

(C					S	SOIL BORING L	OG			
			Client:	Mason	& Han	ger Group, Inc.		Boring Identification:	B-1		
Geo	Insi	ghť	Project:								2
Environmental S	Strategy &	Engineering				ad, Devens, MA		Checked By: MCP	Pr	oject Number: 9	505-000
		y: Technica	l Drilling S	Services	s, Inc.		Boring Location: See				
Foreman:			• • • •				Ground Surface Eleva			atum: NAVD 88	1/10/10
GeoInsight	t Engin	eer/Geolog	ist: A. Stit	t			Date Started: 11/18/19)	Da	ate Completed: 11	1/18/19
	DRILI	LING MET	THOD			SAMPLER		GROUNDWAT	ER MEASUREMENTS		
Vehicle: Tr					-	SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	
Model: Die						ner (lb): 140	11/18/2019	6.5	Ground Surface	After Dri	lling
Method: 4 DEPTH	.25" Ho	ollow-Stem SAMPLE	0	ATIO	Fall (i	n): 30					
(ft)		Pen/Rec	Depth				SAMPLE		STRATUM	FIELD SCREENING	NOTE
	#	(in)	(ft)	Blov	ws/6''		DESCRIPTION		DESCRIPTION	(ppm)	noil
0 -	S1	24/14	0-2		3	S1: Medium dense	e, brown, fine to coarse S	AND and GRAVEL,	Sand and Gravel		
1 -					7	trace Silt, damp.					
1				12	23				FILL		
2 -				3	34				_		
-						Apparent change in	n material based upon dr	ill rig behavior.			
3 -	┨										
	 								NATIVE OUTWASH DEPOSIT		
4 -									DEPOSIT		
	 										
5 -	S2	24/13	5-7		6	S2: Very dense. gr	ay and brown, fine to co	arse SAND and	Sand and Gravel with		
		215			46	GRAVEL, little Sil			Sana and Graver with Silt		
6 -	1			2	27						
7 -				2	24						
/											
8 -	<u> </u>										
9 -											
10	S3	24/12	10-12	1	14	S3: Medium dense	e, gray and brown, fine to	coarse SAND and	Sand and Gravel with		
					9	GRAVEL, little Sil	lt, wet.		Silt		
11 -					8						
12 -				1	11						
13 -											
	┣──										
14 -	1										
	 										
15	S4	24/14	15-17		7		fine to coarse SAND, se	ome Gravel, trace Silt,	Gravelly Sand		
16 -				1	18	wet.					
10					17						
17 -	<u> </u>			1	10						
	 										
18 -											
19 -	1										
20											
20			IULAR ILS			COHESIVE SOILS			NOTES		
	В	lows/ft.	Dens	ity	Blows						
		0-4	V. LO	<u> </u>	<2		1				
	1	5-10	LOO		2-4						
		11-30 31-50	M. DE DEN		4-8 8-15						
	1	>50	V. DEN		15-3						
	1				>30) HARD					
	1				<u> </u>						

(a					S	SOIL BORING L	OG			
			Client:	Mason	& Hans	ger Group, Inc.		Boring Identification	: B-1		
Geo	Insi	ghť	Project:							eet: 2 of	2
Environmental S	Strategy &	Engineering	-			ad, Devens, MA		Checked By: MCP	Pr	oject Number: 9	
Drilling Co			Drilling S	Services	s, Inc.		Boring Location: See				
Foreman:							Ground Surface Eleva			atum: NAVD 88	
GeoInsight	Engin	eer/Geolog	ist: A. Stit	t			Date Started: 11/18/19)	Da	te Completed: 11	/18/19
	DRILI	LING MET	THOD			SAMPLER		GROUNDWAT	TER MEASUREMENTS		
Vehicle: Tr	uck					SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	tion
Model: Die						er (lb): 140	11/18/2019	6.5	Ground Surface	After Dril	ling
Method: 4			ē		Fall (in	n): 30					1
DEPTH (ft)		SAMPLE Bon/Boo	1	ATIO	N		SAMPLE		STRATUM	FIELD SCREENING	NOTE
(11)	#	Pen/Rec (in)	Depth (ft)	Blov	vs/6''		DESCRIPTION		DESCRIPTION	(ppm)	NOIE
20	S5	24/10	20-22		6	S5: Medium dense	e, brown, fine to coarse S	SAND, some Gravel.	Gravelly Sand	41 <i>/</i>	
		2.70			1	trace Silt, wet.	. ,	, ,			
21 -				1	8				NATIVE OUTWASH		
22				2	25				DEPOSIT		
22 -											
23 -											
23											
24 -											
				<u> </u>							
25	0.1	01/1-	25.25.5		0	Sc. Vend	all another the theory	W wat	Annow we W. J. J.		
	S6	21/15	25-26.8		.8 28	50: very dense, da	ark gray, weathered ROC	. n , wet.	Apparent Weathered Bedrock		
26			-		.8)3				Deuroen		
)/3"						
27				12	010						
28 -											
20											
29 -											
30						ļ					
50	S7	9/7	30-30.8			S7: Very dense, da	ark gray, weathered ROC	CK, wet.	Apparent Weathered		
31 -				120	0/3"	D. 1		<u> </u>	Bedrock		
						Boring terminated a	at 30.8 feet. No auger r	etusal encountered.			
32 -											
33 -											
34 -											
25			1								
35			_								
36 -											
50											
37 -											
38 -											
39 -											
40		GRAN SO	ULAR U S			COHESIVE SOILS			NOTES		
	R	SU lows/ft.	ILS Dens	itv	Blows						
		0-4	V. LO	·	<2		t				
		5-10	LOO	SE	2-4						
		11-30	M. DE		4-8						
		31-50 >50	DEN V. DE		8-15 15-3						
		/50	*. DE	NOL:	>30						

(C		_			S	OIL BORING L	OG			
Geo		- ~l_ +®				ger Group, Inc.		Boring Identification:			
			Project:			I Range id, Devens, MA		Checked By: MCP		neet: 1 of roject Number: 9	
wironmental S		Engineering Technical				iu, Devens, MA	Boring Location: See	-		oject Nulliber. 9	505-000
oreman:			Dining 5	01 11005	, me.		Ground Surface Eleva		Da	atum: NAVD 88	
		eer/Geolog	ist: A. Stit	t			Date Started: 11/18/19			ate Completed: 1	1/18/19
		LING MET				SAMPLER		GROUNDWATH	R MEASUREMENTS		
ehicle: Tr					Type: S	SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	tion
1odel: Die		0-120				er (lb): 140	11/18/2019	5.5	Ground Surface	After Dri	
		ollow-Stem	Auger		Fall (in						0
DEPTH		SAMPLE	INFORM	ATIO	N					FIELD	
(ft)	#	Pen/Rec	-	Blov	ws/6''		SAMPLE DESCRIPTION		STRATUM DESCRIPTION	SCREENING	NOT
0 -	S1A	(in) 4/4	(ft) 0-0.3		6	S1A: Medium dens	se, dark brown, fine to m	edium SAND.	TOPSOIL	(ppm)	
	S1B	20/12	0.3-2			little Silt and fine R			TOTOOL		
1 -					7	S1B: Medium dens	se, brown, fine to coarse	SAND, trace Gravel	Sand		
2 -					12	and Silt, damp.					
-	S2	24/17	2-4			S2: Dense, gray/br	own, fine SAND and SI	LT, damp.	Sand and Silt		
3 -	 				16						└──
					17 20						
4 -	S3	24/24	4-6			S3: Medium dense	. dark brown fine to cos	rse SAND, trace Gravel	Sand		
		27/27	0			and Silt, damp.	,	, auto Giuvei	Dunu		
5 -	1				, 19	-					
6 -					14				NATIVE OUTWASH		
0									DEPOSIT		
7 -											
8 -											
9 -											
10 -											
10	S4	24/18	10-12			S4: Very dense, da GRAVEL, trace Sil	ark gray/brown, fine to co	parse SAND and	Sand and Gravel		
11 -					17 36	GRAVEL, trace Sil	ii, wei.				
					43						
12 -											
12		_									
13 -											
14 -											
15 -	S5	24/15	15-17	,	25	S5: Verv dense ar	ay, fine to coarse SAND	and GRAVEL little	Sand and Gravel with		
	55	27/13	1.5-17			Silt, wet.	,, 18 course or inte	, nute	Sana ana Gravei wiin Silt		
16 -	1				33						
17 -					18						
.,]						
18 -											
19 -	1		<u> </u>								
20											
20 -	S6	24/14	20-22			S6: Medium dense	, dark gray, weathered R	OCK, wet.	Apparent Weathered		
21			<u> </u>		14				Bedrock	ļ	<u> </u>
					16						
22					16	Boring terminated a	nt 22 feet. No auger refu	sal encountered			
22											
23 -			ULAR			COHESIVE		1	NOTES		-
	В	SO lows/ft.	ILS Dens	sity	Blows/	SOILS ft. Consistency					
		0-4	V. LO	OSE	<2	V. SOFT	İ				
		5-10	LOO		2-4	SOFT					
		11-30 31-50	M. DE DEN		4-8 8-15	M. STIFF STIFF					
		>50			15-30						
						HARD					

(C					S	SOIL BORING L	OG			
_			Client:	Mason	& Han	ger Group, Inc.		Boring Identification:	B-3		
Geo	Insi	ghť	Project:						Sh	eet: 1 of	2
Environmental S	Strategy &	Engineering				ad, Devens, MA	1	Checked By: MCP	Pr	oject Number: 9	505-000
Drilling Co			l Drilling S	Services	s, Inc.		Boring Location: See				
Foreman:			• • • • • •				Ground Surface Eleva			atum: NAVD 88	10/10
GeoInsight	Engin	eer/Geolog	ist: A. Stit	t	1		Date Started: 11/18/19)	Da	ate Completed: 11	/18/19
		LING MET	THOD			SAMPLER			ER MEASUREMENTS	1	
Vehicle: Tr						SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	
Model: Die						ner (lb): 140	11/18/2019	6.0	Ground Surface	After Dril	ling
Method: 4 DEPTH		SAMPLE		ATIO	Fall (i	n): 30					
(ft)	-	Pen/Rec	Depth				SAMPLE		STRATUM	FIELD SCREENING	NOTE
	#	(in)	(ft)	Blov	ws/6''		DESCRIPTION		DESCRIPTION	(ppm)	noil
0 -	S1A	4/4	0-0.3		2	S1A: Loose, dark b	prown, fine to medium S	AND,	TOPSOIL		
	S1B	20/6	0.3-2		2	little Silt and fine R					
1 -					4	S1B: Loose, brown	n, fine to medium SAND	, little Silt, damp.	Silty Sand		
					5						
2 -	1					1					
2											
3 -									NATIVE OUTWASH		
4 -									DEPOSIT		
4 -											
5 -						l					
	S2	24/13	5-7		11	-	own, fine to coarse SAN	D and GRAVEL, little	Sand and Gravel with		
6 -					30	Silt, damp.			Silt		
					38						
7 -				3	31						
				-							
8 -											
9 -											
10 -	S 3	24/14	10-12		16	S3. Dense grav and	d dark brown, fine to coa	arse SAND and	Sand and Gravel with		
	55	24/14	10-12		22	GRAVEL, little Sil			Sana ana Graver win Silt		
11 -					16						
	-				10						
12 -						Cobbles present 12	-13 feet based upon drill	rig behavior.			
						F					
13 -	1		ł			1					
1.4			1								
14 -	1										
15											
15	S4	24/16	15-17		20		ay/brown, fine to coarse	SAND, little Gravel,	Gravelly Sand		
16 -					21	trace Silt, wet.					
10					11						
17 -]	11						
18 -	<u> </u>										
19 -	<u> </u>		<u> </u>								
20		CPAN	ULAR	L		COHESIVE					
			ILS			SOILS		I	NOTES		
	B	lows/ft.	Dens	ity	Blows						
		0-4	V. LO	OSE	<2	V. SOFT	Î				
		5-10	LOO		2-4						
		11-30	M. DE		4-8						
		31-50 >50	DEN V. DE		8-15 15-3						
					>30						

(a					S	SOIL BORING L	OG			
		-	Client:	Mason	& Han	ger Group, Inc.		Boring Identification:	: B-3		
Geo	Insi	ghť	Project:					2 or mg rue numeron		neet: 2 of	2
Environmental S	Strategy &	Engineering				ad, Devens, MA		Checked By: MCP		roject Number: 9	
Drilling Co	ompany	Technica	l Drilling S	Service	s, Inc.		Boring Location: See				
Foreman:							Ground Surface Eleva	tion: ~228 feet		atum: NAVD 88	
GeoInsight	t Engin	eer/Geolog	ist: A. Stit	t			Date Started: 11/18/19)	Da	ate Completed: 11	/18/19
	DRILI	LING MET	THOD			SAMPLER		GROUNDWAT	ER MEASUREMENTS		
Vehicle: Tr						SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	tion
Model: Die						er (lb): 140	11/18/2019	6.0	Ground Surface	After Dril	ling
Method: 4			ē		Fall (in	n): 30					
DEPTH (ft)		SAMPLE	1	ATIO	N		SAMPLE		STRATUM	FIELD	NOTE
(11)	#	Pen/Rec	Depth	Blov	ws/6''		DESCRIPTION		DESCRIPTION	SCREENING (ppm)	NOTE
20	S5	(in) 24/14	(ft) 20-22	-	16	S5: Medium dense	e, dark gray/brown, fine t	o coarse SAND little	Gravelly Sand	(ppm)	
	35	24/14	20-22		14	Gravel, trace Silt, v		o course shirtb, inde	Graveny Sana		
21 -					12						
22	 				10						
22 -	1		1								
22	l –										
23 -						Very slow and diffi	icult drilling 23-25 feet.				
24 -											
24											
25	<u> </u>										
	S6	11/6	25-25.9		30	S6: Very dense, da	ark gray, weathered ROC	CK, wet.	Apparent Weathered Bedrock		
26 -				75	5/5"	Denin e terrein ete d	-+ 25 0 fact. No	£1	Беагоск		
						Boring terminated a	at 25.9 feet. No auger re	erusal encountered.			
27 -											
	-			-							
28 -											
29 -											
20											
30											
31 -											
51											
32 -											
33 -	<u> </u>		 								
	<u> </u>										
34 -	╂──										
	<u> </u>										
35	<u> </u>					h					
	<u> </u>										
36 -	t		1								
37 -											
51											
38 -											
50											
39 -	<u> </u>										
	<u> </u>										
40		CDAN		L		COHESIVE			L		
		GRAN SO	ULAR ILS			COHESIVE SOILS			NOTES		
	В	lows/ft.	Dens	ity	Blows						
		0-4	V. LO	· ·	<2	V. SOFT	1				
		5-10	LOO		2-4						
		11-30 31-50	M. DE DEN		4-8 8-15						
	1	31-50 >50	V. DEN		8-15						
					>30						

(C					S	OIL BORING L	OG			
Geol		-				ger Group, Inc.		Boring Identification			
Geo	Insi	ght	Project:								1
Environmental S Drilling Co	itrategy &	Engineering				ad, Devens, MA	Boring Location: See	Checked By: MCP	Pr	oject Number: 9	505-000
Foreman:			I Dinning 5	ci vices.	, me.		Ground Surface Eleva		Da	atum: NAVD 88	
GeoInsight			ist: A. Stit	t			Date Started: 11/18/19			ate Completed: 1	1/18/19
]	DRILI	LING MET	THOD			SAMPLER		GROUNDWAT	ER MEASUREMENTS		
Vehicle: Tr	uck				Type: S	SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	tion
Model: Die	drich E	D-120			Hamm	er (lb): 140	11/18/2019	6.0	Ground Surface	After Dri	lling
Method: 4			-		Fall (in	n): 30					
DEPTH (ft)	#	SAMPLE Pen/Rec	Depth		N WS/6''		SAMPLE DESCRIPTION		STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0 -	S1A	(in) 6/6	(ft) 0-0.5		2	S1A: Medium dens	se, dark brown, fine to m	edium SAND	TOPSOIL	(ppm)	
	S1A S1B	18/10	0.5-2			little Silt and fine R		kululii brii (b,	TOTSOIL		
1 -	515	10,10	0.0 2				se, brown, fine SAND, li	ttle Silt, damp.	Silty Sand		
2				1	2						
2 -	S2	24/14	2-4		7	S2: Medium dense	e, brown, fine SAND, lit	tle Silt, damp.	Silty Sand		
3 -					9						
-					9						
4 -		04/14	4.4		8	S2. Madine 1.	light heaven OTT 1	~~~	C'1.		
	S3	24/16	4-6		2 4	55: Medium dense	e, light brown, SILT, dar	пр.	Silt		
5 -			-		4 7						
_					, 9				NATIVE OUTWASH		
6 -		1							DEPOSIT		
7 -											
/											
8 -											
9 -											
				-							
10 -	S4	24/14	10-12		3	S4: Medium dense.	, dark gray/brown, fine t	o coarse SAND and	Sand and Gravel		
			-			GRAVEL, trace Sil					
11 -				1	9						
12 -				1	9						
13 -											
14 -											
15 -											
10	S5	24/10	15-17				rk gray/brown, fine to co	parse SAND and	Sand and Gravel		
16 -					0	GRAVEL, trace Sil	it, wet.				
	<u> </u>				50 58						
17 -			+	2	0						
<i></i>			1								
18 -		1									
19 -											
17											
20 -		0.4/10	20.22	L	V	St. Marson 1		CAND 1	Card and Card and		
	S6	24/12	20-22			S6: Very dense, da GRAVEL, little Silt	rk gray/brown, fine to co	barse SAND and	Sand and Gravel with Silt		
21					37	,					
~~					55						
22		1				Boring terminated a	at 22 feet. No auger refu	sal encountered.	1	1	
23 -											
25			IULAR ILS			COHESIVE SOILS			NOTES		
	В	SU lows/ft.	ILS Dens	ity	Blows/						
		0-4	V. LO	OSE	<2	V. SOFT	t				
		5-10	LOO		2-4						
		11-30 31-50	M. DE DEN		4-8 8-15						
		>50	V. DE		15-30						
					>30	HARD					

(C					S	OIL BORING L	OG			
_			Client:	Mason	h & Han	ger Group, Inc.		Boring Identification:	B-5		
Geo	Insi	ghť	Project:						Sh	eet: 1 of	2
Environmental S	strategy &	Engineering				ad, Devens, MA	1	Checked By: MCP	Pr	oject Number: 9	505-000
Drilling Co			l Drilling S	Service	s, Inc.		Boring Location: See				
Foreman:							Ground Surface Eleva			atum: NAVD 88	
GeoInsight	Engin	eer/Geolog	ist: A. Stit	t	1		Date Started: 11/18/19)	Da	ate Completed: 11	1/18/19
		LING MET	THOD			SAMPLER		-	ER MEASUREMENTS		
Vehicle: Tr						SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	
Model: Die						ner (lb): 140	11/18/2019	10.0	Ground Surface	After Dri	lling
Method: 4					Fall (iı	n): 30					
DEPTH		SAMPLE	1	ATIO	N		SAMPLE		STRATUM	FIELD	NOTE
(ft) 0 -	#	Pen/Rec (in)	Depth (ft)	Blov	ws/6''		DESCRIPTION		DESCRIPTION	SCREENING (ppm)	NOTE
0	S1A	6/6	0-0.5		3	S1A: Loose, dark b	brown, fine to medium S	AND,	TOPSOIL		
1 -	S1B	18/12	0.5-2		5	little Silt and fine R	-				
1					8	S1B: Loose, light b	prown, fine to medium S	AND, little Silt, damp.	Silty Sand		
2 -					9						
-											
3 -											
-				-					POSSIBLE FILL		
4 -											
5 -	60 t	10/10			(S2A. Medium d	a haara firster "	m CAND tar Cilt	C J		
	S2A	10/10	5-5.8		6 8	S2A: Medium den: damp.	se, brown, fine to mediu	m SAND, trace Silt,	Sand		
6 -	S2B	14/10	5.8-7			-	se, gray, fine SAND and	Organia SILT damp	Ann anout One anios		
					11 20	526. Wedium dens	se, gray, the SAND and	Organic SIL1, damp.	Apparent Organics		
7 -					20						
8 -											
9 -			<u> </u>	-							
10 -	S3	24/16	10-12		4	S3: Medium dense	e, gray/ light brown, fine	SAND and SILT, wet.	Sand and Silt		
11			1		4						
11 -					9						
12 -				1	11						
12 -						Cobbles present 12	-13 feet based upon drill	rig behavior.			
13 -											
15											
14 -											
15 -					10	64 I -	с ч . •• = -		an. a		
	S4	24/16	15-17		10	S4: Loose, gray/br	rown, fine to medium SA	AND, trace Silt, wet.	Silty Sand		
16 -			 		6						
					4 3				NATIVE OUTSUAGE		
17 -					J				NATIVE OUTWASH DEPOSIT		
18 -											
19 -											
20											
20		GRAN SO	ULAR ILS			COHESIVE SOILS		I	NOTES		
	B	lows/ft.	Dens	itv	Blows						
		0-4	V. LO		<2		t				
		5-10	LOO		2-4						
		11-30	M. DE		4-8						
		31-50	DEN V DE		8-15						
		>50	V. DE	NOE	15-3 >30						
					/ 50						

(a					S	SOIL BORING L	OG			
_		-	Client:	Mason	& Hang	ger Group, Inc.		Boring Identification	n: B-5		
Geo	Insi	ghť	Project:							eet: 2 of	2
Environmental S						ad, Devens, MA		Checked By: MCP	Pr	oject Number: 9	
Drilling Co			l Drilling S	Services	s, Inc.		Boring Location: See				
Foreman:							Ground Surface Eleva			tum: NAVD 88	
GeoInsight	Engin	eer/Geolog	ist: A. Stit	t			Date Started: 11/18/19)	Da	te Completed: 11	1/18/19
		LING MET	THOD			SAMPLER		GROUNDWA	TER MEASUREMENTS		
Vehicle: Tr						SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	
Model: Die						er (lb): 140	11/18/2019	10.0	Ground Surface	After Dri	lling
Method: 4	_	SAMPLE	-	ATION	Fall (in	n): 30					
DEPTH (ft)	-	SAMPLE Pen/Rec	Depth	AHOr	N		SAMPLE		STRATUM	FIELD SCREENING	NOTE
	#	(in)	(ft)	Blov	vs/6''		DESCRIPTION		DESCRIPTION	(ppm)	NOIL
20	S5	24/12	20-22	1	0	S5: Medium dense	, gray/brown, fine to co	arse SAND and	Sand and Gravel with		
21				1	0	GRAVEL, little Sil	t, wet.		Silt		
21 -				1	1						
22 -		-		1	5						
23 -	ļ		ļ								
-	<u> </u>										
24 -											
25	S6	24/14	25-27	1	7	S6. Medium dense	, gray, fine to coarse SA	ND and GRAVEI	Sand and Gravel with		
	- 50	24/14	25-21			little Silt, wet.	, 5.47, me to course 57	and GRATTLE,	Sana and Graver with Silt		
26 -					3						
27				3	80						
27 -											
28											
20											
29											
30	S 7	24/14	30-32	2	21	S7. Medium dense	, gray, fine to coarse SA	ND and GRAVEL	Sand and Gravel with		
	57	24/14	30-32			little Silt, wet.	, gruj, ine to course sr	ind and ord roll,	Silt		
31 -				1	1						
32 -				1	1						
52 -						Boring terminated	at 32 feet. No refusal er	countered.			
33 -											
34 -											
35											
26											
36 -											
37 -											
2.											
38 -											
39											
40											
70		GRAN SOI			(COHESIVE SOILS			NOTES		
	В	lows/ft.	Dens	ity	Blows/						
		0-4	V. LO		<2	V. SOFT	Ī				
		5-10 11-30	LOO M. DE		2-4 4-8						
		31-50	M. DE DEN		4-8 8-15						
		>50									
		>50 V. DENSE 15-30 >30				HARD	I				

	C)					S	OIL BORING L	OG			
Geo		- .l. 1°				ger Group, Inc.		Boring Identification:			
Geo	Insi	ght	Project:			el Range ad, Devens, MA		Checked By: MCP		eet: 1 of	1
Invironmental S Drilling Co		Engineering Technical					Boring Location: See	-	f1	oject Nulliber. 9	505-000
Foreman:					,		Ground Surface Eleva		Da	atum: NAVD 88	
GeoInsight	Engin	eer/Geologi	ist: A. Stit	t			Date Started: 11/19/19)	Da	ate Completed: 1	1/19/19
1	DRILI	LING MET	HOD			SAMPLER		GROUNDWATH	ER MEASUREMENTS		
Vehicle: AT	ГV				Type: S	SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	tion
Model: Die						er (lb): 140	11/19/2019	7.0	Ground Surface	After Dri	lling
		ollow-Stem	-		Fall (in	n): 30					
DEPTH (ft)		SAMPLE Pen/Rec	Depth				SAMPLE		STRATUM	FIELD SCREENING	NOTE
	#	(in)	(ft)	Blov	ws/6''		DESCRIPTION		DESCRIPTION	(ppm)	
0 -	S1A	6/6	0-0.5		1	S1A: Very loose, d	lark brown, fine to medi	um SAND,	FOREST MAT		
1 -	S1B	18/12	0.5-2			little Silt and fine R					
						S1B: Very loose, b roots, damp.	brown, fine to medium S.	AND, trace Silt and fine	Sand		
2 -	S2	24/16	2-4		5	-	e, brown, fine to coarse s	SAND trace Silt damp	Sand		
	32	24/10	2-4		4 7		e, stown, mie to coarse i		Sunu		
3 -	t	L			, 9						
4 -					9						
Ŧ	S3	24/18	4-6			S3: Stiff, gray/ligh	nt brown, SILT, damp.		Silt		
5 -	 				4						
					6 7				NATIVE OUTWASH		
6 -					/				DEPOSIT		
7											
7 -											
8 -											
-											
9 -											
10 -	S4	24/21	10-12		2	S4: Medium stiff, g	gray, SILT, wet.		Silt		
11 -					2						
					2						
12 -					2						
13 -											
14 -											
14											
15 -									C 11.		
	S5	24/11	15-17		1 2	S5: Soft, gray, SIL	1, wet.		Silt		
16 -					2						
17		L			2						
17 -						Boring terminated a	at 17 feet. No refusal en	countered.			
18 -											
-											
19 -											
	<u> </u>	<u> </u>									
20 -	t										
21											
-1											
22											
23 -		GRAN				COHESIVE			NOTES	<u> </u>	!
	D	SOl lows/ft.	ILS Dens	ity	Blows/	SOILS /ft. Consistency		Г	101Eb		
	В	0-4	V. LO	ě.	slows/		t				
		5-10	LOO		2-4						
		11-30 31-50	M. DE DEN		4-8 8-15						
				~ ~	. 0"10	01111					
		>50	V. DE	NSE	15-30	0 V. STIFF					

\mathbf{C}^{-1}	Levi	- ch+®				ger Group, Inc.		Boring Identification:		•	
Geo	Insi	ght	Project:								1
/ironmental S	Strategy &	Engineering				ad, Devens, MA		Checked By: MCP	Р	roject Number: 9	505-000
-		Technical	Drilling So	ervices,	, Inc.		Boring Location: See				
reman:		-					Ground Surface Eleva			atum: NAVD 88	1/10/10
eoInsignt	t Engin	eer/Geolog	ist: A. Stitt	:			Date Started: 11/19/1	•	L	ate Completed: 1	1/19/19
	DRILI	LING MET	HOD			SAMPLER		GROUNDWATE	ER MEASUREMENTS	5	
ehicle: A	TV				Type: S	SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	tion
odel: Die					Hamm	er (lb): 140	11/19/2019	15.5	Ground Surface	After Dri	lling
ethod: 4		ollow-Stem	-		Fall (in	n): 30					
DEPTH		SAMPLE		ATION	N		SAMPLE		STRATUM	FIELD	
(ft)	#	Pen/Rec (in)	Depth (ft)	Blov	vs/6''		DESCRIPTION		DESCRIPTION	SCREENING (ppm)	NOTE
0	S1A	6/6	0-0.5		1	S1A: Very loose, d	lark brown, fine to medi	um SAND,	FOREST MAT		
1 .	S1B	18/7	0.5-2			little Silt and fine R					
1					1	S1B: Very loose, b	prown, fine to medium S	AND, little Silt, damp.	Silty Sand		
2					2						
-	S2	24/16	2-4				e, brown, fine to mediun	n SAND, little Silt,	Silty Sand		
3.						damp.				L	
					7						
4				(6						
5		0.1/2 :			,	S2. Madin 1	light here a second	D and SILT 1-	Car J J C.1.		
	S3	24/24	5-7			55: Medium dense	e, light brown, fine SAN	D and SIL1, damp.	Sand and Silt		
6					7						
	\vdash				0						
7 -	-			1	1						
8	-										
9 -	-										
10 ·	S4	24/24	10-12		3	S4: Loose, light br	own, fine SAND and SI	LT, damp.	Sand and Silt		
					2	, ,	,				
11 .	-			:	5						
10				1	8						
12											
12											
13											
14											
14											
15											
	S5	24/15	15-17			S5: Medium stiff, I	light brown, SILT, wet.		Silt		
16	\square				4						
					6						
17				,	7	D 1				 	
						Boring terminated a	at 17 feet. No refusal en	countered.			
18											
19 -											
20										 	
21		-									
22											
22											
23		GRAN				COHESIVE		N	NOTES		
		SO		· • • •	D1	SOILS		1,			
	B	lows/ft. 0-4	Dens V. LOO	·	Blows/	/ft. Consistency V. SOFT	ł				
	1	0-4 5-10	LOOS		<2 2-4						
		11-30	M. DE		4-8						
		31-50	DEN		8-15						
	1	>50	V. DEI	NSE	15-30						
			1		>30	HARD	1				

(C					S	OIL BORING L	OG			
_		-	Client:	Mason	& Han	ger Group, Inc.		Boring Identification:	B-8		
Geo	Insi	ghť	Project:							eet: 1 of	2
Environmental			Location	: 1 Jack	son Ro	ad, Devens, MA		Checked By: MCP	Pr	oject Number: 9	505-000
Drilling Co			l Drilling S	Services	s, Inc.		Boring Location: See				
Foreman:							Ground Surface Eleva			tum: NAVD 88	
GeoInsight	t Engin	eer/Geolog	ist: A. Stit	t			Date Started: 11/19/19)	Da	te Completed: 11	1/19/19
		LING MET	THOD			SAMPLER			ER MEASUREMENTS		
Vehicle: A		. 50				SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	
Model: Die		0-50 ollow-Stem	A		Hamm Fall (ii	ner (lb): 140	11/19/2019	15.0	Ground Surface	After Dri	lling
DEPTH		SAMPLE	-	ATION		li). 50				FIELD	
(ft)		Pen/Rec	Depth				SAMPLE		STRATUM	SCREENING	NOTE
	#	(in)	(ft)	Blov	vs/6''		DESCRIPTION		DESCRIPTION	(ppm)	
0	S1A	6/6	0-0.5		1	S1A: Very loose, d	lark brown, fine to medi	um SAND,	FOREST MAT		
1	S1B	18/12	0.5-2		1	little Silt and fine F	Roots, damp.				
1					1	S1B: Very loose, li	ight brown, fine SAND,	little Silt, damp.	Silty Sand		
2					2						
2	S2	24/20	2-4		2	S2: Loose, light br	own, fine to medium SA	ND, little Silt, damp.			
3					2						
5					3						
4					5						
	S 3	24/20	4-6		2		ht brown, fine to mediu	n SAND, little Silt,	Silty Sand		
5	—				2	damp.					
					2						
6					5						
									NATIVE OUTWASH DEPOSIT		
7									DEPOSIT		
8			-								
9											
10	S4	24/15	10-12	1	7	S4: Medium dense	, brown, fine to coase S.	AND, some fine Gravel,	Gravelly Sand with Silt		
				1	3	little Silt, damp.					
11	1			1	4						
12				1	5						
12											
13											
15											
14	-		ļ								
15		0.1/2	15 15	-	1	S5. M-J 1	harry firsts C	AND some fire C - 1	Consults Court and City		
	S5	24/3	15-17		1	S5: Medium dense little Silt, wet	, brown, fine to coase S.	AND, some fine Gravel,	Gravelly Sand with Silt		
16					2	inte sitt, weth					
					1						
17	+			1	. 1						
18	8										
19						1					
20											
	GRANULAR C SOILS					COHESIVE SOILS		1	NOTES		
	В	lows/ft.	Dens	ity	Blows						
		0-4	V. LO	OSE	<2	V. SOFT	Î				
		5-10	LOO		2-4						
		11-30 31-50	M. DE DEN		4-8 8-15						
		31-50 >50	V. DEN		8-13						
					>30						

(a					S	SOIL BORING	LOG			
4	9.		Client:	Mason	& Hans	ger Group, Inc.		Boring Identification	n: B-8		
Geo	Insi	ghť	Project:							eet: 2 of	2
Environmental S			-			ad, Devens, MA		Checked By: MCP		oject Number: 9	
Drilling Co	ompany	: Technical	Drilling S	Services	s, Inc.		Boring Location: Se				
Foreman:							Ground Surface Ele	vation: ~237 feet		tum: NAVD 88	
GeoInsight	Engin	eer/Geolog	ist: A. Stit	t			Date Started: 11/19/	19	Da	te Completed: 11	/19/19
]	DRILI	JING MET	HOD			SAMPLER		GROUNDWA	TER MEASUREMENTS		
Vehicle: A7						SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	
Model: Die						er (lb): 140	11/19/2019	15.0	Ground Surface	After Dril	ling
Method: 4.	-		-		Fall (ir	n): 30					
DEPTH (ft)		SAMPLE		ATIO	N		SAMPLE		STRATUM	FIELD	NOTE
(11)	#	Pen/Rec	Depth	Blov	ws/6''		DESCRIPTION	1	DESCRIPTION	SCREENING (ppm)	NOTE
20	S6	(in) 24/7	(ft) 20-22		6	S6: Medium dense	e, gray, fine to coarse S	AND and GRAVEI	Sand and Gravel	(ppm)	
	50	24/7	20-22		9	trace Silt, wet.	, gruy, fille to course b	inte und Gitti v EE,	Suna ana Graver		
21 -					13				NATIVE OUTWASH		
					16				DEPOSIT		
22 -											
22											
23											
24						Difficult drilling 23	3-24.5 feet.				
24											
25						Boring terminated a	at 24.5 feet. Auger ref	usal encountered.			
26											
27 -											
				-							
28 -											
29 -											
30 -											
21											
31 -											
32 -											
52											
33 -											
34 -											
	<u> </u>										
35 -											
36 -											
37 -				L							
20											
38 -											
39 -											
59											
40											
- 0		GRAN				COHESIVE			NOTES		
	P	SO]		ity	Plow	SOILS					
	В	ows/ft. 0-4	Dens V. LO	<u> </u>	Blows/	/ft. Consistency V. SOFT	4				
		5-10	LOO		2-4						
		11-30	M. DE	NSE	4-8	M. STIFF					
		31-50	DEN		8-15						
		>50	V. DEI	NSE	15-30 >30						
					>10	I HAKD					

(Ĉ					S	OIL BORING L	OG			
Geo	V .	- ch+®				ger Group, Inc.		Boring Identification:			
Geo.	Insi	gnt	Project:			el Range ad, Devens, MA		Checked By: MCP		eet: 1 of oject Number: 9	
Environmental S Drilling Co		Engineering Technica					Boring Location: See		ri	oject Number: 9	505-000
Foreman:			. Drining 5		, 1110.		Ground Surface Eleva		Da	tum: NAVD 88	
		eer/Geolog	ist: A. Stit	t			Date Started: 11/18/19)	Da	te Completed: 1	1/18/19
:	DRILI	LING MET	THOD			SAMPLER		GROUNDWATI	ER MEASUREMENTS		
Vehicle: A	TV				Type:	SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	tion
Model: Die						ner (lb): 140	11/18/2019	15.0	Ground Surface	After Dri	lling
		ollow-Stem	0		Fall (ir	n): 30					
DEPTH (ft)		SAMPLE	1	ATIO	N		SAMPLE		STRATUM	FIELD SCREENING	NOTI
	#	Pen/Rec (in)	Depth (ft)	Blov	ws/6''		DESCRIPTION		DESCRIPTION	(ppm)	nom
0 -	S1A	6/6	0-0.5		1	S1A: Very loose, d	lark brown, fine to medi	um SAND,	FOREST MAT		
	S1B	18/4	0.5-2		2	little Silt and fine R					
1 -					2	S1B: Very loose, b	rown, fine to medium S.	AND, trace Silt, damp.	Sand		
2 -					2						
2											
3 -									NATIVE OUTWASH		
									DEPOSIT		
4 -											
		l									
5 -	S2	24/8	5-7		5	S2: Medium dense	, light brown, fine to me	edium SAND, trace Silt,	Sand		
6 -					6	damp.					
0 -					6						
7 -					5						
										-	
8 -											
9 -											
10 -	S3	24/14	10-12		8	S3: Medium dense	, gray/light brown, fine t	o medium SAND, trace	Sand		
11					6	Silt, damp.					
11 -					9						
12 -					8						
13 -											
14 -											
	<u> </u>	L	1								
15 -	S4	24/15	15-17		5		, light brown, fine to me	dium SAND, trace Silt,	Sand		
16 -					5	wet.					
10					7						
17 -			ļ		6						
18 -			+								
			1								
19 -	1										
20			1								
20 -	S5	24/12	20-22		2		, light brown, fine to coa	rse SAND, trace Silt,	Sand		
21					2	wet.					
					5						L
22				· ·	4	Doming tomation 1	t 22 faat Na	acountered			
						Boring terminated a	tt 22 feet. No refusal er	icounterea.			
23 -		GRAN	ULAR	I		COHESIVE			ļ	ļ	L
			ILS			SOILS		1	NOTES		
	B	lows/ft.	Dens	-	Blows						
	1	0-4 5-10	V. LO LOO		<2 2-4						
		5-10 11-30	M. DE		2-4 4-8						
		31-50	DEN	SE	8-15	5 STIFF					
	1	>50	V. DE	NSE	15-3						
	1				>30	HARD					

(S	OIL BORING L	OG			
Geo		-1.10				ger Group, Inc.		Boring Identification:			
Geo.	Insi	ght	Project:					Checked By: MCP		eet: 1 of	
vironmental S		Engineering y: Technica				ad, Devens, MA	Boring Location: See		PI	oject Number: 9	/505-000
oreman:			I Dinning 5	civices	, me.		Ground Surface Eleva		D	atum: NAVD 88	
		eer/Geolog	ist: A. Stit	t			Date Started: 11/18/19			ate Completed: 1	1/18/19
		LING MET		·		SAMPLER			ER MEASUREMENTS		
ehicle: A					Type:	SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	tion
Iodel: Die		D-5 0				er (lb): 140	11/18/2019	20.0	Ground Surface	After Dri	lling
fethod: 4	4.25" Ho	ollow-Stem	Auger		Fall (ir	n): 30					
DEPTH		SAMPLE	INFORM	ATIO	N		SAMPLE		STRATUM	FIELD	
(ft)	#	Pen/Rec (in)	Depth (ft)	Blov	ws/6''		DESCRIPTION		DESCRIPTION	SCREENING (ppm)	NOT
0 -	S1A		0-0.5		1	S1A: Very loose, d	lark brown, fine to medi	ım SAND,	FOREST MAT		
1 -	S1B	18/9	0.5-2			little Silt and fine R					
1 -					2	S1B: Very loose, b	prown, fine to medium SA	AND, little Silt, damp.	Silty Sand		
2 -					1						
3 -	—								NATIVE OUTWASH DEPOSIT		
									DEFOSIT		
4 -	1										
	<u> </u>										
5 -	S2	24/6	5-7		8	S2: Dense, light br	own, fine SAND, little f	ine Gravel and Silt,			
6 -					18	damp.			Gravelly Sand with Silt		
0				2	20						
7 -				1	18						
8 -											
9 -											
10 -	S3	24/15	10-12		8	S3: Medium dense	, dark brown, fine to coa	rse SAND, some	Gravelly Sand with		
	_		-		11	Gravel, little Silt, da	amp.		Silt		
11 -				1	10						
12 -				1	13						
13 -											
14 -											
15	S4	24/0	15-17	1	17	S4: No recovery. A	Auger cuttings consistent	with S3.	Gravelly Sand with		
16				1	19				Silt		
16 -					18						
17 -				2	20						
	<u> </u>										
18 -	—		<u> </u>								
19 -	1										
	<u> </u>										
20	S5	24/4	20-22		4	S5: Loose, brown,	fine to coarse SAND an	d GRAVEL, little Silt,	Sand and Gravel with		
21					4	wet.			Silt		
<i>L</i> 1	6										
22					6	~ .		-			
						Boring terminated a	at 22 feet. No refusal er	countered.			
23		GRAN	ULAR			COHESIVE			NOTES		<u> </u>
		SO	ILS			SOILS			NOTES		
	B	lows/ft. 0-4	Dens V. LO		Blows/		ł				
	1	0-4 5-10	LOO		<2 2-4						
		11-30	M. DE	NSE	4-8	M. STIFF					
	1	31-50	DEN V DE		8-15						
	1	>50	V. DE	INSE	15-30 >30						
	1				250						

(a					S	OIL BORING L	OG			
	Y	-	Client:	Mason	& Han	ger Group, Inc.		Boring Identification:	B-11		
Geo	Insi	ghť	Project:							neet: 1 of	2
Environmental S						ad, Devens, MA		Checked By: MCP	Pr	oject Number: 9	
Drilling Co	ompany	: Technica	l Drilling S	Service	s, Inc.		Boring Location: See				
Foreman:		-					Ground Surface Eleva			atum: NAVD 88	
GeoInsight	t Engin	eer/Geolog	ist: A. Stit	t	-		Date Started: 11/18/19)	Da	ate Completed: 11	1/18/19
		LING MET	THOD			SAMPLER			ER MEASUREMENTS		
Vehicle: AT						SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	
Model: Die						er (lb): 140	11/18/2019	21.0	Ground Surface	After Dri	lling
Method: 4. DEPTH		SAMPLE	-	ATIO	Fall (in	n): 30					
(ft)		Pen/Rec	r				SAMPLE		STRATUM	FIELD SCREENING	NOTE
	#	(in)	(ft)	Blov	ws/6''		DESCRIPTION		DESCRIPTION	(ppm)	HOLE
0 -	S1A	6/6	0-0.5		1	S1A: Very loose, d	lark brown, fine to medi	um SAND,	FOREST MAT		
1	S1B	18/12	0.5-2		1	little Silt and fine R			1		
1 -					3	S1B: Very loose, b	prown, fine to medium S	AND, trace Silt, damp.	Sand		
2					2						
2											
3 -											
5											
4 -											
	L										
5 -	<u> </u>				_						
	S2	24/16	5-7		2	S2: Loose, light br	own, fine to medium SA	ND, trace Silt, damp.	Sand		
6 -					2						
					4				NATIVE OUTWASH DEPOSIT		
7 -					5				DEPOSIT		
	-			-							
8 -											
				-							
9 -											
10 -	S3	24/17	10-12		2	S3: Loose, light b	rown, fine to medium SA	AND, trace Silt, damp.			
			-		3			•			
11 -					5						
10					6						
12 -											
13 -											
15											
14 -	 										
	L										
15 -	<u> </u>				2	64 I	e				
	S4	24/13	15-17		2	54: Loose, light bi	rown, fine to medium SA	AND, trace Silt, damp.	Sand		
16 -	┣──		ł		2						
	<u> </u>				4 5						
17 -					J						
18 -											
	F										
19 -	1		1								
~~	 										
20			IULAR ILS			COHESIVE SOILS]	NOTES		
	В	lows/ft.	Dens	ity	Blows						
		0-4	V. LO	· ·	<2		t				
		5-10	LOO		2-4						
		11-30	M. DE		4-8						
	1	31-50 >50	DEN V. DE		8-15 15-3						
		/50	v. DE	191	>30						
	1				20						

	e					S	SOIL BORING L	OG			
	9.	-	Client:	Masor	h & Han	ger Group, Inc.		Boring Identification:	B-11		
Geo	Insi	ghť	Project:							eet: 2 of	2
Environmental S	strategy &	Engineering	Location	: 1 Jacl	cson Ro	ad, Devens, MA	•	Checked By: MCP	Pr	oject Number: 9	505-000
Drilling Co			l Drilling S	Service	s, Inc.		Boring Location: See				
Foreman:		-					Ground Surface Eleva			atum: NAVD 88	
GeoInsight	Engin	eer/Geolog	ist: A. Stit	t	1		Date Started: 11/19/19)	Da	ate Completed: 1	1/19/19
		LING MET	THOD			SAMPLER			ER MEASUREMENTS		
Vehicle: A7						SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	
Model: Die					Hamn Fall (ii	ner (lb): 140	11/19/2019	21.0	Ground Surface	After Dri	lling
Method: 4. DEPTH		SAMPLE	-	ATIO	· · ·	n): 30					
(ft)		Pen/Rec	Depth				SAMPLE		STRATUM	FIELD SCREENING	NOTE
	#	(in)	(ft)	Blo	ws/6''		DESCRIPTION		DESCRIPTION	(ppm)	
20 -	S5	24/24	20-22		6	S5: Medium dense	, light brown, fine to me	dium SAND, trace Silt,	Sand		
21					9	wet.					
21					13				NATIVE OUTWASH		
22 -					16				DEPOSIT		
											L
23 -											
24 -						1					
25 -	S6	24/24	25-27		1	S5: Verv loose, lig	ht brown, fine to mediur	n SAND, trace Silt.	Sand		
	50	2027	25 21		1	wet.	, , <i>io</i> media	, sm,			
26 -					1						
27					2						
27 -											
28 -											
20											
29 -											
30 -	67	24/24	20.22		1	S5. Vary loosa are	ay/light brown, fine to m	adjum SAND traca	Sand		
	S7	24/24	30-32		1	Silt, wet.	ay/light blown, line to m	edium SAND, trace	Suna		
31 -					2	·					
					1						
32 -						Boring terminated a	at 32 feet. No refusal en	countered.			
33 -											
34 -											
35			<u> </u>			ł					
36 -						1					
37 -						1					
20						1					
38 -	1										
39 -											
37											
40											
			ULAR			COHESIVE SOILS		1	NOTES		
	в	SO. lows/ft.	ILS Dens	itv	Blows						
		0-4	V. LO		<2		t				
		5-10	LOO		2-4						
		11-30	M. DE		4-8						
		31-50 >50	DEN V. DE		8-15 15-3						
					>30						

(9		Client	Mason & H	anger Group, Inc.	SOIL BORING L	Boring Identification:	B-12		
Geo	Insig	zhť		MPMGR H			boring ruentineution.		eet: 1 of	1
nvironmental S	trategy & I	⊃ Engineering	Location:	1 Jackson I	Road, Devens, MA		Checked By: MCP	Pr	oject Number: 9	505-000
Orilling Co	mpany	: Technical	Drilling So	ervices, Inc.		Boring Location: See	Site Plan			
oreman:		-				Ground Surface Eleva			tum: NAVD 88	
GeoInsight	Engine	er/Geologi	st: A. Stitt			Date Started: 11/18/19	9	Da	te Completed: 1	1/18/19
	DRILL	ING MET	HOD		SAMPLER		GROUNDWATI	ER MEASUREMENTS		
Vehicle: A	ΓV				e: SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	tion
Model: Die					nmer (lb): 140	11/18/2019	Not Encountered	NA	NA	
		llow-Stem			(in): 30					
DEPTH (ft)		SAMPLE		ATION		SAMPLE		STRATUM	FIELD	NOT
(11)	#	Pen/Rec (in)	Depth (ft)	Blows/6"		DESCRIPTION		DESCRIPTION	SCREENING (ppm)	NOL
0 -	S1A	6/6	0-0.5	1	S1A: Very loose.	dark brown, fine to medi	um SAND.	FOREST MAT	41 /	
	S1A S1B	18/8	0.5-2	1	little Silt and fine F		uni bru ib,	TOREST WITT		
1 -	515	10,0	0.0 2	2		brown, fine to medium S.	AND, trace Silt, damp.	Sand		
2				2	_		· · · ·			
2 -	S2	24/16	2-4	2	S2: Very loose, li	ight brown, fine to mediu	m SAND, trace Silt,	Sand		
3 -				2	damp.					
5				4	_			NATIVE OUTWASH		
4 -				5	_			DEPOSIT		
					_					
5.	62	24/14	5 7	2	\$3. Loose here	fine to madium CAND	trace Silt dama	Sand	ļ	
	S3	24/14	5-7	2 3	55. Loose, brown	n, fine to medium SAND,	uace ont, damp.	sana		
6 -				4	-					
_				4	1					
7 -										
0					_					
8 -										
9 -										
2										
10 -										
10	S4	24/12	10-12	6		, dark brown, fine to coa	rse SAND, trace fine	Sand		
11 -				8	Gravel and Silt, da	mp.				
				10	_					
12 -				14	_					
13 -										
14										
14 -										
15 -					_					
13	S5	24/14	15-17	12		, dark brown, fine to coa	rse SAND, trace fine	Sand		
16				11	Gravel and Silt, da	mp.				
				10	4					
17 -	┞──┤			10	D • • • •	. 17.6				
					Boring terminated	at 17 feet. No refusal en	countered.			
18 -	┝─┤				-					
					-1					
19	╞──┤									
••					-1				<u> </u>	
20					7					
21										
21	21 22 2									
22										
					4					
23		CR · · · ·			COURSELE			l		
		GRAN SOI			COHESIVE SOILS		1	NOTES		
	Bl	ows/ft.	Dens	ity Blo	ws/ft. Consistency					
		0-4	V. LOO	OSE -	<2 V. SOFT	1				
		5-10	LOO		-4 SOFT	1				
		11-30 31-50	M. DEI DEN		-8 M. STIFF -15 STIFF	1				
						1				
	>50 V. DENSE 15-30 V					1				

(C					S	OIL BORING L	OG			
Geol		- .1. •				ger Group, Inc.		Boring Identification:			
Geo	Insi	ghť	Project:							eet: 1 of	
Invironmental S	itrategy &	Engineering Technical				ad, Devens, MA	Boring Location: See	Checked By: MCP	Pı	oject Number: 9	505-000
Foreman:			Drilling S	ervices	, Inc.		Ground Surface Eleva		D	atum: NAVD 88	
		eer/Geolog	ist• A Stit	t			Date Started: 11/19/19			ate Completed: 1	1/19/19
		LING MET				SAMPLER			ER MEASUREMENTS		
ehicle: AT			пор		Turnet		Date	Depth (ft)	Reference	Stabiliza	tion
Model: Die		0-50				SPT (Auto) ner (lb): 140	11/19/2019	15.0	Ground Surface	After Dri	
		ollow-Stem	Auger		Fall (i		11, 19, 2019	10.0			
DEPTH		SAMPLE	-	ATIO	N	,				FIELD	
(ft)	#	Pen/Rec	Depth	Blov	ws/6''		SAMPLE DESCRIPTION		STRATUM DESCRIPTION	SCREENING (ppm)	NOTI
0 -	S1	(in) 24/20	(ft) 0-2		2	S1: Medium dense.	, light brown, fine to me	dium SAND, trace Silt,	Sand	(ppm)	
	-				4		-				
1 -					7				FILL		
2 -					7						
-	S2A	16/16	2-3.3		8		se, dark brown, fine SA	ND and organic SILT,	Organics		
3 -					11	damp.	1 7 7 7				
	S2B	8/6	3.3-4		17 24	SB: Medium dense damp.	e, brown, fine to medium	SAND, trace Silt,	Sand		
4 -	S3	24/15	4-6		5 5	-	e, brown, fine to medium	SAND, trace Silt	Sand		
	- 33	2- T /1J	0		8	damp.	-, to meatur	, auce 5m,	Junu		
5 -					8	t					
E					9	1					
6 -									NATIVE OUTWASH		
7 -									DEPOSIT		
8 -											
9 -											
10 -	S4	24/24	10-12		3	S4: Loose, gray, fin	e SAND and SILT, dam	p.	Sand and Silt		
11 -					4						
11 -					4						
12 -					7						
13 -											
14 -											
15 -	S5	24/15	15-17		6	S4: Stiff, gray, SILT	Γ, wet.		Silt		
16 -					4						
10					8						
17 -					7	D 1 1 1 1	. 17 6				
						Boring terminated a	at 17 feet. No refusal en	countered.			
18 -						1					
19 -						1					
20						1					
20 -						I					
21											
22											
23 -		GRAN	ULAR			COHESIVE			NOTES		
		SO	ILS	•4		SOILS			NOTES		
	B	lows/ft. 0-4	Dens V. LO	· ·	Blows	ĩ	ł				
		5-10	LOO		2-4						
		11-30	M. DE		4-8						
		31-50 >50	DEN V. DE		8-15 15-3						
		/30	V. DE	- USE	>30						

	Ĉ,					S	OIL BORING L	OG			
Geo		1.0				ger Group, Inc.		Boring Identification:			
Geo	Insi	ghť	Project:							eet: 1 of	
Environmental S	itrategy &	Engineering				ad, Devens, MA		Checked By: MCP	Pı	oject Number: 9	9505-000
Drilling Co			Drilling S	ervices,	, Inc.		Boring Location: See		D	America NAVD 88	
Foreman: 1 GeoInsight			ict. A Stit				Ground Surface Eleva Date Started: 11/19/19			atum: NAVD 88 ate Completed: 1	1/10/10
seomsigni	Engin	eer/Geolog	ist. A. Sut				Date Started. 11/19/19	,	D	tte Completeu. 1	1/19/19
		LING MET	THOD			SAMPLER	Dete		ER MEASUREMENTS	Stabiliza	4
Vehicle: Tri Model: Die		120				SPT (Auto) er (lb): 140	Date	Depth (ft)	Reference Ground Surface		
Method: 4.			Auger		Fall (ir		11/19/2019	12.0	Ground Surface	After Dri	ning
DEPTH		SAMPLE	0	ATION	-	j. 50					
(ft)		Pen/Rec	Depth				SAMPLE		STRATUM	FIELD SCREENING	NOTE
	#	(in)	(ft)	Blov	ws/6''		DESCRIPTION		DESCRIPTION	(ppm)	
0 -	S1	24/6	0-2		3	S1: Medium dense.	, brown, fine to coarse S	AND, some Gravel,	Gravelly Sand		
					10		, ,	, , ,			
1 -					10						
					8						
2 -	S2	24/18	2-4		7	S2: Medium dense	e, light brown, fine to me	dium SAND, trace Silt,	Sand		
		-	1		6	damp.		,			
3 -	İ –		t	,	7						1
			ł		7						
4 -	S3	24/14	4-6	:	2	S3: Loose, light bro	own, fine to medium SA	ND, trace Silt, damp.	Sand		l
F			1		4			-			1
5 -	1		İ		6					P	
6 -					7				NATIVE OUTWASH		
0	L								DEPOSIT		
7 -											
/											
8 -											
0											
9 -											
,											
10 -											
10	S4	24/14	10-12		2	S4: Loose, brown,	fine to medium SAND,	trace Silt, damp.	Sand		
11 -					4						
					4						
12 -					4						
13 -											
14 -				-							
15 -	Q.5	24/14	15.17		2	S5. Stiff grov/light	brown, SILT, wet. (Col	nesive Silt)	Silt		
	S5	24/16	15-17		4	55. 5mi, gray/ngit	. 510 wii, 511 1, wet. (COI	issive only	5111		
16 -			<u> </u>		4 6						
	<u> </u>	l			7						
17 -			<u> </u>			Boring terminated a	tt 17 feet. No auger refu	sal encountered.			
			1			-					
18 -			1								
			1								
19 -			1								1
20			1								
20 -			Ì								
21	L										
∠1											
22											
44											
23 -											
		GRAN				COHESIVE		1	NOTES		
	-	SO:		•4	יח	SOILS		1			
	B	lows/ft. 0-4	Dens V. LO		Blows/	/ft. Consistency V. SOFT	ł				
		5-10	LOO		2-4	SOFT					
		11-30	M. DE		4-8	M. STIFF					
		31-50	DEN		8-15						
			V. DE	NSE	15-30	0 V. STIFF					
		>50	V. DE	10L	>30						

_	.		Client:	Mason &	& Hang	ger Group, Inc.		Boring Identification:	: B-15		
Geo	Insi	ghť	Project:							eet: 1 of	1
Environmental S	trategy &	➡ Engineering	Location	: 1 Jacks	on Roa	ad, Devens, MA		Checked By: MCP	Pr	oject Number: 9	505-000
Drilling Co	mpany	: Technical	Drilling S	ervices, I	Inc.		Boring Location: See	Site Plan			
Foreman:	Donnie	Watson					Ground Surface Eleva		Da	atum: NAVD 88	
GeoInsight	Engin	eer/Geolog	ist: A. Stit	t			Date Started: 11/19/19	9	Da	ate Completed: 1	1/19/19
		INC MET	TUOD			SAMPLER		CROUNDWAT	ED MEASUDEMENTS		
	DKILI	JING MET	HOD			SAMPLER		GROUNDWAT	ER MEASUREMENTS		
Vehicle: Tr						SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	
Model: Die						er (lb): 140	11/19/2019	10.0	Ground Surface	After Dri	lling
Method: 4			5		Fall (ir	1): 30					
DEPTH		SAMPLE	1	ATION			SAMPLE		STRATUM	FIELD	
(ft)	#	Pen/Rec	Depth	Blows	s/6''		DESCRIPTION		DESCRIPTION	SCREENING	NOT
0 -		(in)	(ft)			G1 L 1	C I CAND	011.1	<i>a</i> 1	(ppm)	
	S1	24/14	0-2	2		S1: Loose, brown,	fine to medium SAND,	trace Silt, damp.	Sand		
1 -				3							
				3							
2 -				3							
-	S2	24/15	2-4	3		S2: Loose, gray/li	ght brown, fine SAND a	nd SILT, damp.	Sand and Silt		
3 -				4							
5				4							
4				3							
4 -	S3	24/14	4-6	2		S3: Soft, gray, SIL	.T, damp.		Silt		
-				2							
5 -				2							
-				4					NATIVE OUTWASH		l
6 -			İ						DEPOSIT		l
_											
7 -											
8 -											
9 -											
		-									
10 -	S4	24/16	10-12	4		S4. Stiff grav SII	T, wet. (Cohesive Silt)		Silt		
	54	24/10	10-12	5		o ir onii, gruy, or	, (comosite 5m)		5111		
11 -				4							
				7							
12 -				,							
13 -											
14 -											
15 -	0.5	0.1/1.1	15.15	~		95. M. J	CHARLEN CITY (C. 1.)	True Cilt)	C:1.		
	S5	24/14	15-17	2		55: Medium stiff,	gray, SILT, wet. (Cohesi	ive Siit)	Silt		
16 -				3							
	<u> </u>			4							
17 -				4			. 15.6				L
						Boring terminated a	at 17 feet. No auger refu	isal encountered.			
18 -											
-											L
19 -											
17											
20 -											
21											
21											
22											
22		_									
23 -											
23		GRAN			(COHESIVE			NOTES		
		SO	ILS			SOILS			NOIE5		
	B	ows/ft.	Dens		Blows/		l				
		0-4	V. LO		<2						
		5-10	LOO M DE		2-4						
		11-30 31-50	M. DE DEN		4-8 8-15						
		>50	V. DEN		8-15						
					>30						
	1										

(C)		_			S	OIL BORING L	OG			
Geo		- ch+®				ger Group, Inc.		Boring Identification:			_
Geo. Environmental S	IIISI trategy &	gnt	Project: Location			ad, Devens, MA		Checked By: MCP		eet: 1 of	
		Technical					Boring Location: See			ojecertainsert	202 000
oreman:	Brett B	alyk					Ground Surface Eleva	ation: ~246 feet	Da	atum: NAVD 88	
GeoInsight	Engin	eer/Geologi	ist: A. Stit	t			Date Started: 11/20/19)	Da	ate Completed: 1	1/20/19
:	DRILI	LING MET	HOD			SAMPLER		GROUNDWATI	ER MEASUREMENTS		
Vehicle: Al						SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	tion
Model: Die						er (lb): 140	11/20/2019	15.0	Ground Surface	After Dri	lling
		ollow-Stem	0		Fall (ir	n): 30					
DEPTH (ft)		SAMPLE Pen/Rec	Depth	1			SAMPLE		STRATUM	FIELD SCREENING	NOTI
	#	(in)	(ft)	Blov	ws/6''		DESCRIPTION		DESCRIPTION	(ppm)	
0 -	S1A	6/6	0-0.5		4	S1A: Medium dens	se, dark brown, fine to m	edium SAND,	FOREST MAT		
1 -	S1B	18/6	0.5-2			little Silt and fine R	-				
1					-	S1B: Medium dens little Silt, damp.	se, brown, fine to medium	n SAND and GRAVEL,	Sand and Gravel		
2 -	62	24/10	2.4		25	-	fine to coore SAND I	ttle Createl and Silt	FILL Gravelly Sand with Silt		
	S2	24/18	2-4			damp.	fine to coarse SAND, li	die Graver and Bill,	Graveny Sana with Sill		
3 -					17						
4 -				1	18						
4 -	S3	24/18	4-6				ray/brown, fine SAND an	nd organic SILT, damp.	Organics		
5 -					2	(Tip of sampler ino	rganic Silt)				
					2 2						
6 -					-				+		
-	-										
7 -											
8 -											
									NATIVE OUTWASH		
9 -									DEPOSIT		
10 -	S4	24/0	10-12		6	S4: No recovery. A	uger cuttings consisted of	of gray/light brown,	Silt		
11 -					7	SILT					
11					9						
12 -				1	13						
13 -											
14 -											
14											
15 -	0.5	24/10	15.17		2	S4. Madium stiff	may SUT wat (Saama	of any fine to medium	5:14		
	S5	24/18	15-17			SAND)	giay, SIL1, wet. (Seams	s of gray, fine to medium	Silt		
16 -		-			3						
17 -					5						
1/						Boring terminated a	at 17 feet. No refusal en	countered.			
18 -											
19 -											
20											
20 -											
21											
22											
22	<u> </u>	I									
23 -		GRAN				COHESIVE		1	NOTES		-
	R	SOI	ILS Dens	sity	Blows/	SOILS /ft. Consistency		1			
		0-4	V. LO	ě.	<2	V. SOFT	t				
		5-10	LOO M. DE		2-4						
		11-30 31-50	M. DE DEN		4-8 8-15						
			V. DE		15-30						
		>50	V. DL	1 IDL	>30						

Geo	Inci	rh+⁰				ger Group, Inc.		Boring Identification:			
Geo.	Insi	gnt	Project:								1
vironmental S	Strategy &	Engineering				ad, Devens, MA		Checked By: MCP	Pr	oject Number: 9	9505-000
-		: Technical	Drilling So	ervices	, Inc.		Boring Location: See				
reman:		-					Ground Surface Eleva			atum: NAVD 88	
eoInsight	Engin	eer/Geolog	ist: A. Stitt				Date Started: 11/20/19	9	Da	ate Completed: 1	1/20/19
	DRILI	LING MET	HOD			SAMPLER		GROUNDWAT	ER MEASUREMENTS		
ehicle: A	TV				Type:	SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	tion
odel: Die	edrich D	-50			Hamm	ner (lb): 140	11/20/2019	11.5	Ground Surface	After Dri	lling
ethod: 4	.25" Ho	ollow-Stem	Auger		Fall (iı	n): 30					
DEPTH	1	SAMPLE	INFORM	ATIO	N		•	•		FIELD	
(ft)	#	Pen/Rec (in)	Depth (ft)	Blov	ws/6''		SAMPLE DESCRIPTION		STRATUM DESCRIPTION	SCREENING (ppm)	NOTE
0	S1A	6/6	0-0.5		2	S1A: Loose, dark b	brown, fine to medium S	AND,	TOPSOIL		
1 -	S1B	18/14	0.5-2		3	little Silt and fine R	oots, damp.				
1 -							n, fine to medium SAND	, little Gravel and Silt,	Gravelly Sand with Silt		
2 -					4	damp.	_		-		
	S2	24/20	2-4		3	S2: Loose, light br	own, fine to coarse SAN	D and SILT, damp.	Sand and Silt		
3 -					3						
					5					L	
4 -					6						
•	S3	24/16	4-6		5	S3: Stiff, light bro	wn, SILT, damp.		Silt		
5.					5	ļ					
					8						
6 -					8						
~											
7 -											
,											
8 -											
0									NATIVE OUTWASH		
9 -									DEPOSIT		
-											
10											
10	S4	24/18	10-12		2	S4: Stiff, light brow	vn, SILT, damp.		Silt		
11 -					4						
					7						
12 -					8						
13 -											
14 -											
15							_			L	
	S5	24/18	15-17		3	S4: Medium dense	, gray, fine to coarse SA	ND, trace Silt, wet.	Sand		
16 -					4						
					9						
17 -					8					 	
						Boring terminated a	at 17 feet. No refusal en	countered.			
18 -											
										L	
19 -										L	
										L	
20						l.				L	
21											
22											
	<u> </u>										
23										L	
		GRAN SO				COHESIVE SOILS]	NOTES		
	D	lows/ft.	Densi	ity	Blows						
	B	0-4	V. LOC		<2		ł				
	1	5-10	LOO		2-4						
		11-30	M. DE		4-8						
		31-50	DEN		8-15						
		>50	V. DEI	NSE	15-3						
	-		1		>30	HARD					

(Ĉ)		_			S	OIL BORING L	OG			
Geol		-				ger Group, Inc.		Boring Identification:	B-18		
Geol	lnsi	ghť	Project:							eet: 1 of	
nvironmental S	trategy &	Engineering				ad, Devens, MA	1	Checked By: MCP	Pi	oject Number: 9	505-000
-		Technica	Drilling S	ervices,	Inc.		Boring Location: See				
oreman:		-					Ground Surface Eleva			atum: NAVD 88	
GeoInsight	Engin	eer/Geolog	ist: A. Stit	t			Date Started: 11/20/19)	D	ate Completed: 1	1/20/19
1	DRILI	LING MET	THOD			SAMPLER		GROUNDWATH	ER MEASUREMENTS		
/ehicle: AT	٢V				Type: S	SPT (Auto)	Date	Depth (ft)	Reference	Stabiliza	tion
Iodel: Die						er (lb): 140	11/20/2019	11.5	Ground Surface	After Dri	lling
Aethod: 4.		ollow-Stem	0		Fall (in	n): 30					
DEPTH		SAMPLE	1	ATION	N		SAMPLE		STRATUM	FIELD	
(ft)	#	Pen/Rec	Depth	Blov	vs/6''		DESCRIPTION		DESCRIPTION	SCREENING	NOT
0 -		(in)	(ft)				C . 11 C	4.5.175		(ppm)	
	S1A	10/10	0-0.8			-	prown, fine to medium S.	AND,	Silty Sand		
1 -	S1B	14/10	0.8-2			little Silt, damp.		AND little Cile down			
						SIB: Loose, dark t	brown, fine to medium S.	AND, little Slit, damp.	FILL		
2 -	62.4	14/14	222		4 2	S2A : Loosa dark k	brown, fine SAND and o	raania SII T. damn	Organias		
	S2A S2B	14/14 10/4	2-3.2 3.2-4		2	52/1 . 10050, uaik l	stown, mic Srand and 0	isame oin i, uamp.	Organics		
3 -	S2B	10/4	3.2-4			S2B: Stiff, gray, S	II T. damp		Silt	ł	
					0	Sab. Sun, gray, S	1. 1, ump.		5111		
4 -	S3	24/16	4-6			S3: Stiff, light bro	wn, SILT. damp		Silt		
	- 33	2-7/10	4-0		+ 7	nght 010	, 5121, aump.		5111		
5 -					, 7						
			1		0						
6 -											1
7 -											
0											
8 -									NATIVE OUTWASH		
9 -									DEPOSIT		
2											
10 -											
10	S4	24/14	10-12			S4: Medium stiff, l	ight brown, SILT, damp		Silt		
11 -					3						
					4						
12 -				1	6						
13 -											
14 -											
15 -	S5	24/24	15-17		3	S4: Medium stiff	ray, SILT wet (Seams	of gray, fine to medium	Silt		
	35	27/24	1.5-17			SAND)		gray, the to moundin			
16 -					3						
			1		5						
17 -			1			Boring terminated a	ut 17 feet. No refusal end	countered.		1	
10						u					1
18 -		1	1								1
10			1								
19 -			1								1
20											
20 -											
21											
<i>1 س</i>											
22											
23 -									ļ		
			ULAR ILS			COHESIVE SOILS		1	NOTES		
	B	lows/ft.	Dens		Blows/	ft. Consistency					
		0-4	V. LO		<2	V. SOFT					
		5-10 11-30	LOO M. DE		2-4 4-8						
		31-50	M. DE DEN		4-8 8-15						
		>50	V. DE		15-30						
					>30	HARD					