Dieter, Gail A (DEC)

From:	Brian.Carling@CH2M.com
Sent:	Wednesday, June 10, 2015 1:02 PM
То:	Dieter, Gail A (DEC)
Cc:	William.Andrae@CH2M.com; Kurt.Mehigh@CH2M.com; cibrikje@dow.com
Subject:	HCC - Waterloo - North Shore Tech Memo
Attachments:	Final_Dow WAT_Post Dredge_Verification Tech Memo_NSD_6-10-15.pdf; Figure 1 - NS - Sediment Core Verification Samples.pdf; Figure 2 - NS - Sediment Thickness Map.pdf; Figure 3 - NS - Post-Dredge Sediment Remaining.pdf; Figure 4 - NS - Redredge
	Area.pdf; Figure 5 - NS - Final Dredge Completion Surface.pdf; NSD QA-QC Redredge Visual Verification Assessment Log WAT AOC A.PDF

Hi Gail:

Attached are the files that comprise the North Shore Tech Memo for our call at 2:00 this afternoon. High level summary:

- 1) Rock was present throughout the deposit and surgical removal with a smaller bucket was performed and overseen/documented by NYSDEC (see Attachment)
- 2) Design estimated volume was 1000 cu yds and we removed approximately 1596 cu yds despite the area that we couldn't be address along the Evans tanks
- 3) Removal of recoverable sediment is complete, anything that remains is between rocks or in crevices that we can't get into

Thanks

Brian S. Carling, P.G.

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Sediment Post-Removal Verification Report, Former Hampshire Chemical Corp. Facility Area of Concern A — Sediment Removal Project – North Shore Area Report, Waterloo, New York

PREPARED FOR:	Hampshire Chemical Corp.
PREPARED BY:	CH2M HILL
DATE:	June 10 , 2015
PROJECT NUMBER:	482750

New York State Department of Environmental Conservation

This memorandum summarizes the dredging and post-removal verification process that was performed in the North Shore Deposit at the Former Hampshire Chemical Corp. (HCC) site, Area of Concern (AOC) A – Cayuga-Seneca Canal sediment removal project in Waterloo, New York. AOC A is a portion of Cayuga-Seneca Canal (canal), which also is known as the Seneca River and is part of the New York State canal system. The portion of AOC A where corrective measures are being performed is separated into three sediment depositional areas referred to as the North Shore Deposit, the Gorham Street Deposit, and the Downstream Deposit (Figure 1). This Technical Memorandum is focused solely on the dredging and verification process used in the North Shore Deposit.

Dredging Summary

CH2M HILL contracted OpTech (now NRC) of Great River, New York to conduct the AOC A sediment removal project. OpTech contracted with the Faust Corporation of St Clair Shores, Michigan to conduct the water side dredging operations while NRC focused its resources on the land side sediment dewatering and waste management operations.

Dredging within the North Shore deposit was initiated on October 20, 2014 and continued through October 29, 2014 resulting in the removal, dewatering and disposal of approximately 1287 cubic yards (in-situ measurement) of sediment. This total includes removal of 208 cubic yards of material (accounted for in the above removal estimate) at the transition between the bank and sediment bottom which was removed during gabion placement preparation in the spring of 2014, this effort was abandoned due to canal flooding. As anticipated, dredging at the North Shore deposit was challenging due to the rocky nature of the subsurface. Refusal on rock was a common occurrence and substantial effort was made to manipulate the environmental clam bucket between the rocks that were known to exist in this deposit. The dredger documented the areas of rock refusal to the degree possible using bucket refusal locations to further define the areas where removal was not possible.

In late October 2015, HCC identified potential canal bank instability adjacent to the North Shore deposit near the Evans Tank Area. This steeply sloped area consists of fill material that is covered with randomly oriented, cut limestone blocks, which extend from the canal bank slope to the canal bottom and cover a small portion of the sediment proposed for removal. An engineer's evaluation of the Evans Tank Area determined that sediment removal at the toe of the canal bank decreases slope stability and increases the risk to the Evans tank and secondary containment system. Due to the risk of destabilizing the bank, secondary containment system, and overlying tanks, HCC is requested permission to exclude dredging within 10 feet of the canal bank over this 200-foot stretch of the canal between stations 23+00 and 25+00 which was subsequently approved by NYSDEC on March 11, 2015. On November 4, 2014 through November 5, 2014, Affiliated Researchers (AR), a subcontractor to CH2M, conducted an interim post-removal, multi-beam bathymetric and poling survey to estimate the remaining sediment within the North Shore deposit. The post-dredge bathymetric and poling data were compared to the pre-removal data to determine the thickness of soft sediment remaining in the area. Figure 2 presents the pre-removal bathymetric surface and Figure 3 presents the initial post-removal surface. The bathymetric and poling data found several small areas of remaining sediment identified as Area A through F (Figure 4). These areas were estimated to include approximately 906 cubic yards of sediment over a total area of 7945 square feet.

During the winter shutdown (January and February 2015), the water level in the canal was lowered to support gabion basket installation as part of the site restoration and stabilization efforts. As anticipated, this provided an opportunity to remove additional sediment in the area of Outfall 8, which is referred to as the "horseshoe area". Excavation within this area began on January 29, 2015 and proceeded through February 6, 2015. The sediment was thicker than anticipated in this area and resulted in removal of approximately 133 cubic yards of sediment. The excavation proceeded to refusal where clay was encountered; the removal area was conventionally surveyed to determine the depth and extent. During this time, the opportunity to perform a dry removal on Area F was presented and approximately 56 cubic yards of sediment was the case for the horseshoe area, removal proceeded to refusal and was documented using standard surveying technology.

From April 22, 2015 to April 29, 2015, an additional surgical sediment removal was initiated in an effort to remove recoverable sediment present between the rocks within the North Shore Deposit. The dredger installed a smaller (3' wide) bucket equipped with a lid to support this effort. The contents of each bucket were documented and described by on-site staff as were areas where recovery was not possible (Attachment A). Kris Keenan of NYSDEC was on-site to oversee the majority of the effort. This effort recovered approximately 120 cubic yards of sediment from Areas A through E and also confirmed that all recoverable sediment had been removed.

Verification Summary

On May 1, 2015, Affiliated Researchers (AR) of East Tawas, Michigan, a subcontractor to CH2M, conducted a final post-removal, multibeam bathymetric survey to estimate the remaining sediment within the North Shore Deposit (Figure 5). The post-dredge bathymetric data were compared to the pre-removal data collected prior to the start of removal activities and determined that the combination of bulk sediment removal and surgical removal at Area A through E was effective in removing the recoverable sediment within the North Shore.

Conclusion

The post-verification bathymetric survey indicates that the goals of the North Shore Deposit soft sediment removal have been achieved to the degree achievable. The surgical removal effort was the final step of the process within this deposit and completed removal of the last portion of recoverable sediment, thus the removal objectives of the DMU have been achieved.



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Figure 1 Sediment Core Verification Samples AOC A Sediment Removal Verification Technical Memorandum North Shore Deposit Former Hampshire Chemical Corp. Facility Waterloo, New York





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Former Hampshire Chemical Corp. Facility

Waterloo, New York

N N	laterial			
u istateliai Daseu	OIL FLACHOR OF THE	Dreuge Ducket)	Hard Scraping by Excavator	- - - -
ravel Observed (Y/N)	Clay Observed (Y/N)	Sediment Observed (Y/N)	(Y/N)	Additional Note
Rocks & Gravel	t	-	Yes - On Rocke/Refired	
tocks & Gravel	E	**	Yes - On Rocks/Refusal	NADADA MANANA
tocks & Gravel	Yes	ł	Yes - On Rocks/Refusal	NA DA
- Few Rocks	Yes	t	Yes - On Rocks/Refusal	na mana kata kata kata kata kata kata kata k
- Few Rocks	Yes	1	Yes - On Rocks/Refusal	Debris
- Few Rocks	Yes	ł	Yes - On Rocks/Refusal	Debris
- Few Rocks	Yes	k	Yes - On Rocks/Refusal	V and a set of the se
- Few Rocks	1	ł	Yes - On Rocks/Refusal	nana a sina a mana a mana a si na sa si na sa si na sa si na si Na
- Few Rocks	ł	ł	Yes - On Rocks/Refusal	Debris
- Few Rocks	ţ	ł	Yes - On Rocks/Refusal	
- Few Rocks	Yes	ł	Yes - On Rocks/Refusal	HAMPI HAMPI AND AND AND AND AND AND AND AND AND AND
ł	Yes	ŝ	Yes - On Rocks/Refusal	nden se demonstrative de la contra de la contr
- Few Rocks	Yes	f	Yes - On Rocks/Refusal	Debris
- Few Rocks	÷	1	Yes - On Rocks/Refusal	Management Annotation and An
- Few Rocks	Yes	1	Yes - On Rocks/Refusal	na referencia da mante a mante a companya da de ser de la companya de la companya de la companya de la company este
- Few Rocks	Yes	Yes - Very Thin Layer on Clay on Tooth	Yes - On Rocks/Refusal	ſ
- Boulders	~	2	Yes - On Rocks/Refusal	REPORTING AND
- Few Rocks	Yes	2	Yes - On Rocks/Refusal	MAAN MAANAMAMAANAMAANAMAANAMAANAMAANAMA
- Few Rocks	Yes	-	Yes - On Rocks/Refusal	sinn ber det television of experiments and a second second second second second second second second second sec
ocks & Gravel	*	2	Yes - On Rocks/Refusal	Nan de de la constante de constante de la const
 Few Rocks 	Yes	£	Yes - On Rocks/Refusal	MAANTANANANANA MANJANANANANANANANANANANANANANANANANANAN
- Few Rocks	Yes	Sa Carlos Car	Yes - On Rocks/Refusal	novem moderni a mini anna anna anna anna anna anna
- Few Rocks	Yes		Yes - On Rocks/Refusal	anaa aanaa aanaa aa ahaa ahaa ahaa ahaa
- Few Rocks	Yes		Yes - On Rocks/Refusal	
	Yes	Yes - Very Thin Layer on Clay	Yes - On Rocks/Refusal	and a second and a second s
- Few Rocks	÷		Yes - On Rocks/Refusal	A A A A A A A A A A A A A A A A A A A
ocks & Gravel	ţ	-	Yes - On Rocks/Refusal	ANDOLOGOWANDOWNOWNYM MARKANA, LAN ALAN AND A DOLLAR AND A DAL ALAN A DAL AND A DAL AND A DAL AND A DAL AND A DA
- Boulders	Yes	Yes - Very Thin Layer on Clay on	Yes - On Rocks/Refusal	I
Few Rocks	Yes		Yes - On Rocks/Refusal	Debris
- Boulders	Yes	Yes - Very Thin Layer on Clay on Tooth	Yes - On Rocks/Refusal	ſ
	N ravel Observed (Y/N) Rocks & Gravel Rocks & Gravel Rocks & Gravel Rocks & Gravel - Few Rocks - Few Rocks	Material Material Based on Fraction of the ravel Observed (V/N)Cocks & Gravel(Y/N)Cocks & Gravel-Cocks & Gravel-Cocks & Gravel-Cocks & Gravel-Few RocksYes- Few RocksYes <td>MaterialWaterial Based on Fraction of the Dredge Bucket)ravel ObservedClay ObservedSediment Observed (V/N)(V/N)$Sediment Observed (V/N)$$Sediment Observed (V/N)$cocks & GravelFew RocksYes-Few Rocks</td> <td>Material Material Freedom Freedom</td>	MaterialWaterial Based on Fraction of the Dredge Bucket)ravel ObservedClay ObservedSediment Observed (V/N)(V/N) $Sediment Observed (V/N)$ $Sediment Observed (V/N)$ cocks & GravelFew RocksYes-Few Rocks	Material Material Freedom

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Stained Rocks & Gravel	Yes - On Rocks/Refusal	5	2	Yes - Rocks & Gravel	Yes	64	4/27/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	,		Yes - Rocks & Gravel	Yes	63	4/27/2015
un en	un er	Yes - 1/8 Sediment	Yes	ē	Yes	62	4/27/2015
Debris	Yes - On Rocks/Refusal	÷	Yes	Yes - Rocks & Gravel	Yes	61	4/27/2015
	Yes - On Rocks/Refusal	1	Yes	Yes - Rocks & Gravel	Yes	60	4/27/2015
	Yes - On Rocks/Refusal	f	Yes	Yes - Rocks & Gravel	Yes	59	4/27/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay on Tooth	Yes	Yes - Rocks & Gravel	Yes	58	4/27/2015
	Yes - On Rocks/Refusal	Yes - 1/8 to 1/4 Sediment	Yes		Yes	57	4/27/2015
÷*	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay	Yes	4	Yes	56	4/27/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	,		Yes - Few Rocks	Yes	55	4/27/2015
	Yes - On Rocks/Refusal	Yes - 1/8 Sediment		Yes - Boulders	Yes	54	4/27/2015
Debris	Yes - On Rocks/Refusal		Yes	Yes - Boulders	Yes	53	4/27/2015
4	Yes - On Rocks/Refusal		Yes	Yes - Few Rocks	Yes	52	4/27/2015
Debris, Stained Rocks & Gravel	Yes - On Rocks/Refusal	3	ą	Yes - Rocks & Gravel	Yes	51	4/27/2015
Stained Rocks & Gravel	Yes - On Rocks/Refusal	3	Yes	Yes - Rocks & Gravel	Yes	50	4/27/2015
f	Yes - On Rocks/Refusal	Yes - Very Thin Layer	Yes	Yes - Rocks & Gravel	Yes	49	4/27/2015
	Yes - On Rocks/Refusal	f	Yes	Yes - Rocks & Gravel	Yes	48	4/27/2015
	Yes - On Rocks/Refusal	-	1	Yes - Rocks & Gravel	Yes	47	4/27/2015
ŧ	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay on Tooth	Yes	Yes - Rocks & Gravel	Yes	46	4/27/2015
Debris	Yes - On Rocks/Refusal	-	Yes	Yes - Few Rocks	Yes	45	4/27/2015
Stained Rocks & Gravel	Yes - On Rocks/Refusal	-	T	Yes - Rocks & Gravel	Yes	44	4/27/2015
Debris	Yes - On Rocks/Refusal	r	Yes	Yes - Few Rocks	Yes	43	4/27/2015
T	Yes - On Rocks/Refusal	-	Yes	Yes - Few Rocks	Yes	42	4/27/2015
	Yes - On Rocks/Refusal	t	Yes	Yes - Few Rocks	Yes	41	4/27/2015
	Yes - On Rocks/Refusal	-	Yes	Yes - Few Rocks	Yes	40	4/27/2015
1	Yes - On Rocks/Refusal	-	r	Yes - Few Rocks	Yes	39	4/27/2015
	Yes - On Rocks/Refusal	*	Yes	Yes - Few Rocks	Yes	38	4/27/2015
	Yes - On Rocks/Refusal	1		Yes - Few Rocks	Yes	37	4/27/2015
¢	Yes - On Rocks/Refusal	4	ł	Yes - Few Rocks	Yes	36	4/27/2015
Γ	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay on Tooth	Yes	ž	Yes	35	4/27/2015
	Yes - On Rocks/Refusal	5	Yes	Yes - Few Rocks	Yes	34	4/27/2015
	Yes - On Rocks/Refusal		Yes	Yes - Few Rocks	Yes	33	4/27/2015
	Yes - On Rocks/Refusal	*	-	Yes - Few Rocks	Yes	32	4/27/2015
-	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	31	4/27/2015



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	Yes - On Rocks/Refusal	e	ę		Yes - Only Water	93	4/27/2015
	Yes - On Rocks/Refusal	i	Yes	Yes - Boulders	Yes	92	4/27/2015
	Yes - On Rocks/Refusal	1	Yes	Yes - Boulders	Yes	16	4/27/2015
Re-dig of #75/76	Yes - On Rocks/Refusal	1	Yes	Yes - Rocks & Gravel	Yes	90	4/27/2015
Re-dig of #74	Yes - On Rocks/Refusal	Yes - Very Thin Layer of Sediment on Tooth	Yes	Yes - Rocks & Gravel	Yes	68	4/27/2015
Re-dig of #72	Yes - On Rocks/Refusal	,	-	Yes - Rocks & Gravel	Yes	88	4/27/2015
Re-dig of #68	Yes - On Rocks/Refusal	i		Yes - Few Rocks	Yes	787	4/27/2015
Re-dig of #67	Yes - On Rocks/Refusal	Yes - 1/4 on top of Boulders		Yes - Boulders	Yes	98	4/27/2015
Re-dig of #66	Yes - On Rocks/Refusal	Yes - Very Thin Layer of Sediment on Rock	ş	Yes - Rocks & Gravel	Yes	85	4/27/2015
2	Yes - On Rocks/Refusal	Yes - Very Thin Layer of Sediment on Clay	Yes	Yes - Rocks & Gravel	Yes	84	4/27/2015
ţ	Yes - On Rocks/Refusal	Yes - 1/4 to 1/2 Sediment on top of Clay	Yes	Yes - Rocks & Gravel	Yes	83	4/27/2015
Debris	Yes - On Rocks/Refusal	Yes - 1/4 Sediment	8	Yes - Boulders	Yes	82	4/27/2015
	Yes - On Rocks/Refusal	1	4	Yes - Few Rocks	Yes	81	4/27/2015
.e.	Yes - On Rocks/Refusal		Yes	Yes - Few Rocks	Yes	08	4/27/2015
	Yes - On Rocks/Refusal	1	Yes	Yes - Rocks & Gravel	Yes	79	4/27/2015
-	Yes - On Rocks/Refusal		Yes	Yes - Gravel	Yes	78	4/27/2015
5	Yes - On Rocks/Refusal	-	Yes	Yes - Rocks & Gravel	Yes	77	4/27/2015
Area dug in a row N to S, then re-dug	Yes - On Rocks/Refusal	Yes - Thin Layer on Clay	Yes	ţ	Yes	76	4/27/2015
Area dug in a row N to S, then re-dug	Yes - On Rocks/Refusal	Yes - Thin Layer on Clay	Yes	5	Yes	75	4/27/2015
Area dug in a row N to S, then re-dug	Yes - On Rocks/Refusal	Yes - 1/8 to 1/4 Sediment	Yes	Yes - Rocks & Gravel	Yes	74	4/27/2015
Debris	Yes - On Rocks/Refusal	1	Yes	-	Yes	73	4/27/2015
Area dug in a row N to S, then re-dug	Yes - On Rocks/Refusal	Yes - Thin Layer on Clay	Yes	5	Yes	72	4/27/2015
1	Yes - On Rocks/Refusal	3	Yes	Yes - Few Rocks	Yes	71	4/27/2015
Area dug in a row N to S, then re-dug	Yes - On Rocks/Refusal	Yes - Layer on Clay	Yes	t	Yes	70	4/27/2015
	Yes - On Rocks/Refusal		Yes	P	Yes	69	4/27/2015
Area dug in a row N to S, then re-dug	Yes - On Rocks/Refusal	Yes - 1/2 Sediment	Yes	ł	Yes	68	4/27/2015
Area dug in a row N to S, then re-dug	Yes - On Rocks/Refusal	Yes - 1/4 Sediment	Yes	ź	Yes	67	4/27/2015
Area dug in a row N to S, then re-dug	Yes - On Rocks/Refusal	Yes - 1/2 Sediment	Yes	Yes - Rocks & Gravel	Yes	66	4/27/2015
Debris	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	yes	65	4/27/2015



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126	125	124	123	122	121	120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101	100	99	86	97	96	95	94
Yes - Only Water	Yes	Yes	Yes	Yes	Yes	yes	yes	Yes	Yes	Yes	Yes	Yes - Only Water	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
w	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Gravel	Yes - Rocks & Gravel		Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Few Rocks	F	Yes - Rocks & Gravel	3	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Boulders	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	I	1	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	ę	Yes - Boulders
F	Yes	Yes	*	÷	Yes	÷	an a		2	£.	-	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			+	Yes	Yes	Yes	1	ş	Yes	Yes	
5	8	I	Yes - Very Thin Layer on Rocks	Yes - Very Thin Layer on Rocks	Yes - 1/2 Sediment		ı				ſ		Yes - Thin Layer on Clay	Yes - Thin Layer on Clay	-	ε		-		1	Yes - 1/8 to 1/4 Sediment	r 	÷.	3	Yes - Thin Layer on Clay	Yes - 1/4 Sediment	ţ	Yes - 1/4 Sediment	ŧ		Yes - Very Thin Layer on Clay	Yes - 1/8 Sediment
Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal			
1	9	Stained Rocks & Gravel		Additional bucket dug at previous location.		-	Stained Rocks & Gravel	Debris		L.	ſ	je se	ŀ	-	· · ·	1			Stained Rocks & Gravel	Additional bucket dug at previous location.	Debris	Stained Rocks & Gravel	Debris	Ţ	Additional bucket dug at previous location.		Additional bucket dug at previous location.		Debris, Stained Rocks & Grave		Additional bucket dug at previous location.	



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156	155	154	153	152	151	150	149	148	147	146	145	144	143	142	141	140	139	138	137	136	135	134	133	132	131	130	129	128	127
Yes	Yes	Yes	Yes - Only Water	Yes - Only Water	Yes - Only Water	Yes - Only Water	Yes - Only Water	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes - Only Water	Yes	Yes	Yes			
Yes - Few Rocks	Yes - Few Rocks	Yes - Few Rocks			an and a second s		an and a second s	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Boulders		Yes - Boulders	Yes - Rocks & Gravel	Yes - Gravel	Yes - Rocks & Gravel	Yes - 1/3 Rocks	Yes - Rocks & Gravel	Yes - Few Rocks	ţ	2	ÿ	I	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel
~	ţ	1	î	ł	2	ş	22	ś	3	×	ţ	1	Y	Yes	Yes	÷	Yes	Yes	s	Yes - 1/3 Clay	ş	t	ł	1	\$,	÷	3	-
															Yes - Thin Layer on Clay		Yes - Very Thin Layer	Yes - 1/4 to 1/3 Sediment	Yes - Thin Layer on Rocks	Yes - 1/3 Sediment	Yes - Layer of Sediment		ξ.	1	P				
Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal			
	20		Similar Location as 130-133	Similar Location as 130-133	Similar Location as 130-133	Similar Location as 130-133	Similar Location as 130-133			, , , , , , , , , , , , , , , , , , ,		Stained Rocks & Gravel	÷	1	÷	Stained Rocks & Gravel	Additional bucket dug at previous location.		Additional bucket dug at previous location.	Debris; Additional bucket dug at previous location.	Debris	2	Hard scraping on possible rock ledge.	Stained Rocks & Gravel	Stained Rocks & Gravel	Stained Rocks & Gravel			

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4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015
189	881	187	186	185	184	183	182	181	180	179	178	177	176	175	174	173	172	171	170	169	168	167	166	165	164	163	162	161	160	159	158	157
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes - Only Water	Yes - Only Water	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes - Rocks & Gravel	Yes - Boulders	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	s	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	To a second se	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel		÷	Yes - Few Rocks	Yes - Few Rocks	Yes - Few Rocks	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	2	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Boulders	Yes - Rocks & Gravel	Yes - Rocks & Gravel
Yes	Yes	-	Yes	3	Yes	Yes	Yes	sa ana ana ana ana ana ana ana ana ana a	Yes	Yes	Yes	Yes			T	-	2	~	4	-	,	ŧ	ł		Yes	Yes	Yes	Yes	Yes	Yes	f.	
Yes - Very Thin Layer on Clay	÷	5	f	Yes - Thin Layer of Sediment	ĝ		Yes - Very Thin Layer on Clay	Yes - 1/8 Sediment					2	Yes - 1/4 Sediment	F	Yes - 1/3 Sediment	Yes - Very Thin Layer	ŗ	÷				1		Yes - Very Thin Layer	Yes - Very Thin Layer	Yes - Very Thin Layer	ţ	Yes - 1/4 Sediment	Yes - Very Thin Layer	Yes - Very Thin Layer	Yes - 1/4 Sediment
Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	\$	Yes - On Rocks/Refusal		Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal				
	ŀ		Debris	Stained Rocks & Gravel	e	Debris	Additional bucket dug at previous location.		Stained Rocks & Gravel	b	Stained Rocks & Gravel	-	Debris; Additional bucket dug at previous location.	1	Additional bucket dug at previous location.		Stained Rocks & Gravel		2	1	ţ	ţ		Stained Rocks & Gravel	1	ť		Additional bucket dug at previous location.	÷	1	Additional bucket dug at previous location.	Debris

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CH2M Hill QAQC Signed CH2M HILL PACE Printed F. CY

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4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015
223	222	221	220	219	218	217	216	215	214	213	212	211	210	209	208	207	206	205	204	203	202	201	200	661	861	197	196	195	194	193	192	191	190
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Boulders	Yes - Boulders	Yes - Boulders	-	Yes - Rocks & Gravel	Yes - Gravel	Yes - Rocks & Gravel	Yes - Boulders	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Boulders	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Boulders	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel
Yes	-		ł	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	3	-		1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Ĭ.	Yes	Yes	ł	ī
ţ	Yes - 1/8 Sediment		ſ		ł	1	Yes - Very Thin Layer on Clay			F	-	Yes - Very Thin Layer of Sediment	2	Yes - Very Thin Layer of Sediment		-		ŝ				*			Υ	Yes - Very Thin Layer on Clay	Yes - Very Thin Layer of Sediment	ŝ	Yes - Very Thin Layer of Sediment	Yes - Very Thin Layer on Clay on Tooth	ţ	Yes - 1/2 Sediment	1
Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal
Additional bucket dug at previous location.	Debris	Debris	÷						f		Debris	Stained Rocks & Gravel	Debris, Stained Rocks & Gravel	-			6	Debris, Stained Rocks & Gravel										Debris	ţ.	t	Additional bucket dug at previous location.		



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4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015
258	257	256	255	254	253	252	251	250	249	248	247	246	245	244	243	242	241	240	239	238	237	236	235	234	233	232	231	230	229	228	227	226	225	224
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes - Only Water	Yes - Only Water	Yes	yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes - Rocks & Gravel	Yes - Boulders	Yes - Rocks & Gravel	Yes - Boulders	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	-	ş	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Few Rocks	Yes - Gravel	Yes - Few Rocks	Yes - Few Rocks	Yes - Boulders	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Boulders	Yes - Gravel	2	Yes - Boulders	Yes - Boulders	Yes - Gravel	Yes - Few Rocks	10	Yes - Few Rocks	Yes - Gravel	Yes - Rocks & Gravel	Yes - Boulders	Yes - Rocks & Gravel	Yes - Rocks & Gravel
Yes	Yes	Yes	ŧ	Yes	ž	Yes	t	ł	ŧ	¥	Yes	ŧ	Yes		Yes	F	Yes	20	Yes	Yes	F	Yes	-	Yes	Yes		Yes	Yes						
-	Yes - Thin Layer of Sediment on Tooth	5		ľ	ţ	Ę	ş		F	T	3		t and the second se	ţ	i		↑	Yes - Very Thin Layer of Sediment			2		1		÷	ė.	r			÷	Yes - Thin Layer on Clay on Tooth	1	3	Yes - Thin Layer on Clay on Tooth
Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal
50 1990	Ŧ						Stained Rocks & Gravel						Debris					Stained Rocks & Gravel										re-			Debris		Debris	1 1



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2	Yes - On Rocks/Refusal	Yes - 1/8 Sediment	Yes		Yes	290	4/29/2015
	Yes - On Rocks/Refusal		Yes		Yes	289	4/29/2015
ž	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay	Yes	Yes - Boulders	Yes	288	4/29/2015
Stained Rocks & Gravel; Additional bucket dug at previous location.	Yes - On Rocks/Refusal	Ţ	ł	Yes - Few Rocks	Yes	287	4/29/2015
Debris	Yes - On Rocks/Refusal	Yes - 1/8 Sediment	Yes		Yes	286	4/29/2015
	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay	Yes	3	Yes	285	4/29/2015
Stained Rocks & Gravel	Yes - On Rocks/Refusal	1	r	Yes - Rocks & Gravel	Yes	284	4/29/2015
	Yes - On Rocks/Refusal	į .	å	Yes - Rocks & Gravel	Yes	283	4/29/2015
	Yes - On Rocks/Refusal	Yes - Thin Layer on Clay	Yes	Yes - Few Rocks	Yes	282	4/29/2015
Debris, Stained Rocks & Gravel	Yes - On Rocks/Refusal	Ē	Yes	Yes - Rocks & Gravel	Yes	281	4/29/2015
nt - La constante de la constante	Yes - On Rocks/Refusal	ĩ	Yes	Yes - Boulders	Yes	280	4/29/2015
	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay	Yes	Yes - Boulders	Yes	279	4/29/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	ř	Yes	Yes - Rocks & Gravel	Yes	278	4/29/2015
	Yes - On Rocks/Refusal	Yes - Layer of Sediment	Yes		Yes	277	4/29/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	ı	Yes	Yes - Rocks & Gravel	Yes	276	4/29/2015
	Yes - On Rocks/Refusal	Yes - 1/2 Sediment	Yes		Yes	275	4/29/2015
	Yes - On Rocks/Refusal	Ξ	Yes	*	Yes	274	4/29/2015
	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay	Yes	Yes - Rocks & Gravel	Yes	273	4/29/2015
Stained Rocks & Gravel	Yes - On Rocks/Refusal	P	Yes	Yes - Rocks & Gravel	Yes	272	4/29/2015
	Yes - On Rocks/Refusal	i	Yes	Yes - Rocks & Gravel	Yes	271	4/29/2015
	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay	Yes	Yes - Rocks & Gravel	Yes	270	4/29/2015
	Yes - On Rocks/Refusal	t	Yes	Yes - Few Rocks	Yes	269	4/29/2015
	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay	Yes	4	Yes	268	4/29/2015
Stained Rocks & Gravel	Yes - On Rocks/Refusal		Yes	Yes - Gravel	Yes	267	4/29/2015
	Yes - On Rocks/Refusal	۲	Yes	Yes - Gravel	Yes	266	4/29/2015
Stained Rocks & Gravel; Additional bucket dug at previous location.	Yes - On Rocks/Refusal	Ţ	Yes	Yes - Rocks & Gravel	Yes	265	4/29/2015
	Yes - On Rocks/Refusal	Yes - 1/8 Sediment	Yes	1	Yes	264	4/29/2015
Stained Rocks & Gravel	Yes - On Rocks/Refusal	1	Yes	Yes - Rocks & Gravel	Yes	263	4/29/2015
	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	262	4/29/2015
		-	**	-	Yes - Only Water	261	4/29/2015
	Yes - On Rocks/Refusal	ę	Yes	r.	Yes	260	4/28/2015
1	Yes - On Rocks/Refusal	•	Yes	-	Yes	259	4/28/2015



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NRC/Op-Tech QAQC Printed	Annote

4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015
322	321	320	319	318	317	316	315	314	313	312	311	310	309	308	307	306	305	304	303	302	301	300	299	298	297	296	295	294	293	292	291
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ŀ	Yes - Rocks & Gravel	no. Anto an anna an anna an anna anna anna an	Yes - Rocks & Gravel	þ	Yes - Rocks & Gravel			Yes - Rocks & Gravel	Yes - Boulders	Yes - Rocks & Gravel	5	Yes - Rocks & Gravel	Yes - Boulders	Yes - Rocks & Gravel	t	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Boulders	ł	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Few Rocks	ę	Yes - Rocks & Gravel
Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	r	Yes	Yes	Yes
Yes - Very Thin Layer on Clay	I	Yes - 1/8 Sediment	Ē	Yes - 1/8 Sediment	3	Yes - Layer on Clay	ţ		Yes - Very Thin Layer on Clay	F		i i i i i i i i i i i i i i i i i i i		Yes - Thin Layer On Clay	Yes - Thin Layer on Clay	ŀ	Yes - 1/4 Sediment	Yes - Layer of Sediment	Yes - Thin Layer on Clay		ž	Yes - Very Thin Layer on Clay	ş	1	Yes - 1/8 to 1/4 Sediment	Yes - Very Thin Layer on Clay	Ę	ł	F	ð	1
Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal
Debris	Stained Rocks & Gravel; Additional bucket dug at previous location.	ve	Additional bucket dug at previous location.			Debris									Debris	Additional bucket dug at previous location.		P			Debris		Debris, Stained Rocks & Grave	Stained Rocks & Gravel; Additional bucket dug at previous location.		Debris	Stained Rocks & Gravel			Debris	Stained Rocks & Gravel; Additional bucket dug at previous location.

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4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015
358	357	356	355	354	353	352	351	350	349	348	347	346	345	344	343	342	341	340	339	338	337	336	335	334	333	332	331	330	329	328	327	326	325	324	323
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes - Rocks & Gravel	Yes - Boulders	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Few Rocks	÷	Yes - Few Rocks	Yes - Boulders	Yes - Rocks & Gravel	Yes - Boulders	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	3	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Few Rocks	8	Yes - Boulders	Yes - Rocks & Gravel	Yes - Boulders	Yes - Rocks & Gravel		Yes - Rocks & Gravel	Yes - Rocks & Gravel	2	Yes - Boulders	3	ł		3			
Yes	Yes	Yes	Yes	Yes	E	Yes	Yes	Yes	ž	Yes	*	-	Yes		Yes	Yes	Yes	•	Yes	•	ł	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes - Thin Layer on Tooth	Yes - Layer on Clay on Tooth	Yes - Very Thin Layer on Clay			Yes - Thin Layer of Sediment	Yes - 1/4 Sediment	Yes - Thin Layer on Clay	5	j.		Yes - Very Thin Layer	Yes - Very Thin Layer	Yes - Thin Layer on Clay	ġ		Yes - Very Thin Layer on Clay	Yes - Thin Layer on Clay		-	-	3	Yes - Thin Layer on Clay	I		Yes - Very Thin layer	1	Yes - 1/8 Sediment	6	Yes - Very Thin Layer	Yes - Thin Layer on Clay	Yes - Thin Layer on Clay	Yes - Thin Layer on Clay	Yes - Very Thin Layer on Clay	Yes - Very Thin Layer on Clay	Yes - Very Thin Layer on Clay on Tooth
Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal
Stained Rocks & Gravel	1			1	Additional bucket dug at previous location.			Debris			Debris		1						r An and a second	Stained Rocks & Gravel	1			Stained Rocks & Gravel		Additional bucket dug at previous location.		Debris	Stained Rocks & Gravel			S			2



CH2M Hill QAQC Signed

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4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015	4/29/2015
390	389	388	387	386	385	384	383	382	381	380	379	378	377	376	375	374	373	372	371	370	369	368	367	366	365	364	363	362	361	360	359
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel		Yes - Rocks & Gravel	ł	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	1	÷		Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	ţ	Yes - Rocks & Gravel	Yes - Boulders	đ	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Few Rocks
	ţ	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		Ŧ	ł	na.	5	Yes	nc.	Yes	ţ	-	Yes
5		3			ž	Yes - 1/8 Sediment		1	Yes - 1/8 Sediment	3		1	Yes - 1/4 Sediment		t t	Σ.			Yes - Thin Layer of Sediment	Yes - Very Thin Layer on Clay	Yes - 1/3 Sediment	Yes - Thin Layer of Sediment	Yes - 1/4 Sediment	Yes - Very Thin Layer of Sediment	ř	2	Yes - 1/8 Sediment	Yes - Thin Layer on Clay	ı	Yes - Thin Layer of Sediment	Yes - 1/4 Sediment
Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal					
3	Stained Rocks & Gravel	Debris		-	Additional bucket dug at previous location.			Additional bucket dug at previous location.		Stained Rocks & Gravel	Stained Rocks & Gravel	Debris; Additional bucket dug at previous location.			Debris			Stained Rocks & Gravel	Debris	Additional bucket dug at previous location.	Ĭ	Additional bucket dug at previous location.			Stained Rocks & Gravel	Additional bucket dug at previous location.	re non de mandalance en provenant a márico que per provincio en el a provincio provincio en el a de arcente a m Non de mandalance en provincio a márico que per provincio en el a provincio en el a de arcente a márico de ante		Additional bucket dug at previous location.	Debris; Additional bucket dug at previous location.	





Jakes Arnho Kd NRC/OP-Tech OAOC Printed NRC/Op-Tech OAQC Signed V

CH2M Hill OAQC Plinted CH2M Hill OAQC Signed

4/25/2015 3	4/25/2015 3	4/25/2015 3:	4/25/2015 3	4/25/2015 34	4/25/2015 2	4/25/2015 2)	4/25/2015 2	4/25/2015 2/	4/25/2015 2	4/25/2015 2.	4/25/2015 2	4/25/2015 2	4/25/2015 2	4/25/2015 2	4/25/2015	4/25/2015 1	4/25/2015 I	4/25/2015	4/25/2015 1.	4/25/2015	4/25/2015 1.	4/25/2015 1.	4/25/2015 1	4/25/2015	4/25/2015 5	4/25/2015 &	4/25/2015 7	4/25/2015 6	4/25/2015 5	4/25/2015 4	4/25/2015 3	4/25/2015 2	4/25/2015 1	Date Buck			
4 Yes	2 Vac	2 Yes	1 Yes	0 Yes	9 · Yes	8 Yes	7 Yes	6 Yes	5 Yes - Only Water	4 Yes - Only Water	3 Yes - Only Water	2 Yes	I Yes	0 Yes	9 Yes	8 Yes	7 Yés	6 Yes	5 Yes	4 Yes	3 Yes	2 Yes	1 Yes	0 Yes) Yes	> Yes	r Yes	Yes	yes	Yes - Only Water	Yes - Only Water	2 Yes	Yes	H No. Bucket Filled Wit Water (Y/N)			
Yes - Rocks & Gravel	Ves - Rocks & Gravel	Yes - Boulders		Yes - Boulders	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel				Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel			Yes - Rocks & Gravel	Yes - Rocks & Gravel	h Rock/Cravel Observed (Y/N)	(Quantified Material Base		
Yes		Yes	Yes	Yes	Yes			Clay on Tooth					Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes								Yes		Clay Observed (Y/N)	d on Fraction of the I	Material	
Yes - 1/8 Sediment	Yes - Very Thin Layer on Rocks			Yes - Very thin layer on Clay on Tooth	Yes - Thin Layer on Clay		Yes - Very Thin Layer on Rocks								Yes - 1/2 Sediment	Yes - 1/8 to 1/4 Sediment		Yes - 1/4 Sediment	Yes - 1/4 to 1/2 Sediment		Yes - 1/2 Sediment	Yes - Layer of Sediment		Yes - Thin Layer on Clay								Yes - Very Thin Layer on Rocks		Sediment Observed (Y/N)	Dredge Bucket)		Area B
Yes - On Rocks/Refusal	Yes - On Rocke/Refitsal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal		Hard Scraping by Excavator (Y/N)			
	v mail (a circu v reducindo na investa interne una de concernencia de un de que de concience en que que concernence que que a concernence que que a concernence que que a concernence que que a concernence que que que que que que que que que qu			Additional bucket dug at previous location.		Additional bucket dug at previous location.			Impeded by a slab of concrete.	Impeded by a slab of concrete.	Impeded by a slab of concrete.	ина на полна на п		Additional bucket dug at previous location.	Debris; Additional bucket dug at previous location.			Additional bucket dug at previous location.		Additional bucket dug at previous location.	Additional bucket dug at previous location.	Debris	Debris	Debris: Additional bucket dug at previous location.			Debris							Additional Notes			

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	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	75	4/25/2015
Stained Rocks & Gravel	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	74	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Boulders	Yes	73	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	72	4/25/2015
	Yes - On Rocks/Refusal	Yes - 1/2 Sediment	Yes		Yes	71	4/25/2015
Debris	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	70	4/25/2015
	Yes - On Rocks/Refusal				Yes - Only Water	69	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal			Yes - Rocks & Gravel	Yes	68	4/25/2015
	Yes - On Rocks/Refusal	Yes - 1/8 Sediment	Yes		Yes	67	4/25/2015
	Yes - On Rocks/Refusal	Yes - Thin Layer of Sediment on Clay	Yes		Yes	66	4/25/2015
	Yes - On Rocks/Refusal	Yes - Thin Layer of Sediment on Clay	Yes		Yes	65	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Boulders	Yes	64	4/25/2015
	Yes - On Rocks/Refusal			Yes - Rocks & Gravel	Yes	63	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	62	4/25/2015
	Yes - On Rocks/Refusal			Yes - Gravel	Yes	61	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	60	4/25/2015
	Yes - On Rocks/Refusal			Yes - Rocks & Gravel	Yes	59	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal			Yes - Rocks & Gravel	Yes	58	4/25/2015
	Yes - On Rocks/Refusal	Yes - Thin Layer of Sediment	Yes	Yes - Rocks & Gravel	Yes	57	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Gravel	Yes	56	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Rocks	Yes	Yes - Gravel	Yes	55	4/25/2015
Debris	Yes - On Rocks/Refusal	Yes - 1/8 Sediment	Yes	Yes - Gravel	Yes	54	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Gravel	Yes	53	4/25/2015
	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay	Yes	Yes - Rocks & Gravel	Yes	52	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	51	4/25/2015
	Yes - On Rocks/Refusal	Yes - 1/4 to 1/2 Sediment	Yes	Yes - Boulders	Yes	50	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Gravel	Yes	49	4/25/2015
	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay	Yes		Yes	48	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Gravel	Yes	47	4/25/2015
	Yes - On Rocks/Refusal		Yes		Yes	46	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal		Yes	Yes - Gravel	Yes	45	4/25/2015
	Yes - On Rocks/Refusal	Yes - 1/4 to 1/2 Sediment	Yes		Yes	44	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Boulders	Yes	43	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	Yes - Very Thin Layer	Yes	Yes - Rocks & Gravel	Yes	42	4/25/2015
	Yes - On Rocks/Refusal	Yes - Thin Layer of Sediment	Yes	Yes - Boulders	Yes	41	4/25/2015
	Yes - On Rocks/Refusal	Yes - Very Thin Layer	Yes	Yes - Boulders	Yes	40	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	39	4/25/2015
Debris	Yes - On Rocks/Refusal	Yes - Thin Layer of Sediment	Yes	Yes - Rocks & Gravel	Yes	38	4/25/2015
	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay	Yes	Yes - Rocks & Gravel	Yes	37	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	36	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay	Yes	Yes - Rocks & Gravel	Yes	35	4/25/2015



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Addition	Yes - On Rocks/Refusal	Yes - 1/4 Sediment		Yes - Gravel	Yes	109	4/27/2015
Rocks/Refusal	Yes - On	Yes - 1/4 Sediment			Yes	108	4/27/2015
On Rocks/Refusal	Yes -			Yes - Gravel	Yes	107	4/27/2015
 On Rocks/Refusal 	Yes			Yes - Gravel	Yes	106	4/27/2015
- On Rocks/Refusal	Yes	Yes - 1/8 Sediment	Yes		Yes	105	4/27/2015
s - On Rocks/Refusal	Ye			Yes - Few Rocks	Yes	104	4/27/2015
es - On Rocks/Refusal	Y	Yes - 1/8 Sediment	Yes	Yes - Rocks & Gravel	Yes	103	4/27/2015
es - On Rocks/Refusal	Y	Yes - 1/4 Sediment	Yes		Yes	102	4/27/2015
es - On Rocks/Refusal	Y		Yes	Yes - Gravel	Yes	101	4/27/2015
'es - On Rocks/Refusal	Υ		Yes		Yes	100	4/27/2015
es - On Rocks/Refusal		Yes - Thin Layer on Clay	Yes		Yes	99	4/27/2015
(es - On Rocks/Refusal		Yes - Layer of Sediment	Yes		Yes	86	4/27/2015
Yes - On Rocks/Refusal		Yes - Thin Layer on Rocks	Yes	Yes - Gravel	Yes	70	4/27/2015
Yes - On Rocks/Refusal		Yes - Very Thin Layer on Rocks		Yes - Rocks & Gravel	Yes	96	4/27/2015
Yes - On Rocks/Refusal		Yes - Very Thin Layer on Clay	Yes	Yes - Gravel	Yes	56	4/27/2015
Yes - On Rocks/Refusal			Yes	Yes - Rocks & Gravel	Yes	94	4/27/2015
Yes - On Rocks/Refusal				Yes - Gravel	Yes	56	4/27/2015
Yes - On Rocks/Refusal		Yes - Layer of Sediment on Clay	Yes		Yes	92	4/27/2015
Yes - On Rocks/Refusal		Yes - 1/8 Sediment	Yes	Yes - Rocks & Gravel	Yes	16	4/27/2015
Yes - On Rocks/Refusal		Yes - 1/4 Sediment	Yes		Yes	90	4/27/2015
Yes - On Rocks/Refusal		Yes - 1/4 Sediment	Yes		Yes	68	4/27/2015
Yes - On Rocks/Refusal		Yes - 1/4 to 1/2 Sediment	Yes	Yes - Rocks & Gravel	Yes	88	4/27/2015
Yes - On Rocks/Refusal		Yes - 1/2 to 3/4 Sediment		Yes - Rocks & Gravel	Yes	87	4/27/2015
Yes - On Rocks/Refusal		Yes - 1/8 to 1/4 Sediment		Yes - Boulders	Yes	98	4/27/2015
Yes - On Rocks/Refusal		Yes - 1/8 to 1/4 Sediment		Yes - Boulders	Yes	58	4/27/2015
Yes - On Rocks/Refusal				Yes - Rocks & Gravel	Yes	80 44	4/27/2015
Yes - On Rocks/Refusal		Yes - Very Thin Layer on Rocks		Yes - Rocks & Gravel	Yes	83	4/27/2015
Yes - On Rocks/Refusal		Yes - 1/2 to 3/4 Sediment		Yes - Boulders	Yes	82	4/25/2015
Yes - On Rocks/Refusal				Yes - Boulders	Yes	18	4/25/2015
Yes - On Rocks/Refusal		Yes - Layer of Sediment		Yes - Boulders	Yes	08	4/25/2015
Yes - On Rocks/Refusal				Yes - Few Rocks	Yes	79	4/25/2015
Yes - On Rocks/Refusal			Yes	Yes - Rocks & Gravel	Yes	78	4/25/2015
Yes - On Rocks/Refusal		Yes - 1/4 to 1/2 Sediment	Yes		Yes	77	4/25/2015
res - On Rocks/Refusal			Yes	Yes - Rocks & Gravel	Yes	76	4/25/2015



Additional bucket dug at previous location.	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Rocks		Yes - Rocks & Gravel	Yes	611	4/27/2015
	Yes - On Rocks/Refusal	Yes - 1/8 Sediment	Yes	Yes - Rocks & Gravel	Yes	118	4/27/2015
Debris	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Rocks	Yes	Yes - Rocks & Gravel	Yes	117	4/27/2015
Debris, Large Concrete Blocks	Yes - On Rocks/Refusal			Yes - Rocks & Gravel	Yes	116	4/27/2015
	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	511	4/27/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal			Yes - Rocks & Gravel	Yes	114	4/27/2015
Debris; Additional bucket dug at previous location.	Yes - On Rocks/Refusal	Yes - 1/4 Sediment		Yes - Rocks & Gravel	Yes	113	4/27/2015
Stained Rocks & Gravel	Yes - On Rocks/Refusal			Yes - Rocks & Gravel	Yes	112	4/27/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	Yes - 1/4 Sediment		Yes - Rocks & Gravel	Yes	111	4/27/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	Yes - 1/4 Sediment		Yes - Rocks & Gravel	Yes	110	4/27/2015

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			(Ouantified Material B	Material ased on Fraction of 1	he Dredge Bucket)	
Date	Bucket No.	W	Buildened Discoursed	Mar Manual	C	Hard Scraping by Excavator (
		Bucket Filled With Water (Y/N)	Kock/Gravel Observed (Y/N)	Clay Observed (Y/N)	Sediment Observed (Y/N)	
4/23/2015	1	Yes	Yes - Few Rocks	÷		
4/23/2015	2	Yes	Yes - Few Rocks	-	r	8
4/23/2015	3	Yes	Yes - Few Rocks	Yes - On Tooth		Yes - On Rocks/Refus
4/23/2015	4	Yes	Yes - Rocks & Gravel	-		Yes - On Rocks/Refus
4/23/2015	5	Yes	Yes - Rocks & Gravel	-	r	Yes - On Rocks/Refus
4/23/2015	9	Yes	Yes - Few Rocks	Yes	Yes - Thin Layer	4
4/23/2015	7	Yes	Yes - Rocks & Gravel	Yes	ł	Yes - On Rocks/Refus
4/23/2015	8	Yes	2		Yes - 1/3 to 1/2 Sediment	
4/23/2015	9	Yes	Yes - Rocks & Gravel	Yes		Yes - On Rocks/Refusal
4/23/2015	10	Yes	Yes - Rocks & Gravel	÷	e	Yes - On Rocks/Refusal
4/23/2015	11	Yes	Yes - Rocks & Gravel	,		Yes - On Rocks/Refusa
4/23/2015	12	Yes	Yes - Rocks & Gravel	ł		Yes - On Rocks/Refusa
4/23/2015	13	Yes	Yes - Few Rocks	-	Yes - Thin Layer on Rocks	8
4/23/2015	-4	Yes	Yes - Few Rocks	,	Yes - Very Thin Layer on Rocks	Yes - On Rocks/Refusa
4/23/2015	51	Yes	Yes - Few Rocks	Yes	Yes - Very Thin Layer on Rocks	ž
4/23/2015	91	Yes		,	Yes - 1/4 Sediment	Yes - On Rocks/Refusa
4/23/2015	17	Yes	Yes - Rocks & Gravel	3	¢	Yes - On Rocks/Refusa
4/23/2015	18	Yes	P		Yes - 1/4 Sediment	Yes - On Rocks/Refusa
4/23/2015	19	Yes	Yes - Rocks & Gravel	1		E
4/23/2015	20	Yes	*	ř	Yes - 1/8 Sediment	Yes - On Rocks/Refusa
4/23/2015	21	Yes	Yes - Rocks & Gravel	1	•	
4/23/2015	22	Yes	Yes - Rocks & Gravel	s	Yes - Thin Layer	Yes - On Rocks/Refusa
4/23/2015	23	Yes	Yes - Few Rocks	r	a	Yes - On Rocks/Refusa
4/23/2015	24	Yes	Yes - Rocks & Gravel	ŕ	Yes - Very Thin Layer on Rocks	Yes - On Rocks/Refusa
4/23/2015	25	Yes	Yes - Rocks & Gravel	Yes	Yes - Thin Layer	Yes - On Rocks/Refuse
4/23/2015	26	Yes	Yes - 1/3 Rocks	Yes - 1/3 Clay	Yes - 1/3 Sediment	Yes - On Rocks/Refusa
4/23/2015	27	Yes	Yes - Rocks & Gravel	Yes	ı	Yes - On Rocks/Refusa
4/23/2015	28	Yes	Yes - Rocks & Gravel	Yes		19
4/23/2015	29	Yes	Yes - Rocks & Gravel	i		1



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4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015
64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes - Only Water	Yes	Yes	Yes - Only Water	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel		Yes - Boulders	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Few Rocks	*	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Few Rocks		*	Yes - Few Rocks	Yes - Rocks & Gravel	3	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	5	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Few Rocks	Yes - Rocks & Gravel	ŀ	Yes - Rocks & Gravel
E	£	Yes	Yes	Yes	Yes		T	ĩ	1	1	Yes	1	1	1	1	ş		Yes	\$	Yes	i	2	3	ę	ī	Yes	Yes	Yes - 1/2 Clay		-	ł	1	ŷ	,
	Yes - Thin Layer on Rocks						į	Yes - Layer of Sediment	service and the service of the servi			je Na stalo na slovenski na slovensko na vrstva stalo vrstva stalo na slovenska slov	¢.	Yes - Thin Layer on Rocks			Yes - Very Thin Layer on Rocks						Yes - Very Thin Layer on Rocks	Yes - Very Thin Layer on Rocks	Yes - 1/8 Sediment		β	Yes - 1/2 Sediment	Yes - Thin Layer on Rocks			ė.	Yes - 1/8 Sediment	
Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	÷	Yes - On Rocks/Refusal		Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	÷	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal		Yes - On Rocks/Refusal		Yes - On Rocks/Refusal		Yes - On Rocks/Refusal	Yes - On Rocks/Refusal		Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	to a second and a second and a second and a second and a second a second a second a second a second a second a		Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	
Additional bucket dug at previous location.	5					Debris	Additional bucket dug at previous location.						Additional bucket dug at previous location.			Additional bucket dug at previous location.	ter and the second and th	The second s						Additional bucket dug at previous location.	1400 August 2014 2014 2014 2014 2014 2014 2014 2014		Additional bucket dug at previous location.	Bucket 3/4 full of material.	Debris		5	Additional bucket dug at previous location.	Debris	



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4/24/2015 65 69 89 67 66 66 86 97 96 95 94 92 16 00 68 88 87 98 82 84 83 82 $\frac{\infty}{2}$ 08 79 78 77 $\frac{76}{6}$ 25 74 7372 71 70 Yes - Rocks & Gravel Yes - Few Rocks Yes - Boulders Yes - On Tooth Yes - On Tooth Yes - On Tooth Yes ı , Yes - Very Thin Layer on Rocks Yes - Very Thin Layer on Clay Yes - Very Thin Layer on Clay Yes - Very Thin Layer on Clay Yes - Thin Layer on Rocks Yes - 1/8 to 1/4 Sediment Yes - 1/4 to 1/3 Sediment Yes - 1/8 to 1/4 Sediment Yes - Layer of Sediment Yes - 1/4 Sediment , ÷ . ę Yes - On Rocks/Refusal Additional bucket dug at previous location. previous location. previous location. previous location. previous location. previous location.



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Additional bucket dug at previous location.	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	135	4/24/2015
	Yes - On Rocks/Refusal	Yes - Thin Layer on Clay	Yes	Yes - Rocks & Gravel	Yes	134	4/24/2015
	Yes - On Rocks/Refusal		ł	Yes - Rocks & Gravel	Yes	133	4/24/2015
	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	132	4/24/2015
	Yes - On Rocks/Refusal		5	Yes - Rocks & Gravel	Yes	131	4/24/2015
	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Rocks	ŕ	Yes - Rocks & Gravel	Yes	130	4/24/2015
	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Rocks	£	Yes - Rocks & Gravel	Yes	129	4/24/2015
Sheen Observed	Yes - On Rocks/Refusal		ł	Yes - Rocks & Gravel	Yes	128	4/24/2015
	Yes - On Rocks/Refusal		,	Yes - Few Rocks	Yes	127	4/24/2015
÷	Yes - On Rocks/Refusal		Ŧ	Yes - Few Rocks	Yes	126	4/24/2015
-	Yes - On Rocks/Refusal	Yes - Thin Layer on Clay	Yes	-	Yes	125	4/24/2015
r	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	124	4/24/2015
	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	123	4/24/2015
	Yes - On Rocks/Refusal		,	Yes - Rocks & Gravel	Yes	122	4/24/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	121	4/24/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	Yes - Layer of Sediment	Yes	i	Yes	120	4/24/2015
ţ	Yes - On Rocks/Refusal	Yes - Layer of Sediment	Yes	ŧ	Yes	119	4/24/2015
	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	811	4/24/2015
	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	117	4/24/2015
1	Yes - On Rocks/Refusal		4	÷	Yes - Only Water	116	4/24/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	*	Yes	Yes - Rocks & Gravel	Yes	115	4/24/2015
	Yes - On Rocks/Refusal	Yes - 1/3 Sediment	Yes - 1/3 Clay	Yes - 1/3 Boulders	Yes	114	4/24/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	e -	Yes	Yes - Rocks & Gravel	Yes	113	4/24/2015
þ	Yes - On Rocks/Refusal	Yes - Thin Layer on Rocks	*	Yes - Rocks & Gravel	Yes	112	4/24/2015
	Yes - On Rocks/Refusal		ł	Yes - Few Rocks	Yes	111	4/24/2015
т.	Yes - On Rocks/Refusal		Yes	Yes - Boulders	Yes	110	4/24/2015
ţ	Yes - On Rocks/Refusal		Yes	Yes - Boulders	Yes	109	4/24/2015
	Yes - On Rocks/Refusal		ŀ	Yes - Boulders	Yes	108	4/24/2015
ſ	Yes - On Rocks/Refusal	ŧ	k	ę	Yes - Only Water	107	4/24/2015
	Yes - On Rocks/Refusal		r	Yes - Few Rocks	Yes	106	4/24/2015
ŀ	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	105	4/24/2015
Debris	Yes - On Rocks/Refusal		Yes	Yes - Boulders	Yes	104	4/24/2015
ŀ	Yes - On Rocks/Refusal	4	ł	*	Yes - Only Water	103	4/24/2015
÷	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	102	4/24/2015
	Yes - On Rocks/Refusal	P	Yes	Yes - Rocks & Gravel	Yes	101	4/24/2015
анализияние и на	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	100	4/24/2015

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4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2015	4/24/2010
170	169	168	167	166	165	164	163	162	161	160	159	158	157	156	155	154	153	152	151	150	149	148	147	146	145	144	143	142	141	140	139	138	137	UC L
Yes	Yes	Yes	Yes - Only Water	Yes	Yes	Yes	Yes	Yes	Yes	Yes - Only Water	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	4 4.3
Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Boulders		Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	÷	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Few Rocks	÷	Yes - Few Rocks	5	Yes - Few Rocks	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Few Rocks	Yes - Few Rocks							
Yes	Yes	Yes	٠	ż	Yes	Yes	Yes	F	ž	×	Yes	÷	ä	,	ż	÷	Yes	Yes	×	Yes	ŧ	÷	ţ	Yes	ŕ	Yes	÷	•	Yes	ł	ŕ	÷	4	
Yes - 1/4 Sediment	Ŧ	1		ż	1	ĩ	1	\$	Yes - Very Thin Layer on Rocks	5	-	Ŧ	Ŧ		Yes - Very Thin Layer on Rocks	ţ	Yes - Very Thin Layer on Clay	7	t		Ę	ŀ	÷	Yes - Thin Layer on Clay	f	Yes - Very Thin Layer on Clay	7	7	F	Yes - 1/8 Sediment	Yes - Very Thin Layer on Rocks	-	Ŧ	
Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal										
÷	Stained Rocks & Gravel	Stained Rocks & Gravel		Ĩ			t t	Stained Rocks & Gravel	j.		Debris		2	L L														*	Additional bucket dug at previous location.		All was a supervised on the second	Debris		

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undra un preción de la menociona de la menocione de Menocione de la menocione de l	Yes - On Rocks/Refusal	T	1	Yes - Few Rocks	Yes	206	4/25/2015
	Yes - On Rocks/Refusal	та на селото се поста се пост	Yes	Yes - Rocks & Gravel	Yes	205	4/25/2015
	Yes - On Rocks/Refusal	t	Yes	Yes - Rocks & Gravel	Yes	204	4/25/2015
	Yes - On Rocks/Refusal		3	Yes - Few Rocks	Yes	203	4/25/2015
	Yes - On Rocks/Refusal		1	Yes - Few Rocks	Yes	202	4/25/2015
Debris	Yes - On Rocks/Refusal		\$	Yes - Boulders	Yes	201	4/25/2015
Debris	Yes - On Rocks/Refusal		Yes	Yes - Few Rocks	Yes	200	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	661	4/25/2015
	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay	Yes	Yes - Rocks & Gravel	Yes	861	4/25/2015
On Rock Ridge	Yes - On Rocks/Refusal	ŧ	*		Yes - Only Water	197	4/25/2015
On Rock Ridge	Yes - On Rocks/Refusal	-	~		Yes - Only Water	196	4/25/2015
On Rock Ridge	Yes - On Rocks/Refusal	¢	ł	ž	Yes - Only Water	195	4/25/2015
On Rock Ridge	Yes - On Rocks/Refusal	÷	ſ	ŧ	Yes - Only Water	194	4/25/2015
On Rock Ridge	Yes - On Rocks/Refusal	ŝ	z	2	Yes - Only Water	193	4/25/2015
Stained Rocks & Gravel	Yes - On Rocks/Refusal		ž	Yes - Rocks & Gravel	Yes	192	4/25/2015
i i	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Rocks	ł	Yes - Rocks & Gravel	Yes	191	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	T	Yes	Yes - Rocks & Gravel	Yes	190	4/25/2015
5	Yes - On Rocks/Refusal	Yes - 1/8 Sediment	1	Yes - Rocks & Gravel	Yes	189	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	e e e e e e e e e e e e e e e e e e e	Yes	Yes - Rocks & Gravel	Yes	188	4/25/2015
t the second	Yes - On Rocks/Refusal	Yes - Layer of Sediment	Yes	ŝ	Yes	187	4/25/2015
1	Yes - On Rocks/Refusal		k	Yes - Few Rocks	Yes	186	4/25/2015
	Yes - On Rocks/Refusal		1	÷	Yes - Only Water	185	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	í	Yes	Yes - Rocks & Gravel	Yes	184	4/25/2015
С	Yes - On Rocks/Refusal	Yes - 1/8 Sediment	Yes	-	Yes	183	4/25/2015
2	Yes - On Rocks/Refusal		4	Yes - Few Rocks	Yes	182	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	5	r	Yes - Few Rocks	Yes	181	4/25/2015
	Yes - On Rocks/Refusal		ł	Yes - Few Rocks	Yes	180	4/25/2015
	Yes - On Rocks/Refusal	(ī	-	Yes - Only Water	179	4/25/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	ĩ	Yes	Yes - Rocks & Gravel	Yes	178	4/24/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	Yes - 1/8 to 1/4 Sediment	Yes		Yes	177	4/24/2015
Debris	Yes - On Rocks/Refusal	Yes - 1/8 Sediment	Yes	ſ	Yes	176	4/24/2015
Stained Rocks & Gravel	Yes - On Rocks/Refusal		Yes	Yes - Few Rocks	Yes	175	4/24/2015
	Yes - On Rocks/Refusal	-	*	Yes - Few Rocks	Yes	174	4/24/2015
	Yes - On Rocks/Refusal		1	Yes - Rocks & Gravel	Yes	173	4/24/2015
2	Yes - On Rocks/Refusal	e	k	Yes - Few Rocks	Yes	172	4/24/2015
Additional bucket dug at previous location.	Yes - On Rocks/Refusal	· · · · · · · · · · · · · · · · · · ·	Yes	Yes - Rocks & Gravel	Yes	171	4/24/2015





r	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Clay	Yes	Yes - Rocks & Gravel	Yes	222	4/25/2015
	Yes - On Rocks/Refusal	Yes - Very Thin Layer on Rocks	Yes	Yes - Rocks & Gravel	Yes	221	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	220	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Boulders	Yes	219	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Boulders	Yes	218	4/25/2015
Debris	Yes - On Rocks/Refusal	÷	Yes	Yes - Rocks & Gravel	Yes	217	4/25/2015
Debris	Yes - On Rocks/Refusal		Yes	Yes - Boulders	Yes	216	4/25/2015
	Yes - On Rocks/Refusal	9	1	Yes - Boulders	Yes	215	4/25/2015
Debris; Additional bucket dug a previous location.	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	214	4/25/2015
	Yes - On Rocks/Refusal	Yes - Layer of Sediment	Yes	3	Yes	213	4/25/2015
ź	Yes - On Rocks/Refusal	5	Yes	Yes - Rocks & Gravel	Yes	212	4/25/2015
Debris	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	211	4/25/2015
	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	210	4/25/2015
Stained Rocks & Gravel	Yes - On Rocks/Refusal		Yes	Yes - Rocks & Gravel	Yes	209	4/25/2015
Stained Rocks & Gravel; Additional bucket dug at previous location.	Yes - On Rocks/Refusal	ŗ	1	Yes - Rocks & Gravel	Yes	208	4/25/2015
	Yes - On Rocks/Refusal	Yes - Thin Layer on Clay	Yes - On Tooth	Yes - Rocks & Gravel	Yes	207	4/25/2015

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			Noi	th Shore Dre Ar	dging Observations		
				Material			
Data	Bushet Nie		(Quantified Material Base	1 on Fraction of the Dree	lge Bucket)	Hard Secondar by Excavator (V/N)	A shittened Ninton
Date	DUCKET (NB)	Bucket Filled With Water (Y/N)	Rock/Gravel Observed (Y/N)	Clay Observed (Y/N)	Sediment Observed (Y/N)	וזמות סכו מסוונץ טין בארמימוסו (דעוי)	AGUILIUIS21 INOGCS
4/23/2015		Yes	Yes - Rocks & Gravel	r	Yes - Very Thin Layer on Rocks	Yes - On Rocks/Refusal	2
4/23/2015	2	Yes	Yes - Very Few		S.	Yes - On Rocks/Refusal	-
4/23/2015	3	Yes	Yes - Rocks & Gravel	Yes - On Tooth	Yes - Very Thin Layer on Clay		
4/23/2015	4	Yes	Yes - Rocks & Gravel	Yes - On Tooth	Yes - Very Thin Layer on Clay	r	Additional bucket dug at
4/23/2015	s	Yes	Yes - Rocks & Gravel	Yes - On Tooth	Yes - Very Thin Layer on Clay		er en
4/23/2015	6	Yes	Yes - Rocks & Gravel	s	Yes - 1/8 to 1/4 Sediment	Yes - On Rocks/Refusal	
4/23/2015	7	Yes	Yes - Rocks & Gravel	ŧ			
4/23/2015	8	Yes	Yes - Rocks & Gravel	Yes	Yes - Very Thin Layer on Clay	Yes - On Rocks/Refusal	-
4/23/2015	9	Yes	Yes - Rocks & Gravel	r	Yes - Very Thin Layer of Sediment on Rocks	Yes - On Rocks/Refusal	r
4/23/2015	10	Yes	Yes - Few Rocks	Yes	Yes - Very Thin Layer on Clay		-
4/23/2015	40000 40000 40000	Yes	8	Yes	Yes - Very Thin Layer on Clay	z	Additional bucket dug at mevious location
4/23/2015	12	Yes	Yes - Rocks & Gravel	r	т	Yes - On Rocks/Refusal	5
4/23/2015	13	Yes	Yes - Rocks & Gravel	Yes	Yes - Very Thin Layer on Clay		
4/23/2015	4	Yes - Only Water	k	ı	,	Yes - On Rocks/Refusal	Additional bucket dug at
4/23/2015	15	Yes	Yes - Rocks & Gravel	Yes - On Tooth	5	Yes - On Rocks/Refusal	
4/23/2015	16	Yes	Yes - Rocks & Gravel	+		10 meteorem (1) met	
4/23/2015	17	Yes	Yes - Rocks & Gravel	\$			
4/23/2015	18	Yes	Yes - Rocks & Gravel	Yes	Yes - Layer on Rocks & Clay	Yes - On Rocks/Refusal	na kulo
4/23/2015	19	Yes	Yes - 1/3 Rocks	Yes - 1/3 Clay	1/3 of material sediment	Yes - On Rocks/Refusal	Additional bucket dug at previous location
4/23/2015	20	Yes	Yes - Rocks & Gravel	Yes		Yes - On Rocks/Refusal	Additional bucket dug at previous location
4/23/2015	21	Yes	Yes - Rocks & Gravel	-	Yes - Layer on Rocks		
4/23/2015	22	Yes	Yes - Rocks & Gravel	ş	,	ŝ	Additional bucket dug at previous location
4/23/2015	23	Yes	Yes - Rocks & Gravel	-	Yes - Thin Layer on Rocks	Yes - On Rocks/Refusal	÷
4/23/2015	24	Yes	Yes - Few Rocks	r			C
4/23/2015	25	Yes - Only Water		1		Yes - On Rocks/Refusal	na o versione de la constante de la const
4/23/2015	26	Yes - Only Water	and the second se	1			2017 CONTRACTOR OF THE OWNER OF THE OWNER OF THE OWNER OWN
4/23/2015	27	Yes - Only Water	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1			-
4/23/2015	28	Yes - Only Water		*		Yes - On Rocks/Refusal	
4/23/2015	29	Yes	Yes - Few Rocks	-	• • • • • • • • • • • • • • • • • • •		5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 -
4/23/2015	30	Yes	Yes - Rocks & Gravel	Yes - On Tooth	Yes - Thin Layer on Clay	Yes - On Rocks/Refusal	
4/23/2015	31	Yes	Yes - Rocks & Gravel	Yes	b	Yes - On Rocks/Refusal	Additional bucket dug at previous location
4/23/2015	32	Yes	Yes - Rocks & Gravel	Yes			
4/23/2015	نیا نیا	Yes	Yes - 1/3 Rocks	Yes - 1/3 Clay	Yes - 1/3 Sediment	Yes - On Rocks/Refusal	1/4 - 1/3 bucket filled with material
4/23/2015	34	Yes	Yes - Rocks & Gravel	Yes	ł	Yes - On Rocks/Refusal	Additional bucket dug at
				1			1 1010 ADDA STORAGE



4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015	4/23/2015
50	49	48	47	46	45	4	43	42	41	\$	39	38	37	36	35
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes - Few Rocks	Yes - Few Rocks	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel	Yes - Rocks & Gravel
r	F	£	3	ŝ		Yes		ę		*	Yes - On Tooth	Yes		I	í
a 			Yes - Very Thin Layer on Rocks	Yes - Thin Layer on Rocks	Yes - Thin Layer on Rocks			Yes - 1/4 Sediment	Yes - 1/4 to 1/3 Sediment		Yes - Thin Layer on Clay				
5	-		Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal		service of the servic	Yes - On Rocks/Refusal	Yes - On Rocks/Refusal	να	Yes - On Rocks/Refusal				
\$	5	400-400 VIII COMPANY AND COMPANY A	Additional bucket dug at previous location	Additional bucket dug at previous location	store water and the state of th			Additional bucket dug at previous location							The second s

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ž	r	r	ŧ	Ł	Yes - Only Water	۲	4/23/2015
Debris	2	Yes - Thin Layer on Clay	Yes	Yes - Rocks & Gravel	Yes	6	4/23/2015
ŀ	Yes - On Rocks/Refusal	I	Yes - On Tooth	I	Yes	5	4/23/2015
ł	1	£	Yes	Yes - Rocks & Gravel	Yes	4	4/23/2015
ş	Yes - On Rocks/Refusal	1	Yes	Yes - Rocks & Gravel	Yes	ى ت	4/23/2015
ę	ł	ş	3	2	Yes - Only Water	2	4/23/2015
ş	Yes - On Rocks/Refusal	Ţ	Yes - On Tooth	J	Yes	in the second seco	4/23/2015
	EXCAVATOL (17/N)	Sediment Observed (Y/N)	Clay Observed (Y/N)	Rock/Gravel Observed (Y/N)	Bucket Filled With Water (Y/N)		
Additional Notes	Hard Scraping by	ge Bucket)	action of the Dred	ied Material Based on Fr	(Quantil	Bucket No.	Date
			2	Materi		<u></u>	
			Area E				
		Observations	Dredging (North Shore I			