

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Edison 777 New Durham Road Edison, NJ 08817 Tel: (732)549-3900

TestAmerica Job ID: 460-149789-1 Client Project/Site: Rock Hill

For:

Hanson Aggregates PA LLC 7660 Imperial Way Allentown, Pennsylvania 18195

Attn: Andrew Gutshall

Japine Mappe

Authorized for release by: 2/15/2018 8:33:18 AM Sapna Nayyar, Project Manager I sapna.nayyar@testamericainc.com

Designee for Jill Miller, Project Manager II (732)549-3900 jill.miller@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Qualifiers

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 460-149789-1

Laboratory: TestAmerica Edison

Narrative

Job Narrative 460-149789-1

Case Narrative

Comments

No additional comments.

Receipt

The sample was received on 2/7/2018 1:39 PM; the sample arrived in good condition, properly preserved and, where required, on ice.

General Chemistry

Method(s) SM 2540D: Insufficient sample volume was provided to produce results within the specifications of SM 2540D which requires at least 2.5 mg dried residue with a sample volume not to exceed 1L. A sample volume less than 1L, that yielded less than 2.5 mg dried residue, was provided for the following sample: NPDES001 (460-149789-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Lab Sample ID: 460-149789-1

Matrix: Water

Client Sample ID: NPDES001

Date	Conected:	02/00/10	07:55
Date	Received:	02/07/18	13:39

General Chemistry Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.2		2.0	mg/L			02/12/18 10:51	1
Settleable Solids	ND		0.50	mL/L			02/08/18 02:18	1
рН	7.7	HF		SU			02/14/18 14:23	1

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Lab Sample ID: 460-149789-1

Matrix: Water

Client Sample ID: NPDES001

Date Collected: 02/06/18 07:55 Date Received: 02/07/18 13:39

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D			496544	02/12/18 10:51	LRW	TAL EDI
Total/NA	Analysis	SM 2540F		1	495756	02/08/18 02:18	KYN	TAL EDI
Total/NA	Analysis	SM 4500 H+ B		1	497244	02/14/18 14:23	YAH	TAL EDI

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Client: Hanson Aggregates PA LLC Project/Site: Rock Hill TestAmerica Job ID: 460-149789-1

Laboratory: TestAmerica Edison

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Connecticut	State Program	1	PH-0200	09-30-18
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	N/A	12-31-18
New Jersey	NELAP	2	12028	06-30-18
New York	NELAP	2	11452	04-01-18
Pennsylvania	NELAP	3	68-00522	02-28-18
Rhode Island	State Program	1	LAO00132	12-30-18
USDA	Federal		NJCA-003-08	06-13-20

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Client: Hanson Aggregates PA LLC Project/Site: Rock Hill

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Method	Method Description	Protocol	Laboratory
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL EDI
SM 2540F	Solids, Settleable	SM	TAL EDI
SM 4500 H+ B	pH	SM	TAL EDI

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater",

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

TestAmerica Job ID: 460-149789-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-149789-1	NPDES001	Water	02/06/18 07:55	02/07/18 13:39

TectAmerica							777 Edi	777 New Durham Road Edison, New Jersey 088 Phone: (732) 549-3900	777 New Durham Road Edison, New Jersey 08817 Phone: (732) 549-3900 Fax: (732) 549-3679	629
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Name for report and invoice) ANDZEW (SUTSHALL		Samplers Name (Printed)	ime (Printe	(pe		Site/Project Identification	ification ROCK	Hruc	DUMREY	
Company		P. O. #				State (Location of site):	f site): NJ:	∐. YN	Other: JA	
Address		Analysis Turnar	ound Time		ANALYSIS REQU	ANALYSIS REQUESTED (ENTER 'X: BELOW TO INDICATE REQUEST)	D INDICATE REQUEST)			Τ.
Theus Imperatu WAY		Standard							Project No:	
City LIENTOWN PA 18055	ss	Rush Charges Authorized For: 2 Week	uthorized For:		ana. Bue				:ON GOL	
Phone Colo - 3Lolo - 4819		1 Week		HC	1/105 1371 55		-		hatphi	त
Sample Identification	Date	Time Ma	No. of. Matrix Cont.	<u>f</u>	135 				Sample Numbers	
NPDES 001	21012	0755 1	H M	X	XX					
										1
							460-146	460-149789 Chain of Custody	sustody	TT
Preservation Used: $1 = ICE$, $2 = HCI$, $3 = H_2S$	1 = 1 3 = H ₂ SO ₄ , 4 = HNO ₃ ,	, 5 = NaOH	- N	Soil:						Т
6 = Other, 7 =	= Other		Water:	er:						
Special Instruction							Wat	Water Metals Filtered (Yes/No)?	ired (Yes/No)?	
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Reinodished by Company 4)	aany		Date / Time	me	Received by			Company		
Laboratory Certifications: New Jersey (12028), New York (11452),	2028), New	York (11452		Pennsylvania (68-522),		Connecticut (PH-0200),		Rhode Island (132)	32). TAL - 0016 (0715)	715)
Massachusetts (M-NJ312), North Carolina (No. 578)	a (No. 578)									

2/15/2018

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Page			Other														5
			Total Phos	(pH<2)											adjusted. sis.		
			Total Cyanide	(pH>12)											h were pH r to analys		8
			TOC	(pH<2)											iples which hours pric		9 1(
		Cooler#7 Cooler#8 Cooler#8 Cooler#9	TKN	(pH<2)											ut the san at least 24	H-	1
Do.		0000 1	Sulfide	(6 <hq)< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>". ""</td><td>Expiration Date:</td><td>The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted. Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.</td><td>als: JG Date: 27</td><td></td></hq)<>									". ""	Expiration Date:	The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted. Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.	als: JG Date: 27	
TestAmerica Edison Receipt Temperature and pH Log	t. tures		Phenols	(pH<2)							 		Volume of Preservative used (ml):	Expirat	ould be n e must be	Date:	
TestAmerica Edison of Temperature and p	Coolerniemperatu	Cooler#6	EPH or QAM	(pH<2)					-		elow:		me of Pre		lanager sh complianc		
FestAme t Tempe			Pest	(pH 5-9)							the information below:		Volu		artment M are out of		
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	IR Gun#		* Metals	(pH<2)							red record				ct Manage letal analy	30	
			Nitrate Nitrite	(pH<2)							If pH adjustments are required record				riate Proje iples for M		
8			cop	(pH<2)							ustments				ie appropi Šan	Initials:	
68£6171			Ammonia	(pH<2)							lf pH adji	adjusted:	ne/Conc.:	vative(s):	E		
Job Number:	er of Coolers:	Cooler#1		TALS Sample Number								Sample No(s). adjusted:	Preservative Name/Conc.:	Lot # of Preservative(s)		EDS-WI-038, Rev 4, 06/09/2014	
1 doL	Number			TALS												EDS-WI-038	

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Client: Hanson Aggregates PA LLC

Login Number: 149789 List Number: 1 Creator: Gilmore, Julie L

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	IR KOP#1
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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List Source: TestAmerica Edison