.45	-76.7	
15:53	0.39	4.92	0.13	27'	6.69	14.57°	1488	3.9%	2.06	-74.4	

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0008; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.008; 1/2" = 0.010; 5/8" = 0.016
 PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <i>Re</i>	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING INITIATED AT: 15:55	SAMPLING ENDED AT: 16:11
PUMP OR TUBING DEPTH IN WELL (feet): 27'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N)	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING (Y) N (replaced)	OTHER (specify)	DUPLICATE: Y N DUP. ID:

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-004	5	AG, CG	1L, 40mL	HCL	2120 mL		TPH-200 / 200 GRD	RFPP	500 mL per minute
↓	3	CG	40ML	HCL	120 mL		8260 VOC	↓	
↓	2	AG	1L	NO NO	2000 mL		8270 SVOC	↓	
↓	1	DE	1L	HNO3	1000 mL		4 RCRA	↓	

5 WELL VOLUMES: 24.3 gal. REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; WM = Water Level Meter

EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify); LP = Lab Preserved

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
 pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized; ORP: + 10 mV
 2 Standard decontamination procedures includes DI water rinse, Luminol solution wash, DI water final rinse, & air dry
 3 1 gpm = 3,785.4 mL/min

3/4

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION 4615 14th Street NW Washington D.C. 20011	PROJECT NO: 014100 014100
WELL NO: TMW-002	SAMPLE ID: TMW-002	DATE: 1/7/22

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 0.1875	WELL SCREEN INTERVAL DEPTH: 18.82 feet to 8.82	STATIC DEPTH TO WATER (feet): 14.98	PURGE PUMP TYPE OR BAILER PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

$$= (18.82 \text{ feet} - 14.98 \text{ feet}) \times 0.04 \text{ gallons/foot} = 0.15 \text{ gallons}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
 NOTE YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)

$$= \text{gallons} + (\text{gallons/foot} \times \text{feet}) + \text{gallons} = \text{gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 14	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14	PURGING INITIATED AT: 1:50	PURGING ENDED AT: 2:00	TOTAL VOLUME PURGED (gallons): 0.61
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TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (mg/L) % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
1:50	0.1	0.1	0.066	14.98	7.00	14.9	1185	0.73	16.8	-52	clear
1:53	0.198	0.298	0.066	14.98	6.84	15.4	1294	0.55	6.5	-60.4	sulfur-g
1:55	0.132	0.43	0.066	14.98	6.78	15.7	1330	0.58	2.47	-63.6	odor
1:57	0.09	0.52	0.04	14.98	6.76	15.7	1347	0.53	2.6	-62.6	
1:59	0.09	0.61	0.04	14.98	6.76	15.7	1354	0.54	2.1	-61	↓

WELL CAPACITY (Gallons Per Foot) 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal/Ft) 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
 PURGING EQUIPMENT CODES B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RR	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING INITIATED AT: 2:05	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 17	TUBING MATERIAL CODE HDPE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N <input type="checkbox"/>	TUBING <input checked="" type="checkbox"/> N <input type="checkbox"/> (replaced)	OTHER (specify)	DUPLICATE Y <input type="checkbox"/> N <input checked="" type="checkbox"/>

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-002	2	AG	1L	none	2,000	6.76	8270 SVOC	RFPP	250
↓	3	CG	40ML	HCl	120	6.76	8260 VOC	↓	250

5 WELL VOLUMES: **0.763 gal** REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene; PP = Polypropylene; S = Silicone, T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; WM = Water Level Meter

EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify); LP = Lab Preserved

- NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
 pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized, ORP: + 10 mV
 2 Standard decontamination procedures includes DI water rinse, Luminol solution wash, DI water final rinse, & air dry
 3 1 gpm = 3,785 4 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO.: 0440517 044100
WELL NO: TMW-004S	SAMPLE ID: TMW-004S	DATE: 1/7/22

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 0.1875	WELL SCREEN INTERVAL DEPTH: 256 feet to 1565	STATIC DEPTH TO WATER (feet): 14.20	PURGE PUMP TYPE OR BAILER: PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (25.65 feet - 14.20 feet) X 0.09 gallons/foot = 0.46 gallons				

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL) = _____ gallons + (_____ gallons/foot X _____ feet) + _____ gallons = _____ gallons				
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INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20'	PURGING INITIATED AT: 11:09	PURGING ENDED AT: 11:19	TOTAL VOLUME PURGED (gallons):
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (mg/L) % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
11:09	0.2	0.2	0.066	14.20	5.44	13.65°	929	2.07	10.1	-41.8	clear
11:13	0.26	0.46	0.066	14.20	5.41	13.95°	930	2.14	7.51	-46.	no odor
11:15	0.132	0.592	0.066	14.20	5.47	14.00	937	2.14	4.58	-47.6	
11:17	0.132	0.724	0.066	14.20	5.51	14.06	939	2.13	2.74	-48.	
11:19	0.132	0.856	0.066	14.08	5.59	14.06	940	2.14	2.33	-47.8	

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RR	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING INITIATED AT: 11:22	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 20'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N	TUBING <input checked="" type="checkbox"/> N (replaced)	OTHER (specify):	DUPLICATE: Y N DUP. ID:

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW004S	2	AG	1L	NONE	2,000	5.59	8270 SIOC	PP	250
↓	3	CG	40mL	HCL	120	5.59	8260 VOC	PP	250

5 WELL VOLUMES: **2.3** REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
 SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; WM = Water Level Meter
 EQUIPMENT CODES: RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify); LP = Lab Preserved

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
 pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized; ORP: + 10 mV
 2 Standard decontamination procedures includes DI water rinse, Luminol solution wash, DI water final rinse, & air dry.
 3 1 gpm = 3,785.4 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO: 8440317 044100
WELL NO: TMW-004D	SAMPLE ID: TMW-004D	DATE: 1/7/22

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 0.875	WELL SCREEN INTERVAL DEPTH: 26.98 feet to 21.98	STATIC DEPTH TO WATER (feet): 13.70	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (**26.98** feet - **13.70** feet) X **0.04** gallons/foot = **0.5312** gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
NOTE: YSI 558MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)
= _____ gallons + (_____ gallons/foot X _____ feet) + _____ gallons = _____ gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 21	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 21	PURGING INITIATED AT: 10:40	PURGING ENDED AT: 10:52	TOTAL VOLUME PURGED (gallons):
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN mg/L / % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
10:40	0.1	0.1	0.066	20.70	6.33	12.2°	967	26.0%	68.4	-39	clear/
10:43	0.198	0.298	0.066	20.70	5.72	13.74°	942	14.6%	36.4	-42.5	no odor
10:46	0.132	0.43	0.066	20.70	5.58	13.98°	938	13.7%	18.7	-49.5	
10:49	0.132	0.56	0.066	20.70	5.49	14.00°	939	14.5%	17.6	-54.0	
10:52	0.132	0.69	0.066	20.70	5.43	14.19°	937	14.0%	11.3	-56.4	
				↑ 13.70							

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RR	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 10:55	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 21	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y <input checked="" type="checkbox"/>	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N	TUBING <input checked="" type="checkbox"/> N (replaced)	OTHER (specify) _____	Y N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-004D	2	AG	1L	none	2000	5.43	8270 SUDC	PP	250
↓	3	CG	40mL	HCl	120	5.43	9260 VOC	PP	250

5 WELL VOLUMES: **2.656**
REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; WM = Water Level Meter

EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify); LP = Lab Preserved

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity avalues are less than 5 NTUs, consider stabilized, ORP: + 10 mV

2 Standard decontamination procedures includes DI water rinse, Luminox solution wash, DI water final rinse, & air dry.

3 1 gpm = 3,785.4 mL/min

* No filter pack screen

GROUNDWATER SAMPLING LOG

SITE NAME WMATA Northern Bus Station	SITE LOCATION 4615 14th Street NW Washington D.C. 20011	PROJECT NO. 0144100
WELL NO TMW-006S	SAMPLE ID TMW-006S	DATE 1/7/22

PURGING DATA

WELL DIAMETER (inches) 1	TUBING DIAMETER (inches) 0.1875	WELL SCREEN INTERVAL DEPTH 25.88 feet to 13.66	STATIC DEPTH TO WATER (feet) 13.66	PURGE PUMP TYPE OR BAILER PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = 12.22 feet - 13.66 feet X 0.04 gallons/foot = 0.48 gallons				

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) NOTE YSI 558MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL) = _____ gallons + (_____ gallons/foot X _____ feet) + _____ gallons = _____ gallons				
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INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20'	PURGING INITIATED AT: 11:45	PURGING ENDED AT: 12:12	TOTAL VOLUME PURGED (gallons)
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TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (mg/L) % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
11:45	0.2	0.2	0.053	13.66	6.2	14.55°	1100	0.44 mg/L	+100	-51	no odor
11:52	0.371	0.571	0.053	13.66	6.2	14.3°	1123	0.55	+100	-66	mucky
11:57	0.2	0.77	0.04	13.66	6.32	14.05°	1096	0.38	+100	-71.1	turbid water
12:02	0.2	0.97	0.04	13.66	6.28	13.98°	1085	0.41	+100	-71.4	
12:07	0.4	1.37	0.04	13.66	6.22	13.80°	1086	0.42	+87	-71.3	

WELL CAPACITY (Gallons Per Foot) 1/2" = 0.010, 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
 PURGING EQUIPMENT CODES: B = Bailer, BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RR	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING INITIATED AT: 12:14	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE HDPE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE _____ μm
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N <input type="checkbox"/>	TUBING <input checked="" type="checkbox"/> N (replaced) <input type="checkbox"/> Y	OTHER (specify):	DUPLICATE: Y <input type="checkbox"/> N <input type="checkbox"/>

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-006S	2	AG	1L	None	2,000	6.22	8270 SVOC	PP	200
↓	3	CG	40 ML	HCL	120	6.22	8260 VOC	PP	200

5 WELL VOLUMES: **2.82 gal.** REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump, B = Bailer, BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, WM = Water Level Meter
 EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), VT = Vacuum Trap, O = Other (Specify), LP = Lab Preserved

- NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
 pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized, ORP: +10 mV
 2 Standard decontamination procedures includes DI water rinse, Luminox solution wash, DI water final rinse, & air dry
 3 1 gpm = 3,785.4 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO: 0144100 0144100
WELL NO: TMW-006D	SAMPLE ID: TMW-006D	DATE: 1/7/22

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 0.1875	WELL SCREEN INTERVAL DEPTH: 28.45 feet to 18.45	STATIC DEPTH TO WATER (feet): 12.99	PURGE PUMP TYPE OR BAILER: PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (28.45 feet - 12.99 feet) X 0.04 gallons/foot = .62 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 19'				
FINAL PUMP OR TUBING DEPTH IN WELL (feet): 19'				
PURGING INITIATED AT: 12:42				
PURGING ENDED AT: 12:54				
TOTAL VOLUME PURGED (gallons):				

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (mg/L) % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
12:42	0.2	0.2	0.052	12.99	6.39	11.96°	1198	2.11	22	-3	clear
12:46	0.208	0.41	0.052	12.99	6.52	13.16	1855	0.49	23	-38.9	no odors
12:50	0.208	0.62	0.052	12.99	6.51	13.56	1261	0.60	25	-46.1	sulfur
12:52	0.104	0.72	0.052	12.99	6.58	13.77	1269	0.60	21	-56.1	
12:54	0.104	0.82	0.052	12.99	6.59	13.86	1264	0.52	14	-59.4	

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RR				SAMPLER(S) SIGNATURES: <i>[Signature]</i>				SAMPLING INITIATED AT: 12:57		SAMPLING ENDED AT:	
PUMP OR TUBING DEPTH IN WELL (feet): 19'				TUBING MATERIAL CODE: HOPE				FIELD-FILTERED: Y <input checked="" type="checkbox"/> N		FILTER SIZE: _____ μm	
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N				TUBING <input checked="" type="checkbox"/> N (replaced) OTHER (specify)				DUPLICATE: Y N		DUP. ID:	
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
TMW-006D	2	AG	1L	NONE	2,000	6.59	8270 SVOC	RFPP	200		
✓	3	CG	40mL	HCL	120	6.59	8260 VOC	RPP	200		

5 WELL VOLUMES: 3.092 gal. REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
 SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; WM = Water Level Meter
 EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify); LP = Lab Preserved

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP.GW4
 pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized; ORP: + 10 mV.
 2 Standard decontamination procedures includes DI water rinse, Luminox solution wash, DI water final rinse, & air dry
 3 1 gpm = 3,785.4 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO: 044100
WELL NO: TMW-0085	SAMPLE ID: TMW-0085	DATE: 1/11/22

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 19.4 feet to 14.4	STATIC DEPTH TO WATER (feet): 13.65	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
 (only fill out if applicable)
 = (**19.4** feet - **13.63** feet) X **0.04** gallons/foot = **.23** gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 (only fill out if applicable)
 NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 16'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 16'	PURGING INITIATED AT: 10:44	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (mg/L) % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
10:46	0.1	0.1	0.05	13.63	6.10	11.77°	3343	08.9	8.36	-12.3	
10:48	0.1	0.2	0.05	13.63	6.21	11.65°	3353	6.0	11.65	-28.0	
10:50	0.1	0.3	0.05	13.63	6.30	11.32°	3357	6.2	10.91	-34.00	
10:52	0.1	0.4	0.05	13.63	6.31	11.18°	3381	6.4	10.04	-35.8	
10:55	0.15	0.55	0.05	13.6	6.31	12.45	3398	6.07	10.7	-38.1	

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
 PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RR	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING INITIATED AT: 10:58
PUMP OR TUBING DEPTH IN WELL (feet): 16'	TUBING MATERIAL CODE: HDPE	SAMPLING ENDED AT:
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N TUBING <input checked="" type="checkbox"/> N (replaced) OTHER (specify):	FIELD-FILTERED: <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	FILTER SIZE: _____ μm

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			DUPLICATE: <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N		DUP. ID	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)	
TMW-0085	2	AG	1L	none	2,000	6.31	8270 SVOC	PRFP	120	
↓	3	CG	40mL	HCl	120	6.31	8260 VOC	↓		

5 WELL VOLUMES: **1.15 gal.** REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump, B = Bailor, BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, WM = Water Level Meter

EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap, O = Other (Specify); LP = Lab Preserved

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
 pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized; ORP: + 10 mV

2 Standard decontamination procedures includes DI water rinse, Luminol solution wash, DI water final rinse, & air dry.

3 1 gpm = 3,785.4 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO: 0144100 0144100
WELL NO: TMW-008D	SAMPLE ID: TMW-008D	DATE: 1/11/22

PURGING DATA

WELL DIAMETER (inches) 1"	TUBING DIAMETER (inches) 0.1875	WELL SCREEN INTERVAL DEPTH: 24.5 feet to 14.5	STATIC DEPTH TO WATER (feet) 14.3	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (24.5 feet - 14.3 feet) X 0.04 gallons/foot = 0.41 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)
= _____ gallons + (_____ gallons/foot X _____ feet) + _____ gallons = _____ gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet) 18'	FINAL PUMP OR TUBING DEPTH IN WELL (feet) 18'	PURGING INITIATED AT: 10:14	PURGING ENDED AT: 10:28	TOTAL VOLUME PURGED (gallons): 0.7
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TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (mg/l) % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
10:16	0.1	0.1	0.05	14.3	5.93	12.70	2767	4.54	11.7	4.3	clear
10:18	0.1	0.2	0.05	14.3	5.90	12.29	2785	5.39	8.9	3.2	no odor
10:20	0.1	0.3	0.05	14.3	5.7	13.37	2807	5.37	8.3	7.5	
10:22	0.1	0.4	0.05	14.3	5.7	13.25	2709	5.37	5.1	11.8	
10:24	0.1	0.5	0.05	14.3	5.6	13.91	2709	8.93	2.0	13.7	
10:26	0.1	0.6	0.05	14.3	5.6	13.26	2780	9.02	2.9	14.0	
10:28	0.1	0.7	0.05	14.2	5.6	12.3	2785	8.86	2.2	4.9	

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010, 0.75" = 0.02, 1" = 0.04, 1.25" = 0.08, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016
 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RR	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING INITIATED AT: 10:30	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 18'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N)	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING (N) (replaced)	OTHER (specify) _____	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-008D	2	AG	1L	none	2,000	5.6	8270-SVOC	PRPP	250
-008D	3	CG	40ML	HCL	120	↓	8260-VOC	↓	300

5 WELL VOLUMES: 2.0 gal.
REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
 SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; WM = Water Level Meter
 EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify); LP = Lab Preserved

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
 pH: ± 0.1 units Temperature: $\pm 3\%$ Specific Conductance: $\pm 3\%$ Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized, ORP: + 10 mV.
 2 Standard decontamination procedures includes DI water rinse, Luminox solution wash, DI water final rinse, & air dry
 3 1 gpm = 3,785.4 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO: 0144100 0144100
WELL NO: TMW-0095	SAMPLE ID: TMW-0095	DATE: 1/11/22

PURGING DATA

WELL DIAMETER (inches)	TUBING DIAMETER (inches)	WELL SCREEN INTERVAL DEPTH: 19.95 feet to 14.95 feet	STATIC DEPTH TO WATER (feet): 17.77	PURGE PUMP TYPE OR BAILER: PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (19.95 feet - 17.77 feet) X 0.04 gallons/foot = 0.09 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL) = _____ gallons + (_____ gallons/foot X _____ feet) + _____ gallons = _____ gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 18'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 18'	PURGING INITIATED AT: 11:55	PURGING ENDED AT: 12:03	TOTAL VOLUME PURGED (gallons): 0.2

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or g/cm	DISSOLVED OXYGEN (mg/l) / % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
11:57	0.04	0.04	0.02	17.77	5.69	10.8	620	8.41	33.1	20.3	clear
11:59	0.084	0.084	0.02	17.77	5.57	10.6	620	8.75	32.7	20.1	no color
12:01	0.084	0.12	0.02	17.77	5.71	10.4	619	8.9	30.9	20.8	↓
12:03	0.084	0.206	0.02	17.77	5.74	10.5	620	8.3	29.6	19.1	↓

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010, 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016
 PURGING EQUIPMENT CODES: B = Bailor, BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RR	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 12:05	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 18'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y N	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP Y N TUBING Y N (replaced) OTHER (specify)		Y N	DUPLICATE: Y N DUP. ID:

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-0095	2	AG	1L	none	2,000	5.74	8270 SVOC	PRPP	90
↓	3	CG	90mL	HCl	190	↓	8260 VZ	↓	

5 WELL VOLUMES: 0.49 gal
 REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene, PP = Polypropylene, S = Silicone; T = Teflon; O = Other (Specify)
 SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailor, BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump, WM = Water Level Meter
 EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap, O = Other (Specify); LP = Lab Preserved

- NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
 pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized; ORP: + 10 mV.
 2 Standard decontamination procedures includes DI water rinse, Luminox solution wash, DI water final rinse, & air dry.
 3 1 gpm = 3,785.4 mL/min

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GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO.: 044100 044100
WELL NO: TMW-011	SAMPLE ID: TMW-011	DATE: 1/11/22

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): .1875	WELL SCREEN INTERVAL DEPTH: 13.6 feet to 3.68	STATIC DEPTH TO WATER (feet): 8.92	PURGE PUMP TYPE OR BAILER: PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (13.68 feet - 8.92 feet) X 0.04 gallons/foot = 0.19 gallons				

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)		NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)
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INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 11'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 11'	PURGING INITIATED AT: 14:13	PURGING ENDED AT: 2:25	TOTAL VOLUME PURGED (gallons):
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN mg/L / % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
14:15	0.16	0.16	0.08	8.92	6.51	13.54	2528	1.27	56.7	-21.1	Very
14:17	0.012	.28	0.06	8.92	6.49	13.35	2444	1.03	43.0	-26.4	Strong
14:19	0.08	.36	0.04	8.92	6.48	13.25	2372	0.93	39.9	-28.2	odor
14:21	0.08	.44	0.04	8.92	6.50	13.35	2298	0.76	38.1	-31.4	
14:23	0.09	.48	0.02	8.92	6.46	13.17	2251	0.73	33.5	-33.9	
14:25	0.09	.52	0.02	8.92	6.51	12.94	2137	0.65	38.5	-34.4	

WELL CAPACITY (Gallons Per Foot) 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal / Ft) 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
 PURGING EQUIPMENT CODES B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RR	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING INITIATED AT: 14:30	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 11'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N <input type="checkbox"/>	TUBING <input checked="" type="checkbox"/> N (replaced) <input type="checkbox"/>	OTHER (specify):	DUPLICATE: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> DUP. ID:

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-011	2	AG	1L	None	2,000	6.51	8270-VOC	PRPP	300 mL
↓	3	CG	40 mL	HCL	120	6.51	8260-VOC	↓	

5 WELL VOLUMES: .95 gal. REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)
 SAMPLING/PURGING APP = After Peristaltic Pump, B = Bailer, BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, WM = Water Level Meter
 EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), VT = Vacuum Trap, O = Other (Specify), LP = Lab Preserved

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
 pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized ORP: + 10 mV
 2 Standard decontamination procedures includes DI water rinse, Luminol solution wash, DI water final rinse, & air dry
 3 1 gpm = 3,785 mL/min

GROUNDWATER SAMPLING LOG

SITE: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO.: <u>014100</u>
<u>TMW-0125</u>	SAMPLE ID: <u>TMW-0125</u>	DATE: <u>1/7/02</u>

PURGING DATA

PUMP/TUBING INTERVAL (inches): <u>1'</u>	TUBING DIAMETER (inches): <u>0.875</u>	WELL SCREEN INTERVAL DEPTH: <u>19.1</u> feet to <u>9.1</u>	STATIC DEPTH TO WATER (feet): <u>10.7</u>	PURGE PUMP TYPE OR BAILER: <u>PP</u>
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
 = (19.1 feet - 10.7 feet) X 6.04 gallons/foot = 0.34 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <u>14'</u>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <u>14'</u>	PURGING INITIATED AT: <u>16:28</u>	PURGING ENDED AT: <u>16:36</u>	TOTAL VOLUME PURGED (gallons):
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (mg/L) % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
16:30	0.18	0.18	0.09	10.7	7.15	11.28	1377	1.69	42.5	-20.5	
16:32	0.18	0.36	0.09	10.7	7.14	11.31	1369	1.10	17.0	-25.8	
16:34	0.18	0.54	0.09	10.7	7.14	11.34	1363	-0.85	19.0	-28.1	
16:36	0.18	0.72	0.09	10.7	7.13	11.42	1355	0.68	16.0	-29.6	

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.008; 1/2" = 0.010; 5/8" = 0.016
 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <u>RR</u>	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: <u>1440</u>	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: <u>HDPE</u>	FIELD-FILTERED: <u>Y</u> (N)	FILTER SIZE: <u> </u> μm
FIELD DECONTAMINATION: <u>PUMP</u> (N)	TUBING: <u>N</u> (replaced)	OTHER (specify):	Filteration Equipment Type:

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			DUPLICATE: <u>Y</u> (N)		DUP ID	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)	
<u>TMW-0125</u>	<u>2</u>	<u>AG</u>	<u>1L</u>	<u>None</u>	<u>2,000</u>	<u>7.13</u>	<u>8270-S-VOL</u>	<u>PRPP</u>	<u>350ML</u>	
	<u>3</u>	<u>CG</u>	<u>40mL</u>	<u>HCL</u>	<u>126</u>	<u>7.13</u>	<u>8260-VOL</u>	<u>✓</u>	<u>✓</u>	

5 WELL VOLUMES: 1.65 gal
 REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
 SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; WM = Water Level Meter
 EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify); LP = Lab Preserved

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQA509.GW4
 pH: ± 0.1 units Temperature: $\pm 3\%$ Specific Conductance: $\pm 3\%$ Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized, ORP: $+ 10$ mV
 2 Standard decontamination procedures includes DI water rinse, Luminox solution wash, DI water final rinse, & air dry.
 3 1 gpm = 3,785.4 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO.: MAWETT 044100
WELL NO: TMW-013S	SAMPLE ID: TMW-013S	DATE: 1/10/22

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 0.1875	WELL SCREEN INTERVAL DEPTH: 15.81 feet to 5.41	STATIC DEPTH TO WATER (feet): 5.4	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (**15.81 feet - 5.46 feet**) X **0.04 gallons/foot** = **.42 gallons**

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)
= **gallons + (gallons/foot X feet) + gallons** = **gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10'	PURGING INITIATED AT: 14:56	PURGING ENDED AT: 15:06	TOTAL VOLUME PURGED (gallons):
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TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (mg/L) % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
14:58	0.18	.18	0.09	5.4	7.55	11.8°	711	1.48	20.1	-1.8	
15:00	0.18	.36	0.09	5.4	7.56	11.3°	711	.96	9.57	-11.5	Night
15:02	0.18	.54	0.09	5.4	7.49	11.59°	712	.64	4.01	-21.8	Order
15:04	0.18	.72	0.09	5.4	7.47	11.6	714	.54	2.28	-24.6	
15:06	0.18	0.90	0.09	5.4	7.47	11.67	714	.45	1.58	-27.4	

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.08; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RE	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 12:09	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 10'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) FILTER SIZE: _____ µm	Filtration Equipment Type:
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N TUBING <input checked="" type="checkbox"/> N (replaced) OTHER (specify)	DUPLICATE: Y (N)	DUP. ID:	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-013S	2	AG	1L	none	2,000	7.47	8270-SVC	PRPP	350ML
	3	CG	40ML	HCL	120	7.47	8260-VOC	↓	

5 WELL VOLUMES: **2.05 gal**
REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; WM = Water Level Meter

EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify); LP = Lab Preserved

- NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
 pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized, ORP: + 10 mV.
 2 Standard decontamination procedures includes DI water rinse, Luminox solution wash, DI water final rinse, & air dry.
 3 1 gpm = 3,785 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO.: 014100 014100
WELL NO: TMW-013D	SAMPLE ID: TMW-013D	DATE: 1/8/22

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 0.1875	WELL SCREEN INTERVAL DEPTH: 21.2 feet to 16.2	STATIC DEPTH TO WATER (feet): 8.35	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (**21.2'** feet - **8.35'** feet) X **0.04** gallons/foot = **.51** gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)
= _____ gallons + (_____ gallons/foot X _____ feet) + _____ gallons = _____ gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 14'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14'	PURGING INITIATED AT: 15:23	PURGING ENDED AT: 15:40	TOTAL VOLUME PURGED (gallons):
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (mg/L) % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
15:25	0.18	0.18	0.09	8.35	7.42	19.39°	899	18.8	100+	6.9	
15:27	0.18	0.36	0.09	8.35	7.31	13.35°	974	.66	100+	-27.0	Might
15:29	0.18	.54	0.09	8.35	7.23	13:37	989	.92	100+	-38.6	odor
15:34	.45	.99	0.09	8.35	7.19	13:38	1014	.36	37.1	-38.6	
15:36	0.18	1.17	0.09	8.35	7.11	13.27	1027	.38	16.2	-44.9	
15:38	0.18	1.35	0.09	8.35	7.08	13.45°	1024	.43	16.2	-47.5	
15:40	0.18	1.53	0.09	8.35	7.06	13.48°	1024	.40	14.2	-49.1	

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RR	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING INITIATED AT: 15:42	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 14'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) FILTER SIZE: _____ μm	Filtration Equipment Type:
FIELD DECONTAMINATION: PUMP (Y) N TUBING (Y) N (replaced) OTHER (specify) Y N	DUPLICATE: Y (N) DUP. ID:		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-013D	2	AG	1L	none	2000	7.06	8270-SI0C	PRPP	350ML
	3	CG	40ML	HCL	120	7.06	8260-V0C	↓	↓

5 WELL VOLUMES: **2.57 gal.** REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; WM = Water Level Meter

EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify); LP = Lab Preserved

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4

pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized ORP: + 10 mV

2 Standard decontamination procedures includes DI water rinse, Luminol solution wash, DI water final rinse, & air dry.

3 1 gpm = 3,785.4 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO.: 0144100 0144100
WELL NO: TMW-014S	SAMPLE ID: TMW-0AS	DATE: 1/7/22

PURGING DATA

WELL DIAMETER (inches) 1"	TUBING DIAMETER (inches) 0.1875	WELL SCREEN INTERVAL DEPTH: 4.95 feet to 4.95	STATIC DEPTH TO WATER (feet): 10.55	PURGE PUMP TYPE OR BAILER: PP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (14.695 feet - 10.55 feet) X 0.04 gallons/foot = 0.18 gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL) = _____ gallons + (_____ gallons/foot X _____ feet) + _____ gallons = _____ gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 12'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 12'	PURGING INITIATED AT: 14:38	PURGING ENDED AT: 14:46	TOTAL VOLUME PURGED (gallons):							
TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) μ mhos/cm	DISSOLVED OXYGEN (mg/L) % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
14:40	0.12	0.12	0.06	10.55	7.35	11.28	882	1.54	1.97	-10.0	
14:42	0.12	.24	0.06	10.55	7.32	10.68	882	1.36	1.28	-14.4	
14:44	0.12	.36	0.06	10.55	7.30	10.64	880	1.28 1.2	1.11	-15.2	
14:46	0.12	.48	0.06	10.55	7.27	10.61	880	1.18	1.48	-15.7	
WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88											
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer, BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump, O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RR		SAMPLER(S) SIGNATURES: <i>[Signature]</i>		SAMPLING INITIATED AT: 14:48	SAMPLING ENDED AT:				
PUMP OR TUBING DEPTH IN WELL (feet): 12'		TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: _____ μ m					
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N TUBING <input checked="" type="checkbox"/> Y <input type="checkbox"/> N (replaced) OTHER (specify)		DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		DUP. ID:					
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-0AS	2	AG	1L	none	2,000	7.27	8270 SVUC	PRPP	250ML
	3	CG	40ML	HCL	120	7.27	8260 VUC	PLPP	
5 WELL VOLUMES: 0.85 gal		REMARKS: * Samples placed on ice subsequent to collection							
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)									
SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; WM = Water Level Meter									
EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify); LP = Lab Preserved									

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
 pH: ± 0.1 units Temperature: $\pm 3\%$ Specific Conductance: $\pm 3\%$ Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized, ORP: + 10 mV

2 Standard decontamination procedures includes DI water rinse, Luminox solution wash, DI water final rinse, & air dry

3 1 gpm = 3,785 4 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO: DM08577 014100
WELL NO: TMW-014D	SAMPLE ID: TMW-014D	DATE: 1/10/22

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 0.1875	WELL SCREEN INTERVAL DEPTH: 19.9 feet to 14.9	STATIC DEPTH TO WATER (feet): 12.7	PURGE PUMP TYPE OR BAILER: PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (19.9 feet - 12.7 feet) X 0.04 gallons/foot = 0.26 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 15'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 15'	PURGING INITIATED AT: 14:08	PURGING ENDED AT: 14:22	TOTAL VOLUME PURGED (gallons):
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (mg/L) % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
14:14	0.48	0.48	0.08	12.7	7.34	11.84	963	1.27	12.7	-5.5	
14:16	0.12	.60	0.06	12.7	7.29	11.63	983	0.87	7.22	-16.2	Strong
14:18	0.12	.72	0.06	12.7	7.25	11.97	974	0.73	3.88	-21.4	odor
14:20	0.12	.84	0.06	12.7	7.24	11.52	973	0.64	3.25	-24.6	light &
14:22	0.12	.96	0.06	12.7	7.23	11.50	974	0.60	4.17	-26.1	sheen

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RR	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING INITIATED AT: 02:25	SAMPLING ENDED AT: 02:25
PUMP OR TUBING DEPTH IN WELL (feet): 15'	TUBING MATERIAL CODE: HOPE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N <input type="checkbox"/>	TUBING <input checked="" type="checkbox"/> N (replaced) <input type="checkbox"/> OTHER (specify)	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	DUPLICATE Y <input type="checkbox"/> N <input checked="" type="checkbox"/> DUP. ID:

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-014D	2	AG	1L	none	2,000	7.23	8270 SVOC	RRPY	300ML
	3	CG	40ML	HCL	120	7.23	8260 VOC	↓	

5 WELL VOLUMES: 1.3 gal

REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; WM = Water Level Meter

EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify); LP = Lab Preserved

- NOTES:
- 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized; ORP: + 10 mV
 - 2 Standard decontamination procedures includes DI water rinse, Luminox solution wash, DI water final rinse, & air dry.
 - 3 1 gpm = 3,785.4 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO: 44100 044100
WELL NO: TMW-15	SAMPLE ID: TMW-15	DATE: 1/10/22

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 0.1875	WELL SCREEN INTERVAL DEPTH: 8.6 feet to 8.6	STATIC DEPTH TO WATER (feet): 12.05	PURGE PUMP TYPE OR BAILER: PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)				
= (18.6 feet - 12.05 feet) X 0.04 gallons/foot = 0.26 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
NOTE: YSI 558MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 12'		FINAL PUMP OR TUBING DEPTH IN WELL (feet): 12'		PURGING INITIATED AT: 9:55
				PURGING ENDED AT: 10:07
				TOTAL VOLUME PURGED (gallons): 0.48

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (mg/l) % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
10:00	0.35	0.35	0.086	12.05	6.48	12.69	1010	1.67	5.62	-5.1	clear/odor
10:02	0.10	0.45	0.081	12.05	6.31	12.75	1007	1.25	4.60	-4.1	
10:05	0.08	0.46	0.081	12.05	6.21	12.47	1010	1.11	3.99	-3.5	
10:07	0.02	0.48	0.01	12.05	6.18	12.45	1008	1.05	3.89	-3.0	

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RE	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING INITIATED AT: 10:40	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 12'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y <input checked="" type="checkbox"/>	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N	TUBING <input checked="" type="checkbox"/> N (replaced)	OTHER (specify) _____	DUPLICATE: Y <input checked="" type="checkbox"/> DUP. ID:

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-15	2	AG	1L	none	2,000	6.18	3276 SVOC	RFPP	0.40
	3	CG	40mL	HCl	120	6.18	3260 VOC	RFPP	

5 WELL VOLUMES: 0.52
REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; WM = Water Level Meter
EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify); LP = Lab Preserved

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized, ORP: + 10 mV.
2 Standard decontamination procedures includes DI water rinse, Luminox solution wash, DI water final rinse, & air dry.
3 1 gpm = 3,785 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME WMATA Northern Bus Station	SITE LOCATION 4615 14th Street NW Washington D.C. 20011	PROJECT NO. 044100
WELL NO TMW-016	SAMPLE ID TMW-016	DATE 1/10/22

PURGING DATA

WELL DIAMETER (inches) 1"	TUBING DIAMETER (inches) 0.1313	WELL SCREEN INTERVAL DEPTH 13.55 feet to 3.55	STATIC DEPTH TO WATER (feet) 11.00	PURGE PUMP TYPE OR BAILER PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (13.55 \text{ feet} - 11.00 \text{ feet}) \times 0.04 \text{ gallons/foot} = 0.342 \text{ gallons}$				

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)		NOTE YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)
= _____ gallons + _____ gallons = _____ gallons		

INITIAL PUMP OR TUBING DEPTH IN WELL (feet) 14'	FINAL PUMP OR TUBING DEPTH IN WELL (feet) 14'	PURGING INITIATED AT 10:47	PURGING ENDED AT 11:02	TOTAL VOLUME PURGED (gallons)
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN mg/L / % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
10:45	0.1	0.1	0.05	11.00	6.66	13.6°	1213	1.32	53.1	-77.8	
10:50	0.25	0.35	0.05	11.00	6.68	13.6°	1218	1.34	10.61	-79.5	
10:55	0.25	0.60	0.05	11.00	6.73	13.72	1218	0.90	4.85	-82	
11:00	0.25	0.85	0.05	11.00	6.73	13.80	1220	0.7	4.09	-84	
11:02	0.1	0.95	0.05	11.00	6.74	13.75°	1219	0.69	3.93	-83.7	

WELL CAPACITY (Gallons Per Foot) 1/2" = 0.010, 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.) 1/8" = 0.0008, 3/16" = 0.0014, 1/4" = 0.0026, 5/16" = 0.004, 3/8" = 0.006, 1/2" = 0.010, 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer, BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION RR	SAMPLER(S) SIGNATURES	SAMPLING INITIATED AT 11:05	SAMPLING ENDED AT
PUMP OR TUBING DEPTH IN WELL (feet) 14'	TUBING MATERIAL CODE HDPE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE _____ μm
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N <input type="checkbox"/>	TUBING <input checked="" type="checkbox"/> N (replaced) OTHER (specify)	Y <input type="checkbox"/> N <input type="checkbox"/>	DUPLICATE: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> DUP ID

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-16	2	AG	1L	none	2,000	6.74	8270 SVDC		200
	3	CG	40mL	HCL	120	6.74	8260 VDC		

5 WELL VOLUMES **1071** REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene, PP = Polypropylene, S = Silicone, T = Teflon, O = Other (Specify)
SAMPLING/PURGING APP = After Peristaltic Pump, B = Bailer, BP = Bladder Pump, ESP = Electric Submersible Pump, PP = Peristaltic Pump, WM = Water Level Meter
EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump, SM = Straw Method (Tubing Gravity Drain), VT = Vacuum Trap, O = Other (Specify), LP = Lab Preserved

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASQP-GW4
pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized, ORP: + 10 mV
2 Standard decontamination procedures includes DI water rinse, Luminox solution wash, DI water final rinse, & air dry
3 1 gpm = 3,785.4 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME: WMATA Northern Bus Station	SITE LOCATION: 4615 14th Street NW Washington D.C. 20011	PROJECT NO: MM0517 044100
WELL NO: TMW-017	SAMPLE ID: TMW-017	DATE: 1/10/22

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 0.1575	WELL SCREEN INTERVAL DEPTH: 16.8 feet to 6.8'	STATIC DEPTH TO WATER (feet): 10.68	PURGE PUMP TYPE: OR BAILER PP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (16.8 feet - 10.68 feet) X 0.04 gallons/foot = 0.24 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 16.8 gallons + (NOTE: YSI 558MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3.785 mL)) gallons/foot X feet + gallons = gallons				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 13'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 13'	PURGING INITIATED AT: 11:25	PURGING ENDED AT: 11:43	TOTAL VOLUME PURGED (gallons):
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) μmhos/cm (or μS/cm)	DISSOLVED OXYGEN (mg/L) % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
11:28	0.09	0.09	0.03	10.68	7.00	14.15	1170	0.88	21.8	-24	
11:30	0.09	0.18	0.03	10.68	7.00	14.23	1100	0.79	18.1	-33.6	
11:32	0.09	0.27	0.03	10.68	6.99	14.47	1047	0.64	12.3	-37.8	
11:34	0.09	0.36	0.03	10.68	6.96	14.46	1019	0.6	8.86	-38.8	
11:36	0.09	0.45	0.03	10.68	6.75	14.48	992	0.55	6.9	-39.3	
11:38	0.09	0.54	0.03	10.68	6.90	14.73	950	0.53	5.22	-39.6	
11:40	0.09	0.63	0.03	10.68	6.88	14.30	942	0.53	4.14	-39.5	
11:42	0.09	0.72	0.03	10.68	6.87	14.37	943	0.51	3.61	-39.7	

WELL CAPACITY (Gallons Per Foot): 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
 PURGING EQUIPMENT CODES: B = Bailor, BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: RE	SAMPLER(S) SIGNATURES: <i>[Signature]</i>	SAMPLING INITIATED AT: 11:45	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 13'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N	TUBING <input checked="" type="checkbox"/> N (replaced)	OTHER (specify):	DUPLICATE Y <input checked="" type="checkbox"/> N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-017	2	AG	1L	None	2,000	6.87	8270 SVOC	RPPP	150
	3	CG	40ML	HCL	120	6.87	8260 POC	↓	

5 WELL VOLUMES: 1.2 gal. REMARKS: * Samples placed on ice subsequent to collection

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon. O = Other (Specify)
 SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump, WM = Water Level Meter
 EQUIPMENT CODES: RPPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap. O = Other (Specify). LP = Lab Preserved

NOTES: 1 Stabilization Criteria for range of variation of last three consecutive readings per EPA EQASOP-GW4
 pH: ± 0.1 units Temperature: ± 3% Specific Conductance: ± 3% Dissolved Oxygen: 10% for values greater than 0.5 mg/L, if three DO values less than 0.5 mg/L, consider values as stabilized Turbidity: 10% for values greater than 5 NTUs, if three turbidity values are less than 5 NTUs, consider stabilized; ORP: + 10 mV.
 2 Standard decontamination procedures includes DI water rinse, Luminox solution wash, DI water final rinse, & air dry.
 3 1 gpm = 3,785.4 mL/min

GROUNDWATER SAMPLING LOG

SITE NAME WMATA Northern Bus Station	SITE LOCATION 4615 14th Street NW Washington D.C. 20011	PROJECT NO 044100
WELL NO TMW-018	SAMPLE ID: TMW-018	DATE: 1/10/22

PURGING DATA

WELL DIAMETER (inches) 1"	TUBING DIAMETER (inches) 0.1875	WELL SCREEN INTERVAL DEPTH 17.7 feet to 7.7	STATIC DEPTH TO WATER (feet): 13.3	PURGE PUMP TYPE OR BAILER PP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= **(17.7 feet - 13.3 feet) X 0.04 gallons/foot = 0.18 gallons**

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

NOTE: YSI 556MPS flow cell volume = 500 mL = 0.13 gallons (1 gallon = 3,785 mL)

= **gallons + (gallons/foot X feet) + gallons = gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 15'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 15'	PURGING INITIATED AT: 12:02	PURGING ENDED AT: 12:23	TOTAL VOLUME PURGED (gallons) 0.31
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ODOR (describe)
12:06	0.08	0.08	0.02	13.3	6.67	11.8	351	2.47	91	-35.7	clear
12:08	0.08	0.16	0.02	13.3	6.67	11.7	3203	3.67	67	-38.9	clear
12:12	0.04	0.2	0.01	13.3	6.66	10.6	3017	5.15	62	-38.1	
12:15	0.03	0.23	0.01	13.3	6.66	10.4	2767	5.63	42	-35.0	
12:17	0.02	0.25	0.01	13.3	6.66	10.1	2677	5.27	36	-33.7	
12:19	0.02	0.27	0.01	13.3	6.66	9.8	2519	5.34	22	-32.4	
12:21	0.02	0.29	0.01	13.3	6.66	9.6	2444	5.51	21	-31.5	
12:23	0.02	0.31	0.01	13.3	6.66	9.5	2107	5.75	22	-31.2	

WELL CAPACITY (Gallons Per Foot) 1/2" = 0.010; 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION RR	SAMPLER(S) SIGNATURES	SAMPLING INITIATED AT 12:25	SAMPLING ENDED AT 13:55
PUMP OR TUBING DEPTH IN WELL (feet) 15'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y	FILTER SIZE 0 μm
FIELD DECONTAMINATION PUMP <input checked="" type="checkbox"/> N	TUBING N (replaced)	OTHER (specify)	DUPLICATE Y <input checked="" type="checkbox"/> DUP. ID:

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED*	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
TMW-018	2	AG	1L	none	2000	6.66	8270 S10C	RFPP	100 mL
↓	3	CG	40 mL	HCL	120	6.66	8260 VOL	↓	

5 WELL VOLUMES **0.9**

REMARKS: * Samples placed on ice subsequent to collection

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