TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-5766-2
Client Project/Site: Glen Isle, Radiological Analyses

For:
Posillico Dev Company at Harbor Isle LLC
1750 New Highway
Farmingdale, New York 11735

Attn: Ellis Koch

Rhonda Ridenhower

Authorized for release by:
3/31/2014 3:50:16 PM

Rhonda Ridenhower, Manager of Project Management
(314)298-8566
rhonda.ridenhower@testamericainc.com

LINKS

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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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Job ID: 160-5766-2

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

Client: Posillico Dev Company at Harbor Isle LLC

Project: Glen Isle, Radiological Analyses

Report Number: 160-5766-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica St. Louis attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 03/01/2014; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.4º C and 20.3º C.This analysis was requested by the client and not listed on the COC.

RADIUM-226 (GFPC)

Sample LT-C-054-GW (160-5766-7) was analyzed for Radium-226 (GFPC) in accordance with EPA Method 903.0. The samples were originally analyzed without ingrowth and counted on 3/5/14. The original planchet was recounted on 3/30/14 for the Radium 226 analysis with 21 days of ingrowth.

All quality control parameters were within the acceptance limits.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

480-55330 Chain of Custody

549-3679

CHAIN OF CUSTODY / ANALYSIS REQUES

Page 1 of 3

Name (for report and invoice) Ellis Koch	Samplers Name (Printed) Amanda Racaniello / Tom Fitzpatrick	Site/Project Identification Glen Isle Waterfront Redevelopment
Company RXR - Glen Isle Partners, LLC	P. O. #	State (Location of site): NJ: ☐ NY: ☒ Other:
		Regulatory Program:
Address 625 - RXR Plaza	Analysis Turnaround Time: Standard ☒	
City Uniondale State NY	Rush Chrages Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone Fax		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

LAB USE ONLY
Project No:
Job No:

Sample Identification	Date	Time	Matrix	No. of. Cont.	BVOC (8270)	Pesticides (8081)	Metals (6010/7471)	GAMMA Spec (GA-01-R)	ISO Thor. (A-01-R)	ISO Uranium (A-01-R)						Sample Numbers
LT-C-065-0-2	2-26-14	930	Soil	2	X	X	X	X	X	X						
LT-C-065-4-6		935		1	X	X	X									
LT-C-065-6-8		940		1	X	X	X									
LT-C-066-0-2		1045		2	X	X	X	X	X	X						
LT-C-066-4-6 (MS/MSD)		1050		3	X	X	X									
LT-C-066-6-8		1055		1	X	X	X									
LT-C-067-0-2		1125		1	X	X	X									
LT-C-067-4-6		1130		1	X	X	X									
LT-C-067-6-8		1135		1	X	X	X									
LT-C-067-10-12		1140		1				X	X	X						

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

Soil:
Water:

5766

Special Instructions _____ Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
[signature]	PWGC	2/27/14 12:20	1) [signature]	TAMK
2)			2)	
3) [signature]	T.A.	02-27-14 14:00	3) [signature]	TAB 2-28-14 0900
4)			4) [signature]	TASR 3-1-14 0825

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). TAL - 0016 (0408)

Massachusetts (M-NJ312), North Carolina (No. 578)

40 #2

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice): Ellis Kotch
Company: RXR - Glen Isle - Partners, LLC
Address: 625 RXR Plaza
City: Uniondale State: NY
Phone: Fax:

Samplers Name (Printed): Amanda Racanielli / Tom Fitzpatrick
P. O. #:
Site/Project Identification: Glen Isle Waterfront Redevelopment
State (Location of site): NJ: ☐ NY: ☒ Other:
Regulatory Program:

Analysis Turnaround Time
Standard ☒
Rush Chrages Authorized For:
2 Week ☐
1 Week ☐
Other ☐ _____

LAB USE ONLY
Project No:
Job No:

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of. Cont.	SVOC (8270)	Pesticides (8081)	Metals (6010/7471)	Gamma Spec (GA-01-R)	Isotopic (A-01-R)	Iso Uranium (A-01-R)						Sample Numbers
Dup033	2-26-14	X	Soil	1	X	X	X									
LT-C-068-0-2		1235		1	X	X	X									
LT-C-068-4-6		1240		1	X	X	X									
LT-C-068-8-10		1245		1	X	X	X									
LT-C-070-0-2		1320		1	X	X	X									
LT-C-070-2-4		1325		1	X	X	X									
LT-C-070-8-10		1330		1	X	X	X									
LT-C-064-0-2 (MS/MSD)		1350		3	X	X	X									
LT-C-064-2-4		1355		1	X	X	X									
LT-C-064-8-10		1405		2	X	X	X	X	X	X						

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____
Soil:
Water:

Special Instructions _____ Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
[signature]	PWGC	2-27-14 12:30	1) [signature]	TAMA
Relinquished by 2)	Company	Date / Time	Received by 2) [signature]	Company TAS 2-28-14 0900
Relinquished by 3) B. Sommi	Company T.A.	Date / Time 02-27-14 14:00	Received by 3) [signature]	Company TASR 3-1-14 0825
Relinquished by 4)	Company	Date / Time	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).
Massachusetts (M-NJ312), North Carolina (No. 578)

TAL - 0016 (0408)

4@#2

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice): Ellis Kolb
Company: RXR-Glen Isle-Partners, LLC
Address: 625 RXR Plaza
City: Uniondale State: NY
Phone: Fax:

Samplers Name (Printed): Amanda Raccaniello/Tom Fitzpatrick
P. O. #:
Site/Project Identification: Glen Isle Waterfront Redevelopment
State (Location of site): NJ: ☐ NY: ☒ Other:
Regulatory Program:

Analysis Turnaround Time
Standard ☒
Rush Chrages Authorized For:
2 Week ☐
1 Week ☐
Other ☐ _____

LAB USE ONLY
Project No:
Job No:

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of. Cont.	SVOC (8270)	Pesticides (8081)	Metals (6010/7471)	Gamma Spec (Gt-01-R)	Iso Ther. (A-01-R)	Iso Uranium (A-01-R)						Sample Numbers
GT-C-071-0-2	2-26-14	1430	Soil	1	X	X	X									
GT-C-071-2-4	2-26-14	1435	Soil	1	X	X	X									
GT-C-071-8-10	2-26-14	1440	Soil	1	X	X	X									
EB031	2-26-14	1530		10	X	X	X	X	X	X						

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____
Soil:
Water:

Special Instructions _____ Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
[signature]	PWGC	2/27/14 12:15	1) [signature]	TAL
Relinquished by 2)	Company	Date / Time	Received by 2)	Company
Relinquished by 3) B. Sonnie	Company T.A.	Date / Time 02-27-14 14:00	Received by 3) [signature]	Company TAS 2-28-14 0900
Relinquished by 4)	Company	Date / Time	Received by 4) Gil Clark	Company TASR 3-1-14 0825

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). TAL - 0016 (0408)

Massachusetts (M-NJ312), North Carolina (No. 578)

#2 2.1, 2.7, 2.5, 2.7

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS

480-55331 Chain of Custody

'oad
08817
900 Fax: (732) 549-3679

Page 1 of 2

Name (for report and invoice) Ellis Koch	Samplers Name (Printed) Amanda Racanielo	Site/Project Identification Glen Isle Waterfront Redevelopment
Company RXR-Glen Isle Partners, LLC	P. O. #	State (Location of site): NJ: ☐ NY: ☒ Other:
		Regulatory Program:
Address 625 RXR Plaza	Analysis Turnaround Time: Standard ☒	
City Uniondale NY State 11556	Rush Chrages Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone Fax		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Sample Identification	Date	Time	Matrix	No. of Cont.	VOC (8260)	SVOC (8270)	Metals (6010) T&D 7471	Radium-226 (GFPC) (903.0)	Radium-228 (GFPC) (904.0)	Iso. Thorium & Uranium (A-01-R)	Gamma Spec (GA-01-R)					Sample Numbers
GM-11	2/26/14	0815	GW	6	X	X	X									
CC-C-048-GW	↓	0945	↓	6	X	X	X									
CC-C-028-GW	↓	1050	↓	11	X	X	X	X	X	X	X					
CC-C-051-GW	↓	1300	↓	6	X	X	X									
LT-C-054-GW	↓	1455	↓	11	X	X	X	X	X	X	X					
DUP032	↓	XXXX	↓	5				X	X	X	X					
FB004-GW	↓	1430	↓	10	X	X	X	X	X	X	X					
TB	—	—	liquid	1												
			AR													

LAB USE ONLY
Project No:
Job No:

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

Soil:
Water:

Special Instructions

Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
A Racanielo	PWGC	2/27/14 15:30	1) [signature]	TAMK
2)			2) [signature]	TAS 2-28-14 0900
3) B Somin	T.A.	02-27-14 14:06	3) Jill Clarke	TA STL 3.1.14 0825
4)			4)	

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). Massachusetts (M-NJ312), North Carolina (No. 578)

TAL - 0016 (0408)

4C #2

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes☐ No☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client: Ellistown - RXR-GI Partners, LLC	Project Manager: Derek Elsbak	Date: 2/27/14	Chain of Custody Number: 266153
Address: 625 RXR Plaza	Telephone Number (Area Code)/Fax Number: 631-589-6353	Lab Number	Page 2 of 2
City: Uniondale; State: NY; Zip Code: 11556	Site Contact: A. Rucaniello	Lab Contact	
Project Name and Location (State): Glen Isle Waterfront Redevelopment	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	VOC (8260)	SVOC (8270)	PCBs (8082)	Radium 228 (GFPC)	Radium 226 (GFPC)	Cyanide Spec	Metals (6010/7470/7196)					
LT-G-010-GW	2/27/14	0915		X			4		1	3			X	X	X				X					
CC-C-001-GW	↓	1100		X			2		1	3			X	X					X					

Analysis (Attach list if more space is needed)

Special Instructions/ Conditions of Receipt

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: A Rucaniello	2/27/14		1. Received By: [signature]	2/27/14	17:15
2. Relinquished By:			2. Received By: [signature] TAB	2-28-14	0900
3. Relinquished By: B Sammi - T.A.	02-27-14	14:00	3. Received By: Jill Clark	3.1.14	0825

Comments: $@ #2

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Posillico Dev Company at Harbor Isle LLC

Job Number: 160-5766-2

Login Number: 5766

List Source: TestAmerica St. Louis

List Number: 1

Creator: Clarke, Jill C

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
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	
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.	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	

Definitions/Glossary

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5766-2

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Method Summary

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5766-2

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	TAL SL

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5766-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-5766-7	LT-C-054-GW	Water	02/26/14 14:55	03/01/14 08:25

Client Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5766-2

Client Sample ID: LT-C-054-GW

Lab Sample ID: 160-5766-7

Date Collected: 02/26/14 14:55

Matrix: Water

Date Received: 03/01/14 08:25

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	4.75		0.633	0.764	1.00	0.312	pCi/L	03/26/14 14:12	03/30/14 20:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*70.2*		*40 - 110*	*03/26/14 14:12*	*03/30/14 20:49*	*1*

QC Sample Results

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5766-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-112739/1-A
Matrix: Water
Analysis Batch: 113379

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 112739

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05449	U	0.0425	0.0428	1.00	0.0633	pCi/L	03/26/14 14:12	03/30/14 20:48	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.0*		*40 - 110*	*03/26/14 14:12*	*03/30/14 20:48*	*1*

Lab Sample ID: LCS 160-112739/2-A
Matrix: Water
Analysis Batch: 113379

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 112739

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.2	12.92		1.24	1.00	0.0707	pCi/L	115	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*91.4*		*40 - 110*

QC Association Summary

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5766-2

Rad

Prep Batch: 112739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-5766-7	LT-C-054-GW	Total/NA	Water	PrecSep-21	
LCS 160-112739/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
MB 160-112739/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Tracer/Carrier Summary

Client: Posillico Dev Company at Harbor Isle LLC
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5766-2

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
		Ba							
Lab Sample ID	**Client Sample ID**	**(40-110)**							
160-5766-7	LT-C-054-GW	70.2							
LCS 160-112739/2-A	Lab Control Sample	91.4							
MB 160-112739/1-A	Method Blank	92.0							

Tracer/Carrier Legend

Ba = Ba Carrier