# Appendix 4

BORING No.	C-1-05
JOI 11140 140.	

SHEET	1	OF	.3	

CLIENT	Aggregate Industries Chelsea, Michigan	
PROJECT	Sand and Gravel Exploration in Chelsea, MI	JOB No. <u>133873</u>
GROUND EL	LEV. METHOD SONIC	LOCATION OF BORING : As Directed
DRILLING C	OMMENTS	DATE STARTED 3/21/2005
		DATE ENDED 3/21/2005
		DRILLERS JK, TW, SW

						DRILLERS JK, TW, SW	
DEPTH, FT	SAMPLE NO.	DEPTH OF SAMPLE, FT FROM TO	BLOWS ON SAMPLER PER 6" INTERVAL	DEPTH OF STRATUM, FT	GRAPHICS	CLASSIFICATION OF MATERIAL  Major Component: Minor Component Term Gravel Trace 1-10% Sand Some 11-35% Silt And 36-50% Clay	SPT "N" OR
1- 2- 3- 4- 5-				4.0		Brown Sand and gravel  Brown Sand and gravel with cobbles	
6- 7- 8- 9-				9.0		Brown Sand and gravel, some cobbles	
11 – 12 – 13 –							
15 16 17							
18- 19- 20-							
			DF	PTH	9	DATE A SPLIT SPOON E AUGER CUTTINGS	

GROUND WATER AT COMPLETION OBSERVATIONS

INITIAL

OTHER

<u>3/21/2005</u> C−SHELBY TUBE



BORING No. \_ C-1-05

REPORT No. <u>133873</u>

SHEET <u>2</u> OF <u>3</u>

				9 4 2	
			8,00	4	MITA A A SECURITY OF THE SECUR
			4 0 0		
			,		
			0000		
	1				
				U d	
		-			
			3000		
		37.0		- Drown aread	
			.0	Brown, gravel	
		39.0	, 50, °	Design Count Assess of adults	
				Brown Sand, traces of cobbles	
		_			
1					
		INITIAL	DEPTH	DEPTH	

WATER AT COMPLETION <u>₹ 3/21/2005</u> C—SHELBY TUBE OBSERVATIONS OTHER <del>▼ D—SONIC</del>



C-1-05 BORING No.

REPORT No. 133873

BOB 59.0'

3 SHEET 3 OF CLASSIFICATION OF MATERIAL DEPTH OF STRATUM, FT GRAPHICS DEPTH, FT SAMPLE NO. **BLOWS ON** Major Component: Minor Component Term DEPTH Gravel SAMPLER Trace 1-10% OF PER 6 IN Sand Some 11-35% SAMPLE, FT **INTERVAL** Silt And 36-50% FROM TO Clay 51 52 53 54 55 55.5 Gray silty Clay, some sand, trace cobbles 56 57 58

59.0

59

A-SPLIT SPOON E-AUGER CUTTINGS DEPTH DATE INITIAL  $\sqrt{3/21/2005}$  B-ROCK CORE GROUND ▼ 3/21/2005 C-SHELBY TUBE WATER AT COMPLETION

D-SONIC

OTHER

OBSERVATIONS



BORING No.	C-2-05	
		_

⊃F	3
	OF

CLIENT	Aggregate Industries Chelsea, Michigan	
PROJECT	Sand and Gravel Exploration in Chelsea, MI	JOB No. <u>133873</u>
GROUND EL	EV. METHOD SONIC	LOCATION OF BORING : As Directed
DRILLING CO		DATE STARTED 3/21/2005  DATE ENDED 3/21/2005
		DRILLERS JK, TW, SW

				  -		CLASSIFICATION OF MATERIAL	
ОЕРТН, FT	SAMPLE NO.	DEPTH OF SAMPLE, FT	BLOWS ON SAMPLER PER 6" INTERVAL	DEPTH OF STRATIIM ET	GRAPHICS	Major Component: Minor Component Term Gravel Trace 1-10% Sand Some 11-35% Silt And 36-50%	SPT "N" OR
		FROM TO		0		Clay	
				-	0000	Brown Sand and gravel	
1-					3000		
2							
3-					000		
4				1			
-				-	000		
5-					3.00		
6							
7-				-	0000		
8							
9				9.0			
4				7	0000	(Cobbles in Bit)	
10					3000		
11							
12					000		
13					9:0:0		
+							
14					.8		
15							
16					0000		
17							
+					0000		
18				100	8.0		
19				19.0	30.00	Brown Sand and gravel w/cobbles	
20						·	
					] ] ] 		

GROUND WATER AT COMPLETION <u>▼ 3/21/2005</u> C—SHELBY TUBE OBSERVATIONS

OTHER \_\_\_\_\_ \_\_\_\_\_D-SONIC



C-2-05 BORING No. REPORT No. 133873 SHEET 2 OF CLASSIFICATION OF MATERIAL ᇤ DEPTH, FT GRAPHICS Major Component: Minor Component Term **BLOWS ON** SAMPLE NO. DEPTH DEPTH OF STRATUM, SAMPLER Gravel Trace 1-10% OF Some 11-35% Sand PER 6 IN SAMPLE, FT Silt And 36-50% INTERVAL Clay FROM TO 22 23 24 25 26 27 28 29 30 31 32-33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

GROUND WATER

OBSERVATIONS

49

DEPTH INITIAL

OTHER

AT COMPLETION

DATE

 $\sqrt{3/21/2005}$  B-ROCK CORE

▼ 3/21/2005 C - SHELBY TUBE D-SONIC

A-SPLIT SPOON E-AUGER CUTTINGS



C-2-05

REPORT No. 133873

SHEET 3 OF 3

	T				T		OLAGOURIOATION OF MATERIAL	
ОЕРТН, FT	SAMPLE NO.	0	PTH F LE, FT TO	BLOWS ON SAMPLER PER 6 IN INTERVAL	DEPTH OF STRATUM, FT	GRAPHICS	CLASSIFICATION OF MATERIAL  Major Component: Minor Component Term Gravel Trace 1-10% Sand Some 11-35% Silt And 36-50% Clay	SPT "N" OR RECOVERY
51-						\$		
52-						) 		
53-						0,,,		
54 - -					54.0		Gray silty Clay, some sand	
55 <del>-</del>								
56 -					57.0			
57 – 58 –						777	Brown gray Sandy silt	
50- 59-					59.0			
00							BOB 59	

DEPTH DATE A—SPLIT SPOON E—AUGER CUTTINGS GROUND INITIAL  $\cup 2 \cup 3/21/2005$  B—ROCK CORE WATER AT COMPLETION  $\cup 2 \cup 3/21/2005$  C—SHELBY TUBE

D-SONIC

OBSERVATIONS

OTHER



SHEET <u>1</u> OF <u>2</u>

CLIENT	Aggregate Industries Chelsea, Michigan	
PROJECT	Sand and Gravel Exploration in Chelsea, MI	JOB No. <u>133873</u>
GROUND FL	.EV. METHOD SONIC	LOCATION OF BORING : As Directed
DRILLING C		DATE STARTED 3/21/2005
		DATE ENDED 3/21/2005
		DRILLERS JK, TW, SW

						DRILLERS JK, TW, SW	
ОЕРТН, FT	SAMPLE NO.	DEPTH OF SAMPLE, FT FROM TO	BLOWS ON SAMPLER PER 6" INTERVAL	DEPTH OF STRATUM, FT	GRAPHICS	CLASSIFICATION OF MATERIAL  Major Component: Minor Component Term Gravel Trace 1-10% Sand Some 11-35% Silt And 36-50% Clay	SPT "N" OR RECOVERY
1-				1.0	8.9	Brown Sand & Gravel	
					000	Brown Sand & gravel w/cobbles	
2-							
3-							
4-					9.00		
5-							
6-					8.0		
7-							
8-				1			
9-							
10-			:		0000		
11-							
12-					0000		
13-							
14-					,		
15-				15.0	0000	Brown Sandy Gravel	
16				-		Brown Garlay Graver	
17-				-	300		
18-				_	0000		
19-							
20-				20.0	0000		
						Gray Sandy Silt, some gravel and trace of cobbles	
GROUI WATEI OBSEF	₹		DE INITIAL PLETION OTHER	PTH		DATE A—SPLIT SPOON E—AUGER CUTTINGS 3/21/2005 B—ROCK CORE 3/21/2005 C—SHELBY TUBE D—SONIC	WSER RNER <sub>®</sub>



BORING No. C-3-05

REPORT No. <u>133873</u>

SHEET 2 OF 2

	T			T	OLACOIFICATION OF MATERIAL	) <u></u>
_				DEPTH OF STRATUM, FT GRAPHICS	CLASSIFICATION OF MATERIAL	>
ДЕРТН, FT	SAMPLE NO.	DEPTH	BLOWS ON	DEPTH OF TRATUM, F	Major Component: Minor Component Term Gravel Trace 1-10% Sand Some 11-35% Silt And 36-50% Clay	SPT "N" OR RECOVERY
ΞŤ	₽ o	OF	SAMPLER	도 등 등 포	Gravel Trace 1-10%	SPT "N" OR ECOVER
<u></u>	₹Z		PER 6 IN	A A A	Sand Some 11-35%	E 0 8
D	S	SAMPLE, FT	INTERVAL	F 1 P	Silt And 36-50%	S H
		FROM TO		S	Clav	
				o 💜		
-						
22-						
-	-			9.9		
23-				- 0		
24				- 9		
-				5		
25-						
-						
26-					<i>,</i>	
-						
27-						
28-						
29-						
-				9 9		
30-				0		
31-						
				5		
32-						
33-				2		
34-				0		
35-				<b>i</b> •		
				- 0		
36-						-
37-						
				38.0		
38 -	L	L	L	, 50.0	ROR 38	

BOB 38

OBSERVATIONS OTHER

GROUND INITIAL  $\frac{2}{3/21/2005}$  B - ROCK CORE WATER AT COMPLETION  $\frac{3}{2}$  3/21/2005 C - SHELBY TUBE

DEPTH

DATE A - SPLIT SPOON E - AUGER CUTTINGS



BORING No.	C-4-05	
		_

SHEET	1	OF	3

CLIENT	Aggregate Industries Chelsea, Michigan	
PROJECT	Sand and Gravel Exploration in Chelsea, MI	JOB No. <u>133873</u>
		LOCATION OF BORING : As Directed
GROUND EL		2/22/22/2005
DRILLING CO	OMMENTS	DATE STARTED <u>3/22/2005</u>
		DATE ENDED 3/23/2005
		DRILLERS JK, TW, SW

***************************************						DRILLERS JK, TW, SW	
··········						CLASSIFICATION OF MATERIAL	
<b>DEPTH, FT</b>	SAMPLE NO.	DEPTH OF SAMPLE, FT FROM TO	BLOWS ON SAMPLER PER 6" INTERVAL	DEPTH OF STRATUM, FT	GRAPHICS	Major Component: Minor Component Term Gravel Trace 1-10% Sand Some 11-35% Silt And 36-50% Clay	SPT "N" OR RECOVERY
		T TOWN TO			0000	Sand and gravel	
1-					.8.0		
2-				2.0	300		
3-					8.0	Brown Sand and gravel, trace of cobbles	
-							
4							
5-					0000		
6-				_	0.		
7-					8.0		
8-					)  }		
-					0		
9					0000		
10-					0.		
11-					8.0		
12-					) .p.,		
13-							
- 14					300.4		
-				_			
15				100	8.0		
16-				16.0	9.00	⊽ Brown Sandy gravel (wet)	
17-				_	000		
18-							
- 19-					0,00		
20-				24.0	0000		
				21.0 EPTH	°°°	DATE A - SPLIT SPOON E - AUGER CUTTINGS	

GROUND WATER OBSERVATIONS

INITIAL \_ AT COMPLETION OTHER \_\_

16.0

DATE A - SPLIT SPOON  $\sqrt{2}$  3/22/2005 B - ROCK CORE ▼ 3/23/2005 C—SHELBY TUBE

Ψ N

\_\_\_ D-SONIC



C-4-05

REPORT No. 133873 SHEET 2 OF CLASSIFICATION OF MATERIAL ᇤ DEPTH, FT GRAPHICS Major Component: **BLOWS ON** Minor Component Term SAMPLE NO. DEPTH OF STRATUM, F DEPTH SAMPLER Gravel Trace 1-10% OF Some 11-35% PER 6 IN Sand SAMPLE, FT Silt 36-50% INTERVAL And Clay FROM TO Brown Sand and gravel 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 A-SPLIT SPOON E-AUGER CUTTINGS DEPTH

GROUND WATER OBSERVATIONS

INITIAL AT COMPLETION

OTHER

16.0

DATE ℤ 3/23/2005

Ν

 $\sqrt{3/22/2005}$  B-ROCK CORE

C-SHELBY TUBE



C-4-05

REPORT No. 133873 SHEET 3 OF **CLASSIFICATION OF MATERIAL** Ī GRAPHICS DEPTH, FT SAMPLE NO. **BLOWS ON** Major Component: Minor Component Term DEPTH DEPTH OF STRATUM, I SAMPLER Gravel Trace 1-10% OF PER 6 IN Sand Some 11-35% SAMPLE, FT INTERVAL Silt And 36-50% Clay FROM TO 51 52 53 54 55 56 57 58 59.0 59 Brown gray silty Sand 60 61 62 63 64 65 66 67 68 69 70 71.0 71 Gray silty Clay, some sand 72 73 74 75 76 77 78 79.0 79 BOB 79.0 DEPTH A-SPLIT SPOON E-AUGER CUTTINGS DATE GROUND INITIAL 16.0 ☑ 3/22/2005 B-ROCK CORE ℤ 3/23/2005 WATER AT COMPLETION C-SHELBY TUBE  $\forall$ OBSERVATIONS OTHER Ν D-SONIC

**BOWSER** 

SHEET	1	OF	2	

	Aggregate Industries Chelsea, Michigan	
PROJECT	Sand and Gravel Exploration in Chelsea, MI	JOB No. <u>133873</u>
		LOCATION OF BORING : As Directed
GROUND EL		DATE CTARTER 2/22/2005
DRILLING CO	DMMENIS	DATE STARTED 3/23/2005
		DATE ENDED 3/23/2005
		DRILLERS JK, TW, SW

						DRILLERS JK, TW, SW	
					T	CLASSIFICATION OF MATERIAL	
<b>DEPTH, FT</b>	SAMPLE NO.	DEPTH OF	BLOWS ON SAMPLER PER 6"	DEPTH OF STRATUM, FT	GRAPHICS	Major Component: Minor Component Term Gravel Trace 1-10% Sand Some 11-35%	SPT "N"
DE	S	SAMPLE, FT FROM TO	INTERVAL	D STR/	GR	Silt And 36-50% Clay	S
-				1.0	0000	Sand and Gravel	
1-				1.0	8.0	Brown Sand and gravel, trace of cobbles	
2-					000		
3-				-	. 6		
4-					000		
5-					0.00		
-				-	\$		-
6-					3000		
7-					.50		
8-					000		
9-							
-10				10.0	\$	Danier acade Carrel	
- - 11				_	0000	Brown sandy Gravel	
-					) 		
12-				12.5		Brown sand Silt	
13- -				13.5		$\nabla$	
14-					000	Brown fine Sand (wet)	
15-							
- -16					000		
- 17-							
-					***		
18-					000		
19- -					000		
20-							
				EPTH	10000	DATE A-SPLIT SPOON E-AUGER CUTTINGS	

GROUND WATER AT COMPLETION OBSERVATIONS

OTHER \_\_\_

DEPTH

INITIAL 13.5 ♀ 3/23/2005 B—ROCK CORE

 ▼ 3/23/2005
 C-SHELBY TUBE

 T
 ▼ N
 D-SONIC



BORING No. C-5-05

REPORT No. 133873

SHEET 2 OF 2

DEPTH OF SAMPLE, FT   FROM TO								REPORT NO. 133073 SHEET Z	<u> </u>
22						-		CLASSIFICATION OF MATERIAL	
22	ᇤ	Щ	DEF	PTH		- <u>-</u>	CS	Major Component: Minor Component Term	
22	ΞÉ	틸.		)E		E # 5	포	Gravel Trace 1-10%	Z Z Z
22	F	₽Z				A O Ell	₹	Sand Some 11-35%	F 0 S
22	Ш	S	SAMP	LE, FT	INTERVAL	R E	GR		S F
23			FROM	TO		S		Clay	
23	_						000		
23	22-					1	000	d d	
24						-	000		
25	23-					_			
25						-	000		
26	24-						000		
26	25-						000		
27 28 29 30 31 32 33 33 Gray Sand and gravel with silty  35 36 37 37 37 37 37 38 39 Gray sandy Clay with gravel	25-								
27 28 29 30 31 32 33 33 Gray Sand and gravel with silty  35 36 37 37 37 37 37 38 39 Gray sandy Clay with gravel	26-					-			
28	-					-			
29	27 -								
29	-					1	000		
30	28-						000		
30	29-						000		
31							0000		
32 33 33 34 35 36 37 37 38 39.0 39.0 39.0 33.0 Gray Sand and gravel with silty  Gray Sand and gravel with silty  Gray Sand and gravel with silty	30-					-{	0000		
32 33 33 34 35 36 37 37 38 39.0 39.0 39.0 33.0 Gray Sand and gravel with silty  Gray Sand and gravel with silty  Gray Sand and gravel with silty	-					1	0000		
33.0 Gray Sand and gravel with silty  34  35  36  37  37.0 Gray sandy Clay with gravel  38.0 39.0 39.0	31-								
33.0 Gray Sand and gravel with silty  34  35  36  37  37.0 Gray sandy Clay with gravel  38.0 39.0 39.0	22_					1			
Gray Sand and gravel with silty  Gray Sand and gravel with silty  35  36  37  Gray sandy Clay with gravel  38  39.0	32-								
34 35 36 37 37 Gray Sand and gravel with slity  Gray Sand and gravel with slity  37.0 Gray sandy Clay with gravel	33-					33.0			
35 36 37.0 37.0 Gray sandy Clay with gravel 39.0 39.0	-					-	(P2s	Gray Sand and gravel with silty	
37.0 37.0 Gray sandy Clay with gravel	34-					-			
37.0 37.0 Gray sandy Clay with gravel	-					-	9		
37.0 Gray sandy Clay with gravel  38. 39.0 39.0	35-						9		
37.0 Gray sandy Clay with gravel  38. 39.0 39.0	36-								
Gray sandy Clay with gravel  38  39.0	-						0		
38 Gray sandy Clay with gravel	37-					37.0		C	
39.0	-					-		Gray sandy Clay with gravel	
39.0 BOB 39.0'	38-					1			-
BOB 39.0'	-					39.0			
	39-			L I		1	1.8.212.8	BOB 39.0'	

DATE A - SPLIT SPOON E - AUGER CUTTINGS DEPTH GROUND INITIAL \_ 13.5 AT COMPLETION ▼ 3/23/2005 C—SHELBY TUBE WATER ▼ N D-SONIC

OBSERVATIONS

OTHER



BORING No.	C-6-05	
DOI 11110 110.		

	1_	OF	3

CLIENT	Aggregate Industries Chelsea, Michigan	
PROJECT	Sand and Gravel Exploration in Chelsea, MI	JOB No. 133873
ODOLIND FI	EV METUOD SONIC	LOCATION OF BORING : As Directed
GROUND ELDRILLING Consumer Sampled		DATE STARTED 3/23/2005  DATE ENDED 3/23/2005  DRILLERS JK, TW, SW

<b>-</b>			DI OMO ON	F	S	CLASSIFICATION OF MATERIAL	
ОЕРТН, FT	SAMPLE NO.	DEPTH	BLOWS ON SAMPLER	DEPTH OF STRATUM, FT	GRAPHICS	Major Component: Minor Component Term Gravel Trace 1-10% Sand Some 11-35%	SPT "N" OR
Ė	N N	OF	PER 6"	무이는	AP	Sand Some 11-35%	F C
믭	Ś	SAMPLE, FT	INTERVAL	L S	GR	Silt And 36-50%	S
		FROM TO		S		Clay	
				_	7/ 7/	Topsoil (moist)	
1-				-	77		
2					12.14		
_					14		
3-					12.3		
4-				4.0	11/2		
-				-	0000	Browns sand, some gravel (damp)	
5					0000		
6-					.00		
-				-	0000		
7-					000		
8				_	0.		
_				-	0000		
9-					1.000		
10-				-	.00.		
11-					0		
-					000		
12-				-	0.		
13					0000		
-					8.0		
14-					. 55.		
15-					0,00		
				-	000		
16					0.3		
17-				17.0	8.0	Brown Sand with gravel, some gravel	
10					\$	Brown Gand with graver, some graver	
18 – -					3000		
19-				-			
20 <del>-</del>				_	0, 0,		
20-							

GROUND WATER OBSERVATIONS

INITIAL AT COMPLETION OTHER <u>□ □ 3/23/2005</u> B—ROCK CORE ▼ 3/23/2005 C—SHELBY TUBE

▼ N D-SONIC



C-6-05

REPORT No. 133873 SHEET 2 OF CLASSIFICATION OF MATERIAL ᇤ GRAPHICS Major Component: DEPTH, FT **BLOWS ON** Minor Component Term SAMPLE NO. DEPTH OF STRATUM, F DEPTH SAMPLER Gravel Trace 1-10% OF Some 11-35% Sand PER 6 IN SAMPLE, FT Silt 36-50% INTERVAL And FROM TO Clay 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38.0 38 Gray Clay with gravel 39 40 41 42 43 44 45.0 45 Brown silty Sand with gravel 46 47 48 49 50 A-SPLIT SPOON E-AUGER CUTTINGS DEPTH DATE GROUND 59.0 ☑ 3/23/2005 INITIAL B-ROCK CORE **BOWSER** ℤ 3/23/2005 C-SHELBY TUBE

WATER OBSERVATIONS AT COMPLETION

OTHER

T



C-6-05

3 REPORT No. 133873 SHEET 3 OF CLASSIFICATION OF MATERIAL 님 GRAPHICS DEPTH, FT **BLOWS ON** Major Component: Minor Component Term SAMPLE NO. DEPTH DEPTH OF STRATUM, F SAMPLER Gravel Trace 1-10% OF Sand Some 11-35% PER 6 IN SAMPLE, FT INTERVAL Silt And 36-50% Clay FROM TO 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77.0 77 BOB 77.0' A - SPLIT SPOON E - AUGER CUTTINGS DEPTH DATE GROUND INITIAL 59.0 □ 3/23/2005 B-ROCK CORE **¥** 3/23/2005 WATER AT COMPLETION C-SHELBY TUBE Ν

D-SONIC

OBSERVATIONS

OTHER

**BOWSER** MORNER

## **BORING LOG**

SHEET	Т	1	OF.	3

CLIENT	Aggregate Industries Chelsea, Michigan	
PROJECT	Sand and Gravel Exploration in Chelsea, MI	JOB No. <u>133873</u>
		LOCATION OF BORING : As Directed
GROUND EL		DATE OTA DTED 2/24/2005
DRILLING C		DATE STARTED 3/24/2005
Sampled 5	5 - 60	DATE ENDED 3/24/2005
		DRILLERS JK, TW, SW

				H		CLASSIFICATION OF MATERIAL	
DEPTH, FT	SAMPLE NO.	DEPTH OF SAMPLE, FT FROM TO	BLOWS ON SAMPLER PER 6" INTERVAL	DEPTH OF STRATUM, FT	GRAPHICS	Major Component: Minor Component Term Gravel Trace 1-10% Sand Some 11-35% Silt And 36-50% Clay	SPT "N" OR
					71.77	Topsoil	
1-					7.7		
2-					12 3		
3-					1/2		
J				4.0	4 4		
4-				-7.0	0000	Brown Sand, some gravel	
5-					88.0		
6-							
7-					0,00		
1				8.0			
8-					\$	Brown Sand with gravel, trace cobbles	
9-					88.0		A. A
10-					.0.		
11-					0000		
12-							
13-					.8.0		
14-							
15-							
					3000		
16-							
17-					0		
18-				18.0	\$		
				-	8.01	Brown Sand and gravel	
19-					3000		
20-							
				EPTH		DATE A - SPLIT SPOON E - AUGER CUTTINGS	

GROUND WATER **OBSERVATIONS** 

INITIAL AT COMPLETION

OTHER

 $\overline{\mathbb{A}}$ 

▼ 3/24/2005 C — SHELBY TUBE D-SONIC



REPORT No. <u>133873</u>

SHEET 2 OF 3

DEPTH, FT	SAMPLE NO.	DEPTH OF SAMPLE, I	DEPTH OF STRATUM, FT		CLASSIFICATION OF M. Major Component: Minor Gravel Tr Sand So Silt Ar Clay	Component Term ace 1-10% ome 11-35%	SPT "N" OR RECOVERY
22-				.81			
23-							
24-				0,00			
25-							
26-				8.9			
27-							
28-							
29-							
30-							
31-				30.0			
32-							
33-							
34-							
-			, , , , , , , , , , , , , , , , , , ,	.8.°(			
35-							
36-							
37-							
38-				8			
39-							
40-							
41-							
42-							
43-				d 0 d			
44-							
45 – -							
46-							
47-				000			
48 –			48.0		Brown Sand, some gravel		
49-					-		
50-			EPTH	 	DATE A - SPLIT SPOON E - AUGER O		

GROUND WATER OBSERVATIONS

INITIAL AT COMPLETION \_\_

OTHER

 $\sqrt{2}$  3/24/2005 B-ROCK CORE

▼ 3/24/2005 C—SHELBY TUBE



REPORT No. <u>133873</u>

SHEET 3 OF 3

DEPTH, FT	SAMPLE NO.	DEPTH OF SAMPLE, F	DEPTH OF STRATUM FT		CLASSIFICATION OF MATERIAL  Major Component: Minor Component Term Gravel Trace 1-10% Sand Some 11-35% Silt And 36-50% Clay	SPT "N" OR
51-				0000	Very fine sand, no gravel, 50'-59'	
52-				, 50. ),	very fine sand, no graver, 50-55	
53-				0000		
54-						
55 -						
56-				)		
57 -				0,0		
58-				0000		
59 -						
60-				3000	Gray silty clay, 59' - 66'	
-			_			
61-				0,00		
62 -						
63 -				0000		
64-				3		
65-						
66-					Fine tan sand 66' - 73'	
67 -					Fine tan sand 66 - 73	***
68 -				8.0		
69-						
70-				,,,,,		
71-				30.00		
72 -				8.0		
73-			70.5			
74-			73.5		Gray silty clay with sand and gravel	
75 –				2		
76-			75.5		Gray sandy Silt	
-			 77.0			
77	adayan ay an unanyanya an ya an a	·			BOB 77	

GROUND WATER OBSERVATIONS

INITIAL AT COMPLETION

OTHER

DEPTH DATE  $\sqrt{3/24/2005}$  B-ROCK CORE

A-SPLIT SPOON E-AUGER CUTTINGS



SHEET 1 OF 3

#### BORING No.

#### **BORING LOG**

CLIENT	Aggregate Industries Chelsea, Michigan	- -	
PROJECT	Sand and Gravel Exploration in Chelsea, MI	JOB No. <u>133873</u>	
		LOCATION OF BORING : As Directed	
GROUND E	LEV METHOD SONIC		
ORILLING C	COMMENTS	DATE STARTED 3/24/2005	
Sampled 5	5' - 75'	DATE ENDED 3/24/2005	
		DRILLERS JK TW SW	

						DRILLERS JR, TVV, SVV	
					П	CLASSIFICATION OF MATERIAL	
DEPTH, FT	SAMPLE NO.	DEPTH OF SAMPLE, FT FROM TO	BLOWS ON SAMPLER PER 6" INTERVAL	DEPTH OF STRATUM, FT	GRAPHICS	Major Component: Minor Component Term Gravel Trace 1-10% Sand Some 11-35% Silt And 36-50% Clay	SPT "N" OR RECOVERY
	·	PROW TO				Topsoil	
-					7.7	1003011	
1-					10		
2-				-	2 3		
-					14		
3-					1/1		
4-				4.0	0000	Danier and trans of grants	
					0000	Brown sand, trace of gravel	
5-					3		
6-				-	.00.		
					0000		
7-					300		
8-					.0.		
-					0000		
9-					.0.0		
10-					. 50.		
-				1	0		
11-					:00.0		
12-							
-							
13-					.8.0		
14-				14.0	3		
-					8.00	Brown Sand with gravel	
15-					3.00		
16-							
-					0,,,		
17-					000		
18-					900		
-							
19-				1	.0.0		
20-							
20-				-	::3		
				DTU	0.00	DATE A SDUT SPOON E AUGER CUTTINGS	

GROUND WATER OBSERVATIONS INITIAL \_

OTHER

DATE A SPLIT SPOON

□ 3/24/2005 B - ROCK CORE
□ 3/24/2005 C - SHELBY TUBE

V

DATE A - SPLIT SPOON E - AUGER CUTTINGS



C-8-05

REPORT No. 133873

SHEET 2 OF 3

					<b> </b>		CLASSIFICATIO	N OF MATERIAL	
DEPTH, FT	<u> </u>		PTH	BLOWS ON	DEPTH OF STRATUM, FT	GRAPHICS	Major Component: Gravel	Minor Component Term Trace 1-10%	SPT "N" OR
TH.	SAMPLE NO.	С	)F	SAMPLER PER 6 IN	DEPTH OF RATUM,	\PH	Gravel Sand	Trace 1-10% Some 11-35%	SPT "N" OR
DEF	SA	SAMP	LE, FT	INTERVAL		3R/	Sand Silt	And 36-50%	RS )
		FROM			<u>Γ</u>		Clay		
7						0000			
22					1	3000			
23					-	 			
24					-				
25					-				
26					-	0000			
27									-
+					-				
28						000			
29									
30						8.0			
31									
32					1				
33									
+									
34					35.0	8.0			
35					ან.0	\$	Brown Sand and gravel		
36									
37									
38									
39									
40									
+						3			
41						٠ ٠ ټ٠			
42									
43					1				
44					-	8			
45					1	, 50. ] }			
46					1				
47					-				
+					1				
48						.8			
49									
	- 1	1	1		ī	- 0/9			1 -

WATER OBSERVATIONS

AT COMPLETION

OTHER

<u>▼ 3/24/2005</u> C-SHELBY TUBE D-SONIC



BORING No. C-8-05 REPORT No. 133873 SHEET 3 OF 3 DEPTH OF STRATUM, FT **CLASSIFICATION OF MATERIAL** GRAPHICS DEPTH, FT SAMPLE NO. DEPTH **BLOWS ON** Major Component: Minor Component Term Gravel SAMPLER Trace 1-10% OF PER 6 IN Sand Some 11-35% SAMPLE, FT INTERVAL Silt And 36-50% FROM TO Clay 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79.0 79 **BOB 79** 

GROUND WATER OBSERVATIONS

INITIAL AT COMPLETION

OTHER

DEPTH

DATE  $\sqrt{3/24/2005}$  B-ROCK CORE

A-SPLIT SPOON E-AUGER CUTTINGS

▼ 3/24/2005 C — SHELBY TUBE



BORING No.	 C-9-05	
		_

SHEET	1	OF	3	

CLIENT	Aggregate Industries Chelsea, Michigan	
PROJECT	Sand and Gravel Exploration in Chelsea, MI	JOB No. <u>133873</u>
GROUND EL	EV. METHOD SONIC	LOCATION OF BORING : As Directed
DRILLING COMMENTS Sampled 5' - 60'		DATE STARTED 3/24/2005  DATE ENDED 3/24/2005
		DRILLERS JK, TW, SW

						CLASSIFICATION OF MATERIAL		
DEPTH, FT	SAMPLE NO.	DEPTH OF SAMPLE, FT FROM TO	BLOWS ON SAMPLER PER 6" INTERVAL	DEPTH OF STRATUM, FT	GRAPHICS	Major Component: Gravel Sand Silt Clay	Minor Component Term Trace 1-10% Some 11-35% And 36-50%	SPT "N" OR RECOVERY
-				1.0	7/3	Topsoil		
1-				1.0	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	Brown Sand, trace of gravel		
2-					8.0			
3-								
4-					0.00			
5-				-				
-								
6					3			
7-					 			
8-								
9-								
10-					٠.٠. د.٠.			
11-					30.00 30.00			
-								
12-								
13-								
14-								
15-					3000			
16-								
17-								
-					9.0.			
18- -								
19-					3000			
20-				-				
***						DATE A SPLIT SPOON E		

GROUND WATER **OBSERVATIONS** 

INITIAL AT COMPLETION

OTHER

 $\sqrt{3/24/2005}$  B-ROCK CORE

<u>▼ 3/24/2005</u> C—SHELBY TUBE D-SONIC



C-9-05 BORING No. SHEET 2 REPORT No. 133873 OF 3 CLASSIFICATION OF MATERIAL STRATUM, FT GRAPHICS DEPTH, FT **BLOWS ON** Major Component: Minor Component Term SAMPLE NO. DEPTH Gravel SAMPLER Trace 1-10% OF PER 6 IN Sand Some 11-35% SAMPLE, FT INTERVAL Silt And 36-50% FROM TO Clay 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40.0 40 Brown sand with gravel 41 42 43 44 45 46 47 48 49 50

GROUND WATER OBSERVATIONS INITIAL

DEPTH

DATE

A-SPLIT SPOON E-AUGER CUTTINGS

AT COMPLETION OTHER

☑ 3/24/2005 3/24/2005

B-ROCK CORE

C-SHELBY TUBE D-SONIC



C-9-05

BORING No. REPORT No. 133873 SHEET 3 OF CLASSIFICATION OF MATERIAL STRATUM, FT GRAPHICS SAMPLE NO. DEPTH, FT DEPTH **BLOWS ON** Major Component: Minor Component Term SPT "N" Gravel SAMPLER Trace 1-10% OF PER 6 IN Sand Some 11-35% SAMPLE, FT Silt **INTERVAL** And 36-50% FROM TO Clay 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65.0 65 Gray Clay with silt and gravel 66 67 68 69 70 70.5 Brown Sand some gravel 71 72 73 74 75 76 77 78.0 78 BOB 78.0 A-SPLIT SPOON E-AUGER CUTTINGS DEPTH DATE GROUND ☑ 3/24/2005 INITIAL B-ROCK CORE

**¥** 3/24/2005 WATER AT COMPLETION C-SHELBY TUBE OBSERVATIONS OTHER D-SONIC

