CORE ENVIRONMENTAL CONSULTANTS

2312 Wehrle Drive, Buffalo, NY 14221 ◆ Phone: 716-204-8054 ◆ Fax: 716-204-8557
46-11 54th Avenue, Maspeth, NY 11378 ◆ Phone: 718-786-4730 ◆ Fax: 718-786-4764

Transmittal

Date: February 2, 2016

To: Bob Kanaparthi
IEH Division
NYC School Construction Authority
30-30 Thomson Ave.
Long Island City, NY 11101
(718) 472-8620

Re: PS 92X
700 E 179th St
Bronx, NY 10457
Service ID: 63824
SCA Project ID: D015442

We have enclosed:

☐B/W Prints ☐Reproducible ☐Reports ☐Letter

☐Specifications ☐Memorandum ☒Contractor Submittals

Description	Revision #
Waste Characterization Review - Analytical Report *Revise and Resubmit*	

Sent via:

☐Messenger ☐U.S. Mail ☒Federal Express ☒Email

Sincerely,

CORE Environmental Consultants, Inc.

Benjamin D. Barrey
Junior Environmental Engineer

CC: Karen Sheridan (IEH)

CORE ENVIRONMENTAL CONSULTANTS

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46-11 54th Avenue, Maspeth, NY 11378 ◆ Phone: 718-786-4730 ◆ Fax: 718-786-4764

Memorandum

Date: February 2, 2016

Re: PS 92X
700 E 179th St
Bronx, NY 10457
Service ID: 63824
SCA Project ID: D015442

CORE Environmental Consultants (CORE) has reviewed the submission dated November 26, 2014 and submitted for Public School 92X. The submittal was prepared by Municipal Testing Laboratory, Inc. and was received electronically by CORE on January 29, 2016. Please find CORE's comments to the submittal below.

Based on a review of the submittal, CORE has the following comments:

1. The analytical report provided includes samples collected over one year ago. Please provide a more recent material characterization analysis or proof that sampled material is the same as excavated materials.

2. There were several exceedances of Part 375 SCOs for metals and pesticides. This material is rejected for re-use as both cover and below cover material.

3. A Non-hazardous Excavated Materials Disposal Plan (EMDP) must be submitted and approved by the NYCSCA prior to disposal of the materials.

4. Prior to any backfilling, representative samples of the proposed fill material must be collected and analytical results submitted to IEH for review. The submission should include the laboratory data reports and tabulated data for the complete list of required compounds in the format specified in Section 02200, Article 1.05(F). Refer to template 1A in the Earthwork specification.

The Waste Characterization Review has been stamped "Revise and Resubmit".

These comments should not be construed in any way as intent to limit the Contractor's responsibilities. The absence of a comment with respect to a specific Contract requirement should not be interpreted as a suggestion to change the Contract requirement.

MUNICIPAL TESTING LABORATORY, INC.

AN ENGINEERING INSPECTION AND TESTING COMPANY

375 RABRO DRIVE, HAUPPAUGE, NY 11788 (631)761-5555
7520 N.W. 82ND STREET, MIAMI FL 33166 (305)884-3427

EMAIL: MUNICIPAL@MTLLAB.NET WWW.MTLLAB.NET

November 26, 2014

Armstrong Roofing
1449 Richmond Terrace,
Staten Island, NY 10310

TEL: (718)494-6777
FAX: (718)981-6519

Project: PS 92 (X)
Prime Contractor: Armstrong Roofing Corp
Architect: NYC School Construction Authority A/E
Design #: D015442 Date: 12/2/14
Contract #:C0000-13583 Revision: 0
Spec. Section: 02201 Sub No: 02201-007
Qual/Cert: Municipal Testing Laboratory, Inc.
Description: Analyticals for the soil tested
Par Ref: 1.05.D.5

RE: NYC SCA PS 92X, Bronx, NY

Order No.: 1411089

Municipal Testing Laboratory, Inc. received 3 sample(s) on 11/13/2014 for the analyses presented in the following report.

Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report. The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of Municipal Testing Laboratory, Inc. and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified either on the sample results or in the QC section of the report. This package has been reviewed by Municipal Testing Laboratory, Inc. and AAL, LLC QA Department/Laboratory Director to comply with NELAC standards prior to report submittal.

If you have any questions regarding these tests results, please do not hesitate to call (631) 761-5555 or email me directly at rpaulino@mtllab.net.

Sincerely,

Rolando Paulino
Operations Manager
Municipal Testing Laboratory, Inc.

CORE Environmental Consultants
JOB NO.: D015442
☐ CONFORMS
☐ CONFORMS AS NOTED
☐ REVISE AS NOTED AND RESUBMIT
☐ REJECTED, RESUBMIT
☐ REVIEW NOT REQUIRED
BY: B. Bailey
DATE: 2/2/16
THIS DOCUMENT HAS BEEN REVIEWED FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT ONLY.
The comments should not be construed in any ways as intent to limit the contractor's responsibilities. The absence of a comment with respect to a specific contract requirement should not be interpreted as a waiver to deviate from contract requirement.

Workorder
Sample Summary

WO#: 1411089

26-Nov-14

CLIENT: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1411089-001A	92X Test Hole #1		11/13/2014 12:30:00 PM	11/13/2014 5:30:00 PM	Soil
1411089-001B	92X Test Hole #1		11/13/2014 12:30:00 PM	11/13/2014 5:30:00 PM	Soil
1411089-002A	92X Test Hole #2		11/13/2014 12:45:00 PM	11/13/2014 5:30:00 PM	Soil
1411089-002B	92X Test Hole #2		11/13/2014 12:45:00 PM	11/13/2014 5:30:00 PM	Soil
1411089-003A	92X Test Hole #3		11/13/2014 1:00:00 PM	11/13/2014 5:30:00 PM	Soil
1411089-003B	92X Test Hole #3		11/13/2014 1:00:00 PM	11/13/2014 5:30:00 PM	Soil

CHAIN OF CUSTODY

CERTIFICATIONS
NY ELAP - 11418 PA DEP - 68-00573
NJ DEP - NY050 CT DOH - PH-0205

Client Information

Company Name: MUNICIPAL TESTING
Address: P.O.BOX 14127, HAUPPAUGE, NY 11788
City: State: Zip:
Project Contact: M. MATHEW
Phone #: 6317615555
E-mail: MEL.MATHEW@MTL LAB.NET

Project Information

Project Name: NYC SCA PS 92X
Street:
City: BRONX State: Zip:
Project #: PS 92X
Sampler's Name / Company: BILL REICHLING
Sampler's Signature: for Bill

Analytical Information: NYSDEC PART 375

LAB SAMPLE # (LAB USE ONLY)	Client Sample ID	Sample Type	Matrix Code	Date	Time	Glass / Plastic	Total # of bottles	None	HCl	NaOH	HNO_3	H_2SO_4	$NaHSO_4$	MeOH	OTHER	NYSDEC PART 375									
PS92XTESTH-1	92X TEST HOLE #1	G	S	11-13-14	12:30	GL	2	X								X	X			1411089-001					
PS92XTESTH-2	92X TEST HOLE #2	G	S	"	12:45	GL	2	X								X	X						002		
PS92XTESTH-3	92X TEST HOLE #3	G	S	"	1:00	GL	2	X								X							003		

Turnaround Time (Business Days)

- [X] Standard 7-10 Business Days
- [ ] 3 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 2 Day *RUSH*
- [ ] 4 Day *RUSH*
- [ ] 1 Day *RUSH*

SAMPLE TYPE

G = Grab
C = Composite
B = Blank

MATRIX CODES

L = Liquid
S = Soil
O = Oil
W = Wipe
PC = Paint Chip
SL = Sludge
SD = Solid
M = Miscellaneous

Comments / Remarks

Cooler Temp: 1.9°C

Sample custody must be documented below, each time samples change possession, with a signature, date, and time.

RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME
JMa	11-13-14 / 5:30	J. LANCASTER	K Kelly	11/13/14 / 5:30	K Kelly
RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE / TIME	PRINTED NAME

Sample Log-In Check List

Client Name: Work Order Number: 1411089 RcptNo: 1

Logged by:	Lori Beyer	11/13/2014 5:30:00 PM
Completed By:	Lori Beyer	11/14/2014 6:44:27 AM
Reviewed By:	Karen Kelly	11/14/2014

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☑
   No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☐ No ☑
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☑ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

18. Additional remarks:

    Not collected per 5035A

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By

Case Narrative

WO#: 1411089
Date: 11/26/2014

CLIENT: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846 and additional methods as detailed throughout the text of the report. All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives with exceptions notated in this Narrative discussion and/or in the QC Summary Section of the lab report with appropriate qualifiers. Additional quality control information such as surrogate recovery values for organic testing is provided as part of the analytical results.

Soil sample results analyzed for Volatile Organics and/or Gasoline Range Organics (GRO) via preparation method SW846 Method 5035A by the Low Level procedures potentially may be estimated, "J" (biased low) since the samples for this test were not collected according to the 5035A Method. Volatile LCS are analyzed with preservatives - HCL/NaHSO4/Methanol depending on level of analysis (high/low) similar to sample analysis. Outliers can be attributed to the presence of chemical preservatives. 2-Chloroethyl vinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Pesticide/PCB/Herbicide analysis are analyzed on two distinct columns. Once a target compound is qualitatively confirmed by detection on both columns and quantitation is determined to be >40% between the two columns, AAL's policy is to report the lower of the values as suggested by SW846 Method 8000C in cases where no interference exists. If in the professional judgment of the laboratory, the higher value must be utilized this is explained in the lab report. Closing standards for Pesticides resulted in some outliers. Results have been qualified for affected analytes.

The following parameters (if included in this report) are not offered by NY ELAP: VOA 8260 Soil; 1,2,4,5-Tetramethylbenzene, Chlorodifluoromethane, Diisopropyl ether, Ethanol, Freon-114, p-Diethylbenzene, p-Ethyltoluene, Isopropyl Acetate, n-Amyl Acetate, n-Butyl Acetate, n-Propyl Acetate. VOA 8260 Liquid; 1,2,4,5-Tetramethylbenzene, Chlorodifluoromethane, Freon-114, p-Diethylbenzene, p-Ethyltoluene, Isopropyl Acetate, n-Amyl acetate, n-Butyl Acetate, n-Propyl Acetate. Pesticides 8081 Soil; DBCP. Herbicides 8151 Soil; 3,5-Dichlorobenzoic Acid, 4-Nitrophenol, Acifluorfen, Bentazon, Chloramben, DCPA, Picloram .Lachat 10-107-6-1B Ammonia in Soil, SM 2540G Total Volatile Solids, Soil TKN, Soil Organic Nitrogen, Percent Moisture, SM 4500-SO3 B Sulfite in Liquid, Total Sulfur in Soil, Acid Soluble Chloride by ASTMC1152, Water Soluble Chloride by ASTMC1218, Chlorine Demand by SM 2350 B, Total Residual Chlorine in Liquid and Nitrate-Nitrite, Nitrogen in non-potable water and Reactivity to Sulfide and Reactivity to Cyanide.

Case Narrative

WO#: 1411089
Date: 11/26/2014

CLIENT: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

The test results meet the requirements of the NYSDOH and NELAC standards, except where noted. The information contained in this analytical report is the sole property of Municipal Testing Laboratory, Inc., or the client for which this report was issued. The results contained in this report are only representative of the samples received. The sample receipt checklist is included as part of this lab report. Conditions can vary at different times and at different sampling conditions. Municipal Testing is not responsible for the use or interpretation of the data included herein.

Definitions:

Sample Result and QC Summary Qualifiers - Level I and Level II Reports
ND - Not detected at the reporting limit/Limit of Quantitation

B - The analyte was detected in the associated method blank. For volatiles, methylene chloride and acetone are common lab contaminants. Data users should consider anything <5x the blank value as artifact.

E - The value is above the quantitation range

D - Analyte concentration was obtained from diluted analysis or from analysis using reduced sample volume.

J - The analyte was detected below the limit of quantitation but greater than the established Limit of Detection (LOD). There is greater uncertainty associated with these results and data should be considered as estimated.

U - The compound was analyzed for but not detected.

H - Holding time for preparation or analysis has been exceeded.

S - Spike recovery is outside accepted recovery limits.

R - RPD is outside accepted recovery range.

P - Secondary column exceeds 40% difference for GC test.

* - Calibration exceeds method requirement. Due to the large number of analytes for organic testing, the method allows 10% of analytes to have %RSD and/or %D to be >20%.

LOD - Limit of Detection; the lowest level the analyte can be determined to be statistically different from a blank.

LOQ - Limit of Quantitation; the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accurary.
m - Analyte was manually integrated for GC/MS.
+ - Concentration exceeds regulatory level for TCLP

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #1
Lab Order:	1411089	Collection Date:	11/13/2014 12:30:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-001A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5035A		Analyst: LA
1,1,1,2-Tetrachloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,1,1-Trichloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,1,2,2-Tetrachloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethan	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,1,2-Trichloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,1-Dichloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,1-Dichloroethene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,1-Dichloropropene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,2,3-Trichlorobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,2,3-Trichloropropane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,2,4,5-Tetramethylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,2,4-Trichlorobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,2,4-Trimethylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,2-Dibromo-3-chloropropane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,2-Dibromoethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,2-Dichlorobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,2-Dichloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,2-Dichloropropane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,3,5-Trimethylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,3-Dichlorobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,3-dichloropropane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,4-Dichlorobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
1,4-Dioxane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
2,2-Dichloropropane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
2-Butanone	ND	5.9	12	U*	µg/Kg-dry	1	11/14/2014 1:03:00 PM
2-Chloroethyl vinyl ether	ND	1.18	5.9	U*	µg/Kg-dry	1	11/14/2014 1:03:00 PM
2-Chlorotoluene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
2-Hexanone	ND	5.9	12	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
2-Propanol	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
4-Chlorotoluene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
4-Isopropyltoluene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
4-Methyl-2-pentanone	ND	5.9	12	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Acetone	ND	5.9	12	U*	µg/Kg-dry	1	11/14/2014 1:03:00 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #1
Lab Order:	1411089	Collection Date:	11/13/2014 12:30:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-001A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5035A		Analyst: LA
Benzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Bromobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Bromochloromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Bromodichloromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Bromoform	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Bromomethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Carbon disulfide	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Carbon tetrachloride	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Chlorobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Chlorodifluoromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Chloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Chloroform	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Chloromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
cis-1,2-Dichloroethene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
cis-1,3-Dichloropropene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Cyclohexane	ND	2.36	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Dibromochloromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Dibromomethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Dichlorodifluoromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Diisopropyl ether	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Ethanol	ND	11.8	24	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Ethylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Freon-114	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Hexachlorobutadiene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Isopropylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
m,p-Xylene	ND	2.36	12	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Methyl Acetate	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Methyl tert-butyl ether	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Methylene chloride	ND	5.9	12	U*	µg/Kg-dry	1	11/14/2014 1:03:00 PM
n-Butylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
n-Propylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Naphthalene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
o-Xylene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #1
Lab Order:	1411089	Collection Date:	11/13/2014 12:30:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-001A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5035A		Analyst: LA
p-Diethylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
p-Ethyltoluene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
sec-Butylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Styrene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
t-Butyl alcohol	ND	2.95	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
tert-Butylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Tetrachloroethene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Toluene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
trans-1,2-Dichloroethene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
trans-1,3-Dichloropropene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Trichloroethene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Trichlorofluoromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Vinyl acetate	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Vinyl chloride	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:03:00 PM
Surr: 4-Bromofluorobenzene	101	0	50-139		%REC	1	11/14/2014 1:03:00 PM
Surr: Dibromofluoromethane	96.9	0	50-138		%REC	1	11/14/2014 1:03:00 PM
Surr: Toluene-d8	98.7	0	71-120		%REC	1	11/14/2014 1:03:00 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #1
Lab Order:	1411089	Collection Date:	11/13/2014 12:30:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-001B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
MERCURY			SW7471B		SW7471B		Analyst: JP
Mercury	0.247	0.009	0.0135		mg/Kg-dry	1	11/18/2014 1:22:28 PM
HERBICIDES SW-846 8151			SW8151A		SW8151A		Analyst: SB
2,4,5-T	ND	1.20	3.6	U	µg/Kg-dry	1	11/21/2014 3:10:00 AM
2,4,5-TP	ND	1.20	3.6	U	µg/Kg-dry	1	11/21/2014 3:10:00 AM
2,4-D	ND	1.20	3.6	U	µg/Kg-dry	1	11/21/2014 3:10:00 AM
Dicamba	3.0	1.20	3.6	J	µg/Kg-dry	1	11/21/2014 3:10:00 AM
Surr: 2,4-DCAA	143	0	16-152	P	%REC	1	11/21/2014 3:10:00 AM
Surr: 2,4-DCAA	242	0	16-152	PS	%REC	1	11/21/2014 3:10:00 AM
PCB'S AS AROCLORS SW-846 METHOD 8082			SW8082A		SW3546		Analyst: SB
Aroclor 1016	ND	12	24	U	µg/Kg-dry	1	11/21/2014 11:25:00 AM
Aroclor 1221	ND	12	24	U	µg/Kg-dry	1	11/21/2014 11:25:00 AM
Aroclor 1232	ND	12	24	U	µg/Kg-dry	1	11/21/2014 11:25:00 AM
Aroclor 1242	ND	12	24	U	µg/Kg-dry	1	11/21/2014 11:25:00 AM
Aroclor 1248	ND	12	24	U	µg/Kg-dry	1	11/21/2014 11:25:00 AM
Aroclor 1254	ND	12	24	U	µg/Kg-dry	1	11/21/2014 11:25:00 AM
Aroclor 1260	ND	12	24	U	µg/Kg-dry	1	11/21/2014 11:25:00 AM
Aroclor 1262	ND	12	24	U	µg/Kg-dry	1	11/21/2014 11:25:00 AM
Aroclor 1268	ND	12	24	U	µg/Kg-dry	1	11/21/2014 11:25:00 AM
Surr: DCB	50.3	0	12-151		%REC	1	11/21/2014 11:25:00 AM
Surr: DCB	59.6	0	12-151		%REC	1	11/21/2014 11:25:00 AM
Surr: TCX	58.6	0	18-147		%REC	1	11/21/2014 11:25:00 AM
Surr: TCX	67.8	0	18-147		%REC	1	11/21/2014 11:25:00 AM
PESTICIDES SW-846 METHOD 8081			SW8081B		SW3546		Analyst: SB
4,4'-DDD	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
4,4'-DDE	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
4,4'-DDT	1.2	1.2	3.0	J*	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Aldrin	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
alpha-BHC	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
alpha-Chlordane	ND	7.18	12	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
beta-BHC	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Chlorobenzilate	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #1
Lab Order:	1411089	Collection Date:	11/13/2014 12:30:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-001B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PESTICIDES SW-846 METHOD 8081			SW8081B		SW3546		Analyst: SB
DBCP	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
delta-BHC	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Dieldrin	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Endosulfan I	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Endosulfan II	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Endosulfan sulfate	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Endrin	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Endrin aldehyde	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Endrin ketone	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
gamma-BHC	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
gamma-Chlordane	ND	7.18	12	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Heptachlor	ND	2.39	3.6	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Heptachlor epoxide	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Hexachlorobenzene	ND	1.2	3.0	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Hexachlorocyclopentadiene	ND	3.59	3.6	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Methoxychlor	ND	1.2	3.0	U*	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Toxaphene	ND	15	30	U	µg/Kg-dry	1	11/21/2014 5:51:00 PM
Surr: DCB	67.9	0	16-148		%REC	1	11/21/2014 5:51:00 PM
Surr: DCB	62.3	0	16-148		%REC	1	11/21/2014 5:51:00 PM
Surr: TCX	49.5	0	19-145		%REC	1	11/21/2014 5:51:00 PM
Surr: TCX	55.7	0	19-145		%REC	1	11/21/2014 5:51:00 PM
PERCENT MOISTURE			D2216				Analyst: KK
Percent Moisture	17.2	0	1.00		wt%	1	11/14/2014 4:30:00 PM
TOTAL METALS			SW6010C		SW3050B		Analyst: JP
Aluminum	11800	1.14	4.54	D	mg/Kg-dry	10	11/18/2014 1:28:16 PM
Antimony	ND	0.23	0.568	U	mg/Kg-dry	1	11/18/2014 12:49:53 PM
Arsenic	2.95	0.23	0.568		mg/Kg-dry	1	11/18/2014 12:49:53 PM
Barium	144	0.23	0.454		mg/Kg-dry	1	11/18/2014 12:49:53 PM
Beryllium	ND	0.11	0.454	U	mg/Kg-dry	1	11/18/2014 12:49:53 PM
Cadmium	0.237	0.11	0.454	J	mg/Kg-dry	1	11/18/2014 12:49:53 PM
Calcium	12600	2.27	5.68	D	mg/Kg-dry	10	11/18/2014 1:28:16 PM
Chromium	18.6	0.11	0.454		mg/Kg-dry	1	11/18/2014 12:49:53 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #1
Lab Order:	1411089	Collection Date:	11/13/2014 12:30:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-001B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
TOTAL METALS			SW6010C		SW3050B		Analyst: JP
Cobalt	ND	0.11	0.454	U	mg/Kg-dry	1	11/18/2014 12:49:53 PM
Copper	39.9	0.11	0.454		mg/Kg-dry	1	11/18/2014 12:49:53 PM
Iron	18600	2.27	4.54	D	mg/Kg-dry	10	11/18/2014 1:28:16 PM
Lead	222	0.23	0.454		mg/Kg-dry	1	11/18/2014 12:49:53 PM
Magnesium	6130	0.11	0.454		mg/Kg-dry	1	11/18/2014 12:49:53 PM
Manganese	230	0.11	0.454		mg/Kg-dry	1	11/18/2014 12:49:53 PM
Nickel	17.5	0.11	0.454		mg/Kg-dry	1	11/18/2014 12:49:53 PM
Potassium	4390	0.23	0.568		mg/Kg-dry	1	11/18/2014 12:49:53 PM
Selenium	0.271	0.23	0.568	J	mg/Kg-dry	1	11/18/2014 12:49:53 PM
Silver	ND	0.11	0.454	U	mg/Kg-dry	1	11/18/2014 12:49:53 PM
Sodium	176	0.23	0.568		mg/Kg-dry	1	11/18/2014 12:49:53 PM
Thallium	ND	0.34	0.568	U	mg/Kg-dry	1	11/18/2014 12:49:53 PM
Vanadium	30.5	0.11	0.454		mg/Kg-dry	1	11/18/2014 12:49:53 PM
Zinc	174	0.11	0.454		mg/Kg-dry	1	11/18/2014 12:49:53 PM
SEMIVOLATILE SW-846 METHOD 8270			SW8270D		SW3546		Analyst: MH
Biphenyl	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
1,2,4-Trichlorobenzene	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
1,2-Dichlorobenzene	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
1,3-Dichlorobenzene	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
1,4-Dichlorobenzene	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
2,4,5-Trichlorophenol	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
2,4,6-Trichlorophenol	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
2,4-Dichlorophenol	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
2,4-Dimethylphenol	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
2,4-Dinitrophenol	ND	60.1	600	U*	µg/Kg-dry	1	11/18/2014 3:09:00 AM
2,4-Dinitrotoluene	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
2,6-Dinitrotoluene	ND	60.1	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
2-Chloronaphthalene	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
2-Chlorophenol	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
2-Methylnaphthalene	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
2-Methylphenol	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
2-Nitroaniline	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #1
Lab Order:	1411089	Collection Date:	11/13/2014 12:30:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-001B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
SEMIVOLATILE SW-846 METHOD 8270			SW8270D		SW3546		Analyst: MH
2-Nitrophenol	ND	60.1	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
3+4-Methylphenol	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
3,3'-Dichlorobenzidine	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
3-Nitroaniline	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
4,6-Dinitro-2-methylphenol	ND	60.1	600	U*	µg/Kg-dry	1	11/18/2014 3:09:00 AM
4-Bromophenyl phenyl ether	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
4-Chloro-3-methylphenol	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
4-Chloroaniline	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
4-Chlorophenyl phenyl ether	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
4-Nitroaniline	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
4-Nitrophenol	ND	60.1	600	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Acenaphthene	170	30.0	300	J	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Acenaphthylene	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Acetophenone	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Aniline	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Anthracene	360	30.0	300	m	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Atrazine	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Azobenzene	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Benzaldehyde	ND	60.1	600	U*	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Benzidine	ND	60.1	600	U*	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Benzo(a)anthracene	990	30.0	300	m	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Benzo(a)pyrene	720	30.0	180		µg/Kg-dry	1	11/18/2014 3:09:00 AM
Benzo(b)fluoranthene	770	30.0	300		µg/Kg-dry	1	11/18/2014 3:09:00 AM
Benzo(g,h,i)perylene	410	30.0	300		µg/Kg-dry	1	11/18/2014 3:09:00 AM
Benzo(k)fluoranthene	580	30.0	300	m	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Benzoic acid	ND	60.1	600	U*	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Benzyl alcohol	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Bis(2-chloroethoxy)methane	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Bis(2-chloroethyl)ether	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Bis(2-chloroisopropyl)ether	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Bis(2-ethylhexyl)phthalate	320	30.0	300	B	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Butyl benzyl phthalate	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Caprolactam	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #1
Lab Order:	1411089	Collection Date:	11/13/2014 12:30:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-001B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
SEMIVOLATILE SW-846 METHOD 8270			SW8270D		SW3546		Analyst: MH
Carbazole	190	30.0	300	J	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Chrysene	980	30.0	300		µg/Kg-dry	1	11/18/2014 3:09:00 AM
Di-n-butyl phthalate	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Di-n-octyl phthalate	ND	60.1	600	U*	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Dibenzo(a,h)anthracene	110	30.0	180	J	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Dibenzofuran	68	30.0	300	J	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Diethyl phthalate	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Dimethyl phthalate	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Fluoranthene	2200	30.0	300		µg/Kg-dry	1	11/18/2014 3:09:00 AM
Fluorene	140	30.0	300	J	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Hexachlorobenzene	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Hexachlorobutadiene	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Hexachlorocyclopentadiene	ND	60.1	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Hexachloroethane	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Indeno(1,2,3-c,d)pyrene	490	30.0	300		µg/Kg-dry	1	11/18/2014 3:09:00 AM
Isophorone	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
N-Nitrosodi-n-propylamine	ND	30.0	180	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
N-Nitrosodimethylamine	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
N-Nitrosodiphenylamine	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Naphthalene	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Nitrobenzene	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Parathion	ND	60.1	600	U*	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Pentachlorophenol	ND	60.1	600	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Phenanthrene	1700	30.0	300	m	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Phenol	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Pyrene	1900	30.0	300		µg/Kg-dry	1	11/18/2014 3:09:00 AM
Pyridine	ND	30.0	300	U	µg/Kg-dry	1	11/18/2014 3:09:00 AM
Surr: 2,4,6-Tribromophenol	87.7	0	14-144		%REC	1	11/18/2014 3:09:00 AM
Surr: 2-Fluorobiphenyl	77.6	0	17-129		%REC	1	11/18/2014 3:09:00 AM
Surr: 2-Fluorophenol	74.8	0	21-149		%REC	1	11/18/2014 3:09:00 AM
Surr: 4-Terphenyl-d14	88.5	0	18-134		%REC	1	11/18/2014 3:09:00 AM
Surr: Nitrobenzene-d5	78.3	0	18-125		%REC	1	11/18/2014 3:09:00 AM
Surr: Phenol-d6	76.9	0	20-147		%REC	1	11/18/2014 3:09:00 AM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #1
Lab Order:	1411089	Collection Date:	11/13/2014 12:30:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-001B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
CYANIDE, TOTAL			SW9012B		SW9012B		Analyst: STP
Cyanide, Total & Amenable: Auto Colorimetric	0.0640	0.06	0.121	J	mg/Kg-dry	1	11/20/2014 2:37:18 PM
TRIVALENT CHROMIUM			SW6010C				Analyst: PAV
Chromium, Trivalent	18.6	0.1	0.400		mg/Kg-dry	1	11/19/2014 9:27:26 AM
HEXAVALENT CHROMIUM			SW7196A		SW3060A		Analyst: PAV
Chromium, Hexavalent	ND	0.24	0.601	U	mg/Kg-dry	1	11/18/2014

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #2
Lab Order:	1411089	Collection Date:	11/13/2014 12:45:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-002A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5035A		Analyst: LA
1,1,1,2-Tetrachloroethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,1,1-Trichloroethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,1,2,2-Tetrachloroethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethan	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,1,2-Trichloroethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,1-Dichloroethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,1-Dichloroethene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,1-Dichloropropene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,2,3-Trichlorobenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,2,3-Trichloropropane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,2,4,5-Tetramethylbenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,2,4-Trichlorobenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,2,4-Trimethylbenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,2-Dibromo-3-chloropropane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,2-Dibromoethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,2-Dichlorobenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,2-Dichloroethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,2-Dichloropropane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,3,5-Trimethylbenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,3-Dichlorobenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,3-dichloropropane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,4-Dichlorobenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
1,4-Dioxane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
2,2-Dichloropropane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
2-Butanone	ND	5.48	11	U*	µg/Kg-dry	1	11/14/2014 1:30:00 PM
2-Chloroethyl vinyl ether	ND	1.1	5.5	U*	µg/Kg-dry	1	11/14/2014 1:30:00 PM
2-Chlorotoluene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
2-Hexanone	ND	5.48	11	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
2-Propanol	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
4-Chlorotoluene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
4-Isopropyltoluene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
4-Methyl-2-pentanone	ND	5.48	11	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Acetone	ND	5.48	11	U*	µg/Kg-dry	1	11/14/2014 1:30:00 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #2
Lab Order:	1411089	Collection Date:	11/13/2014 12:45:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-002A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5035A		Analyst: LA
Benzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Bromobenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Bromochloromethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Bromodichloromethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Bromoform	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Bromomethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Carbon disulfide	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Carbon tetrachloride	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Chlorobenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Chlorodifluoromethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Chloroethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Chloroform	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Chloromethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
cis-1,2-Dichloroethene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
cis-1,3-Dichloropropene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Cyclohexane	ND	2.19	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Dibromochloromethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Dibromomethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Dichlorodifluoromethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Diisopropyl ether	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Ethanol	ND	11	22	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Ethylbenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Freon-114	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Hexachlorobutadiene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Isopropylbenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
m,p-Xylene	ND	2.19	11	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Methyl Acetate	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Methyl tert-butyl ether	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Methylene chloride	ND	5.48	11	U*	µg/Kg-dry	1	11/14/2014 1:30:00 PM
n-Butylbenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
n-Propylbenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Naphthalene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
o-Xylene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #2
Lab Order:	1411089	Collection Date:	11/13/2014 12:45:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-002A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5035A		Analyst: LA
p-Diethylbenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
p-Ethyltoluene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
sec-Butylbenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Styrene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
t-Butyl alcohol	ND	2.74	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
tert-Butylbenzene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Tetrachloroethene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Toluene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
trans-1,2-Dichloroethene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
trans-1,3-Dichloropropene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Trichloroethene	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Trichlorofluoromethane	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Vinyl acetate	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Vinyl chloride	ND	1.1	5.5	U	µg/Kg-dry	1	11/14/2014 1:30:00 PM
Surr: 4-Bromofluorobenzene	103	0	50-139		%REC	1	11/14/2014 1:30:00 PM
Surr: Dibromofluoromethane	96.0	0	50-138		%REC	1	11/14/2014 1:30:00 PM
Surr: Toluene-d8	98.2	0	71-120		%REC	1	11/14/2014 1:30:00 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #2
Lab Order:	1411089	Collection Date:	11/13/2014 12:45:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-002B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
MERCURY			SW7471B		SW7471B		Analyst: JP
Mercury	0.218	0.009	0.0128		mg/Kg-dry	1	11/18/2014 1:24:37 PM
HERBICIDES SW-846 8151			SW8151A		SW8151A		Analyst: SB
2,4,5-T	1.8	1.12	3.4	JP	µg/Kg-dry	1	11/21/2014 3:24:00 AM
2,4,5-TP	4.9	1.12	3.4	P	µg/Kg-dry	1	11/21/2014 3:24:00 AM
2,4-D	ND	1.12	3.4	U	µg/Kg-dry	1	11/21/2014 3:24:00 AM
Dicamba	3.0	1.12	3.4	JP	µg/Kg-dry	1	11/21/2014 3:24:00 AM
Surr: 2,4-DCAA	271	0	16-152	S	%REC	1	11/21/2014 3:24:00 AM
Surr: 2,4-DCAA	228	0	16-152	S	%REC	1	11/21/2014 3:24:00 AM
PCB'S AS AROCLORS SW-846 METHOD 8082			SW8082A		SW3546		Analyst: SB
Aroclor 1016	ND	11.1	22	U	µg/Kg-dry	1	11/21/2014 11:49:00 AM
Aroclor 1221	ND	11.1	22	U	µg/Kg-dry	1	11/21/2014 11:49:00 AM
Aroclor 1232	ND	11.1	22	U	µg/Kg-dry	1	11/21/2014 11:49:00 AM
Aroclor 1242	ND	11.1	22	U	µg/Kg-dry	1	11/21/2014 11:49:00 AM
Aroclor 1248	ND	11.1	22	U	µg/Kg-dry	1	11/21/2014 11:49:00 AM
Aroclor 1254	ND	11.1	22	U	µg/Kg-dry	1	11/21/2014 11:49:00 AM
Aroclor 1260	ND	11.1	22	U	µg/Kg-dry	1	11/21/2014 11:49:00 AM
Aroclor 1262	ND	11.1	22	U	µg/Kg-dry	1	11/21/2014 11:49:00 AM
Aroclor 1268	ND	11.1	22	U	µg/Kg-dry	1	11/21/2014 11:49:00 AM
Surr: DCB	50.1	0	12-151		%REC	1	11/21/2014 11:49:00 AM
Surr: DCB	49.9	0	12-151		%REC	1	11/21/2014 11:49:00 AM
Surr: TCX	56.7	0	18-147		%REC	1	11/21/2014 11:49:00 AM
Surr: TCX	55.5	0	18-147		%REC	1	11/21/2014 11:49:00 AM
PESTICIDES SW-846 METHOD 8081			SW8081B		SW3546		Analyst: SB
4,4'-DDD	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
4,4'-DDE	3.9	1.11	2.8	P	µg/Kg-dry	1	11/21/2014 6:05:00 PM
4,4'-DDT	2.3	1.11	2.8	JP	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Aldrin	ND	1.11	2.8	U*	µg/Kg-dry	1	11/21/2014 6:05:00 PM
alpha-BHC	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
alpha-Chlordane	180	66.6	110	D	µg/Kg-dry	10	11/25/2014 10:20:00 AM
beta-BHC	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Chlorobenzilate	17	1.11	2.8	P	µg/Kg-dry	1	11/21/2014 6:05:00 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #2
Lab Order:	1411089	Collection Date:	11/13/2014 12:45:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-002B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PESTICIDES SW-846 METHOD 8081			SW8081B		SW3546		Analyst: SB
DBCP	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
delta-BHC	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Dieldrin	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Endosulfan I	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Endosulfan II	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Endosulfan sulfate	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Endrin	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Endrin aldehyde	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Endrin ketone	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
gamma-BHC	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
gamma-Chlordane	140	66.6	110	D	µg/Kg-dry	10	11/25/2014 10:20:00 AM
Heptachlor	ND	2.22	3.3	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Heptachlor epoxide	26	1.11	2.8		µg/Kg-dry	1	11/21/2014 6:05:00 PM
Hexachlorobenzene	ND	1.11	2.8	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Hexachlorocyclopentadiene	ND	3.33	3.3	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Methoxychlor	ND	1.11	2.8	U*	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Toxaphene	ND	13.9	28	U	µg/Kg-dry	1	11/21/2014 6:05:00 PM
Surr: DCB	71.4	0	16-148		%REC	1	11/21/2014 6:05:00 PM
Surr: DCB	61.7	0	16-148		%REC	1	11/21/2014 6:05:00 PM
Surr: TCX	57.0	0	19-145		%REC	1	11/21/2014 6:05:00 PM
Surr: TCX	57.2	0	19-145		%REC	1	11/21/2014 6:05:00 PM
PERCENT MOISTURE			D2216				Analyst: KK
Percent Moisture	10.5	0	1.00		wt%	1	11/14/2014 4:30:00 PM
TOTAL METALS			SW6010C		SW3050B		Analyst: JP
Aluminum	12600	1.09	4.37	D	mg/Kg-dry	10	11/18/2014 1:30:18 PM
Antimony	ND	0.22	0.546	U	mg/Kg-dry	1	11/18/2014 12:51:54 PM
Arsenic	4.01	0.22	0.546		mg/Kg-dry	1	11/18/2014 12:51:54 PM
Barium	163	0.22	0.437		mg/Kg-dry	1	11/18/2014 12:51:54 PM
Beryllium	ND	0.11	0.437	U	mg/Kg-dry	1	11/18/2014 12:51:54 PM
Cadmium	0.164	0.11	0.437	J	mg/Kg-dry	1	11/18/2014 12:51:54 PM
Calcium	4270	0.22	0.546		mg/Kg-dry	1	11/18/2014 12:51:54 PM
Chromium	23.7	0.11	0.437		mg/Kg-dry	1	11/18/2014 12:51:54 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #2
Lab Order:	1411089	Collection Date:	11/13/2014 12:45:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-002B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
TOTAL METALS			SW6010C		SW3050B		Analyst: JP
Cobalt	ND	0.11	0.437	U	mg/Kg-dry	1	11/18/2014 12:51:54 PM
Copper	22.3	0.11	0.437		mg/Kg-dry	1	11/18/2014 12:51:54 PM
Iron	20300	2.18	4.37	D	mg/Kg-dry	10	11/18/2014 1:30:18 PM
Lead	203	0.22	0.437		mg/Kg-dry	1	11/18/2014 12:51:54 PM
Magnesium	4110	0.11	0.437		mg/Kg-dry	1	11/18/2014 12:51:54 PM
Manganese	437	0.11	0.437		mg/Kg-dry	1	11/18/2014 12:51:54 PM
Nickel	15.0	0.11	0.437		mg/Kg-dry	1	11/18/2014 12:51:54 PM
Potassium	2500	0.22	0.546		mg/Kg-dry	1	11/18/2014 12:51:54 PM
Selenium	0.297	0.22	0.546	J	mg/Kg-dry	1	11/18/2014 12:51:54 PM
Silver	ND	0.11	0.437	U	mg/Kg-dry	1	11/18/2014 12:51:54 PM
Sodium	130	0.22	0.546		mg/Kg-dry	1	11/18/2014 12:51:54 PM
Thallium	ND	0.33	0.546	U	mg/Kg-dry	1	11/18/2014 12:51:54 PM
Vanadium	33.3	0.11	0.437		mg/Kg-dry	1	11/18/2014 12:51:54 PM
Zinc	134	0.11	0.437		mg/Kg-dry	1	11/18/2014 12:51:54 PM
SEMIVOLATILE SW-846 METHOD 8270			SW8270D		SW3546		Analyst: MH
Biphenyl	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
1,2,4-Trichlorobenzene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
1,2-Dichlorobenzene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
1,3-Dichlorobenzene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
1,4-Dichlorobenzene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
2,4,5-Trichlorophenol	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
2,4,6-Trichlorophenol	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
2,4-Dichlorophenol	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
2,4-Dimethylphenol	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
2,4-Dinitrophenol	ND	55.6	560	U*	µg/Kg-dry	1	11/18/2014 3:40:00 AM
2,4-Dinitrotoluene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
2,6-Dinitrotoluene	ND	55.6	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
2-Chloronaphthalene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
2-Chlorophenol	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
2-Methylnaphthalene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
2-Methylphenol	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
2-Nitroaniline	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #2
Lab Order:	1411089	Collection Date:	11/13/2014 12:45:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-002B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
SEMIVOLATILE SW-846 METHOD 8270			SW8270D		SW3546		Analyst: MH
2-Nitrophenol	ND	55.6	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
3+4-Methylphenol	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
3,3'-Dichlorobenzidine	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
3-Nitroaniline	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
4,6-Dinitro-2-methylphenol	ND	55.6	560	U*	µg/Kg-dry	1	11/18/2014 3:40:00 AM
4-Bromophenyl phenyl ether	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
4-Chloro-3-methylphenol	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
4-Chloroaniline	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
4-Chlorophenyl phenyl ether	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
4-Nitroaniline	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
4-Nitrophenol	ND	55.6	560	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Acenaphthene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Acenaphthylene	59	27.8	280	J	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Acetophenone	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Aniline	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Anthracene	32	27.8	280	J	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Atrazine	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Azobenzene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Benzaldehyde	ND	55.6	560	U*	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Benzidine	ND	55.6	560	U*	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Benzo(a)anthracene	240	27.8	280	Jm	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Benzo(a)pyrene	240	27.8	170		µg/Kg-dry	1	11/18/2014 3:40:00 AM
Benzo(b)fluoranthene	250	27.8	280	J	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Benzo(g,h,i)perylene	180	27.8	280	J	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Benzo(k)fluoranthene	220	27.8	280	Jm	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Benzoic acid	ND	55.6	560	U*	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Benzyl alcohol	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Bis(2-chloroethoxy)methane	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Bis(2-chloroethyl)ether	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Bis(2-chloroisopropyl)ether	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Bis(2-ethylhexyl)phthalate	320	27.8	280	B	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Butyl benzyl phthalate	280	27.8	280	B	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Caprolactam	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #2
Lab Order:	1411089	Collection Date:	11/13/2014 12:45:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-002B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
SEMIVOLATILE SW-846 METHOD 8270			SW8270D		SW3546		Analyst: MH
Carbazole	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Chrysene	250	27.8	280	J	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Di-n-butyl phthalate	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Di-n-octyl phthalate	ND	55.6	560	U*	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Dibenzo(a,h)anthracene	41	27.8	170	Jm	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Dibenzofuran	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Diethyl phthalate	130	27.8	280	BJ	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Dimethyl phthalate	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Fluoranthene	380	27.8	280		µg/Kg-dry	1	11/18/2014 3:40:00 AM
Fluorene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Hexachlorobenzene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Hexachlorobutadiene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Hexachlorocyclopentadiene	ND	55.6	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Hexachloroethane	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Indeno(1,2,3-c,d)pyrene	200	27.8	280	J	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Isophorone	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
N-Nitrosodi-n-propylamine	ND	27.8	170	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
N-Nitrosodimethylamine	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
N-Nitrosodiphenylamine	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Naphthalene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Nitrobenzene	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Parathion	ND	55.6	560	U*	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Pentachlorophenol	ND	55.6	560	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Phenanthrene	100	27.8	280	Jm	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Phenol	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Pyrene	380	27.8	280		µg/Kg-dry	1	11/18/2014 3:40:00 AM
Pyridine	ND	27.8	280	U	µg/Kg-dry	1	11/18/2014 3:40:00 AM
Surr: 2,4,6-Tribromophenol	69.2	0	14-144		%REC	1	11/18/2014 3:40:00 AM
Surr: 2-Fluorobiphenyl	60.1	0	17-129		%REC	1	11/18/2014 3:40:00 AM
Surr: 2-Fluorophenol	57.2	0	21-149		%REC	1	11/18/2014 3:40:00 AM
Surr: 4-Terphenyl-d14	71.8	0	18-134		%REC	1	11/18/2014 3:40:00 AM
Surr: Nitrobenzene-d5	61.5	0	18-125		%REC	1	11/18/2014 3:40:00 AM
Surr: Phenol-d6	59.6	0	20-147		%REC	1	11/18/2014 3:40:00 AM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #2
Lab Order:	1411089	Collection Date:	11/13/2014 12:45:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-002B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
CYANIDE, TOTAL			SW9012B		SW9012B		Analyst: STP
Cyanide, Total & Amenable: Auto Colorimetric	0.0868	0.06	0.112	J	mg/Kg-dry	1	11/20/2014 2:38:13 PM
TRIVALENT CHROMIUM			SW6010C				Analyst: PAV
Chromium, Trivalent	22.9	0.1	0.400		mg/Kg-dry	1	11/19/2014 9:27:26 AM
HEXAVALENT CHROMIUM			SW7196A		SW3060A		Analyst: PAV
Chromium, Hexavalent	0.849	0.22	0.559		mg/Kg-dry	1	11/18/2014

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #3
Lab Order:	1411089	Collection Date:	11/13/2014 1:00:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-003A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5035A		Analyst: LA
1,1,1,2-Tetrachloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,1,1-Trichloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,1,2,2-Tetrachloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethan	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,1,2-Trichloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,1-Dichloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,1-Dichloroethene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,1-Dichloropropene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,2,3-Trichlorobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,2,3-Trichloropropane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,2,4,5-Tetramethylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,2,4-Trichlorobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,2,4-Trimethylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,2-Dibromo-3-chloropropane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,2-Dibromoethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,2-Dichlorobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,2-Dichloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,2-Dichloropropane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,3,5-Trimethylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,3-Dichlorobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,3-dichloropropane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,4-Dichlorobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
1,4-Dioxane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
2,2-Dichloropropane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
2-Butanone	ND	5.89	12	U*	µg/Kg-dry	1	11/14/2014 1:58:00 PM
2-Chloroethyl vinyl ether	ND	1.18	5.9	U*	µg/Kg-dry	1	11/14/2014 1:58:00 PM
2-Chlorotoluene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
2-Hexanone	ND	5.89	12	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
2-Propanol	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
4-Chlorotoluene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
4-Isopropyltoluene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
4-Methyl-2-pentanone	ND	5.89	12	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Acetone	ND	5.89	12	U*	µg/Kg-dry	1	11/14/2014 1:58:00 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #3
Lab Order:	1411089	Collection Date:	11/13/2014 1:00:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-003A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5035A		Analyst: LA
Benzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Bromobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Bromochloromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Bromodichloromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Bromoform	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Bromomethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Carbon disulfide	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Carbon tetrachloride	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Chlorobenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Chlorodifluoromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Chloroethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Chloroform	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Chloromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
cis-1,2-Dichloroethene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
cis-1,3-Dichloropropene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Cyclohexane	ND	2.35	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Dibromochloromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Dibromomethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Dichlorodifluoromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Diisopropyl ether	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Ethanol	ND	11.8	24	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Ethylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Freon-114	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Hexachlorobutadiene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Isopropylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
m,p-Xylene	ND	2.35	12	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Methyl Acetate	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Methyl tert-butyl ether	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Methylene chloride	ND	5.89	12	U*	µg/Kg-dry	1	11/14/2014 1:58:00 PM
n-Butylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
n-Propylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Naphthalene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
o-Xylene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #3
Lab Order:	1411089	Collection Date:	11/13/2014 1:00:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-003A		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5035A		Analyst: LA
p-Diethylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
p-Ethyltoluene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
sec-Butylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Styrene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
t-Butyl alcohol	ND	2.94	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
tert-Butylbenzene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Tetrachloroethene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Toluene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
trans-1,2-Dichloroethene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
trans-1,3-Dichloropropene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Trichloroethene	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Trichlorofluoromethane	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Vinyl acetate	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Vinyl chloride	ND	1.18	5.9	U	µg/Kg-dry	1	11/14/2014 1:58:00 PM
Surr: 4-Bromofluorobenzene	101	0	50-139		%REC	1	11/14/2014 1:58:00 PM
Surr: Dibromofluoromethane	95.8	0	50-138		%REC	1	11/14/2014 1:58:00 PM
Surr: Toluene-d8	97.7	0	71-120		%REC	1	11/14/2014 1:58:00 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #3
Lab Order:	1411089	Collection Date:	11/13/2014 1:00:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-003B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
MERCURY			SW7471B		SW7471B		Analyst: JP
Mercury	0.0181	0.009	0.0135		mg/Kg-dry	1	11/18/2014 1:26:45 PM
HERBICIDES SW-846 8151			SW8151A		SW8151A		Analyst: SB
2,4,5-T	ND	1.19	3.6	U	µg/Kg-dry	1	11/21/2014 3:39:00 AM
2,4,5-TP	ND	1.19	3.6	U	µg/Kg-dry	1	11/21/2014 3:39:00 AM
2,4-D	ND	1.19	3.6	U	µg/Kg-dry	1	11/21/2014 3:39:00 AM
Dicamba	ND	1.19	3.6	U	µg/Kg-dry	1	11/21/2014 3:39:00 AM
Surr: 2,4-DCAA	1680	0	16-152	PS	%REC	1	11/21/2014 3:39:00 AM
Surr: 2,4-DCAA	93.8	0	16-152	P	%REC	1	11/21/2014 3:39:00 AM
PCB'S AS AROCLORS SW-846 METHOD 8082			SW8082A		SW3546		Analyst: SB
Aroclor 1016	ND	11.9	24	U	µg/Kg-dry	1	11/21/2014 12:13:00 PM
Aroclor 1221	ND	11.9	24	U	µg/Kg-dry	1	11/21/2014 12:13:00 PM
Aroclor 1232	ND	11.9	24	U	µg/Kg-dry	1	11/21/2014 12:13:00 PM
Aroclor 1242	ND	11.9	24	U	µg/Kg-dry	1	11/21/2014 12:13:00 PM
Aroclor 1248	ND	11.9	24	U	µg/Kg-dry	1	11/21/2014 12:13:00 PM
Aroclor 1254	ND	11.9	24	U	µg/Kg-dry	1	11/21/2014 12:13:00 PM
Aroclor 1260	ND	11.9	24	U	µg/Kg-dry	1	11/21/2014 12:13:00 PM
Aroclor 1262	ND	11.9	24	U	µg/Kg-dry	1	11/21/2014 12:13:00 PM
Aroclor 1268	ND	11.9	24	U	µg/Kg-dry	1	11/21/2014 12:13:00 PM
Surr: DCB	45.5	0	12-151		%REC	1	11/21/2014 12:13:00 PM
Surr: DCB	41.3	0	12-151		%REC	1	11/21/2014 12:13:00 PM
Surr: TCX	66.9	0	18-147		%REC	1	11/21/2014 12:13:00 PM
Surr: TCX	68.0	0	18-147		%REC	1	11/21/2014 12:13:00 PM
PESTICIDES SW-846 METHOD 8081			SW8081B		SW3546		Analyst: SB
4,4'-DDD	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
4,4'-DDE	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
4,4'-DDT	ND	1.19	3.0	U*	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Aldrin	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
alpha-BHC	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
alpha-Chlordane	13	7.15	12		µg/Kg-dry	1	11/21/2014 6:19:00 PM
beta-BHC	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Chlorobenzilate	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #3
Lab Order:	1411089	Collection Date:	11/13/2014 1:00:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-003B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
PESTICIDES SW-846 METHOD 8081			SW8081B		SW3546		Analyst: SB
DBCP	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
delta-BHC	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Dieldrin	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Endosulfan I	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Endosulfan II	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Endosulfan sulfate	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Endrin	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Endrin aldehyde	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Endrin ketone	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
gamma-BHC	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
gamma-Chlordane	7.8	7.15	12	J	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Heptachlor	ND	2.38	3.6	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Heptachlor epoxide	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Hexachlorobenzene	ND	1.19	3.0	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Hexachlorocyclopentadiene	ND	3.58	3.6	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Methoxychlor	ND	1.19	3.0	U*	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Toxaphene	ND	14.9	30	U	µg/Kg-dry	1	11/21/2014 6:19:00 PM
Surr: DCB	75.7	0	16-148		%REC	1	11/21/2014 6:19:00 PM
Surr: DCB	97.9	0	16-148		%REC	1	11/21/2014 6:19:00 PM
Surr: TCX	78.5	0	19-145		%REC	1	11/21/2014 6:19:00 PM
Surr: TCX	72.8	0	19-145		%REC	1	11/21/2014 6:19:00 PM
PERCENT MOISTURE			D2216				Analyst: KK
Percent Moisture	16.4	0	1.00		wt%	1	11/14/2014 4:30:00 PM
TOTAL METALS			SW6010C		SW3050B		Analyst: JP
Aluminum	12700	1.2	4.79	D	mg/Kg-dry	10	11/18/2014 1:32:20 PM
Antimony	ND	0.24	0.598	U	mg/Kg-dry	1	11/18/2014 12:53:56 PM
Arsenic	1.93	0.24	0.598		mg/Kg-dry	1	11/18/2014 12:53:56 PM
Barium	42.1	0.24	0.479		mg/Kg-dry	1	11/18/2014 12:53:56 PM
Beryllium	ND	0.12	0.479	U	mg/Kg-dry	1	11/18/2014 12:53:56 PM
Cadmium	ND	0.12	0.479	U	mg/Kg-dry	1	11/18/2014 12:53:56 PM
Calcium	999	0.24	0.598		mg/Kg-dry	1	11/18/2014 12:53:56 PM
Chromium	22.4	0.12	0.479		mg/Kg-dry	1	11/18/2014 12:53:56 PM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #3
Lab Order:	1411089	Collection Date:	11/13/2014 1:00:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-003B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
TOTAL METALS			SW6010C		SW3050B		Analyst: JP
Cobalt	ND	0.12	0.479	U	mg/Kg-dry	1	11/18/2014 12:53:56 PM
Copper	15.3	0.12	0.479		mg/Kg-dry	1	11/18/2014 12:53:56 PM
Iron	16800	2.39	4.79	D	mg/Kg-dry	10	11/18/2014 1:32:20 PM
Lead	11.9	0.24	0.479		mg/Kg-dry	1	11/18/2014 12:53:56 PM
Magnesium	2160	0.12	0.479		mg/Kg-dry	1	11/18/2014 12:53:56 PM
Manganese	117	0.12	0.479		mg/Kg-dry	1	11/18/2014 12:53:56 PM
Nickel	13.6	0.12	0.479		mg/Kg-dry	1	11/18/2014 12:53:56 PM
Potassium	1050	0.24	0.598		mg/Kg-dry	1	11/18/2014 12:53:56 PM
Selenium	ND	0.24	0.598	U	mg/Kg-dry	1	11/18/2014 12:53:56 PM
Silver	0.201	0.12	0.479	J	mg/Kg-dry	1	11/18/2014 12:53:56 PM
Sodium	53.6	0.24	0.598		mg/Kg-dry	1	11/18/2014 12:53:56 PM
Thallium	ND	0.36	0.598	U	mg/Kg-dry	1	11/18/2014 12:53:56 PM
Vanadium	28.7	0.12	0.479		mg/Kg-dry	1	11/18/2014 12:53:56 PM
Zinc	31.8	0.12	0.479		mg/Kg-dry	1	11/18/2014 12:53:56 PM
SEMIVOLATILE SW-846 METHOD 8270			SW8270D		SW3546		Analyst: MH
Biphenyl	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
1,2,4-Trichlorobenzene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
1,2-Dichlorobenzene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
1,3-Dichlorobenzene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
1,4-Dichlorobenzene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
2,4,5-Trichlorophenol	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
2,4,6-Trichlorophenol	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
2,4-Dichlorophenol	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
2,4-Dimethylphenol	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
2,4-Dinitrophenol	ND	59.3	590	U*	µg/Kg-dry	1	11/18/2014 4:12:00 AM
2,4-Dinitrotoluene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
2,6-Dinitrotoluene	ND	59.3	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
2-Chloronaphthalene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
2-Chlorophenol	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
2-Methylnaphthalene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
2-Methylphenol	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
2-Nitroaniline	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #3
Lab Order:	1411089	Collection Date:	11/13/2014 1:00:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-003B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
SEMIVOLATILE SW-846 METHOD 8270			SW8270D		SW3546		Analyst: MH
2-Nitrophenol	ND	59.3	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
3+4-Methylphenol	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
3,3'-Dichlorobenzidine	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
3-Nitroaniline	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
4,6-Dinitro-2-methylphenol	ND	59.3	590	U*	µg/Kg-dry	1	11/18/2014 4:12:00 AM
4-Bromophenyl phenyl ether	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
4-Chloro-3-methylphenol	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
4-Chloroaniline	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
4-Chlorophenyl phenyl ether	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
4-Nitroaniline	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
4-Nitrophenol	ND	59.3	590	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Acenaphthene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Acenaphthylene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Acetophenone	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Aniline	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Anthracene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Atrazine	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Azobenzene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Benzaldehyde	ND	59.3	590	U*	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Benzidine	ND	59.3	590	U*	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Benzo(a)anthracene	ND	29.7	300	Um	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Benzo(a)pyrene	ND	29.7	180	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Benzo(b)fluoranthene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Benzo(g,h,i)perylene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Benzo(k)fluoranthene	ND	29.7	300	Um	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Benzoic acid	ND	59.3	590	U*	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Benzyl alcohol	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Bis(2-chloroethoxy)methane	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Bis(2-chloroethyl)ether	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Bis(2-chloroisopropyl)ether	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Bis(2-ethylhexyl)phthalate	300	29.7	300	B	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Butyl benzyl phthalate	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Caprolactam	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #3
Lab Order:	1411089	Collection Date:	11/13/2014 1:00:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-003B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
SEMIVOLATILE SW-846 METHOD 8270			SW8270D		SW3546		Analyst: MH
Carbazole	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Chrysene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Di-n-butyl phthalate	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Di-n-octyl phthalate	ND	59.3	590	U*	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Dibenzo(a,h)anthracene	ND	29.7	180	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Dibenzofuran	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Diethyl phthalate	100	29.7	300	BJ	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Dimethyl phthalate	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Fluoranthene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Fluorene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Hexachlorobenzene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Hexachlorobutadiene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Hexachlorocyclopentadiene	ND	59.3	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Hexachloroethane	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Indeno(1,2,3-c,d)pyrene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Isophorone	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
N-Nitrosodi-n-propylamine	ND	29.7	180	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
N-Nitrosodimethylamine	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
N-Nitrosodiphenylamine	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Naphthalene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Nitrobenzene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Parathion	ND	59.3	590	U*	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Pentachlorophenol	ND	59.3	590	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Phenanthrene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Phenol	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Pyrene	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Pyridine	ND	29.7	300	U	µg/Kg-dry	1	11/18/2014 4:12:00 AM
Surr: 2,4,6-Tribromophenol	92.5	0	14-144		%REC	1	11/18/2014 4:12:00 AM
Surr: 2-Fluorobiphenyl	74.8	0	17-129		%REC	1	11/18/2014 4:12:00 AM
Surr: 2-Fluorophenol	73.3	0	21-149		%REC	1	11/18/2014 4:12:00 AM
Surr: 4-Terphenyl-d14	91.2	0	18-134		%REC	1	11/18/2014 4:12:00 AM
Surr: Nitrobenzene-d5	79.1	0	18-125		%REC	1	11/18/2014 4:12:00 AM
Surr: Phenol-d6	75.1	0	20-147		%REC	1	11/18/2014 4:12:00 AM

Date: *26-Nov-14*

ELAP ID : 11418

CLIENT:	Armstrong Roofing	Client Sample ID:	92X Test Hole #3
Lab Order:	1411089	Collection Date:	11/13/2014 1:00:00 PM
Project:	NYC SCA PS 92X, Bronx, NY	Matrix:	SOIL
Lab ID:	1411089-003B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
CYANIDE, TOTAL			SW9012B		SW9012B		Analyst: STP
Cyanide, Total & Amenable: Auto Colorimetric	ND	0.06	0.120	U	mg/Kg-dry	1	11/20/2014 2:39:06 PM
TRIVALENT CHROMIUM			SW6010C				Analyst: PAV
Chromium, Trivalent	20.9	0.1	0.400		mg/Kg-dry	1	11/19/2014 9:27:26 AM
HEXAVALENT CHROMIUM			SW7196A		SW3060A		Analyst: PAV
Chromium, Hexavalent	1.48	0.24	0.598		mg/Kg-dry	1	11/18/2014

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing

Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2934

Sample ID LCS-2934	SampType: LCS	TestCode: 8260_S	Units: µg/Kg	Prep Date: 11/14/2014	RunNo: 5015
Client ID: LCSS	Batch ID: 2934	TestNo: SW8260C	SW5035A	Analysis Date: 11/14/2014	SeqNo: 93645

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	39	5.0	50.00	0	78.2	42	139				
1,1,2,2-Tetrachloroethane	31	5.0	50.00	0	61.1	44	138				
1,1,2-Trichloroethane	36	5.0	50.00	0	72.2	43	134				
1,1-Dichloroethane	36	5.0	50.00	0	72.5	41	142				
1,1-Dichloroethene	39	5.0	50.00	0	77.7	33	144				
1,2-Dichlorobenzene	36	5.0	50.00	0	72.6	45	128				
1,2-Dichloroethane	36	5.0	50.00	0	71.2	34	145				
1,2-Dichloropropane	38	5.0	50.00	0	75.1	44	135				
1,3-Dichlorobenzene	39	5.0	50.00	0	77.6	40	135				
1,4-Dichlorobenzene	37	5.0	50.00	0	75.0	42	129				
2-Chloroethyl vinyl ether	40	5.0	50.00	0	79.5	30	146				
Benzene	38	5.0	50.00	0	75.7	46	137				
Bromodichloromethane	38	5.0	50.00	0	76.9	44	133				
Bromoform	36	5.0	50.00	0	71.6	39	147				
Bromomethane	52	5.0	50.00	0	104	22	140				
Carbon tetrachloride	41	5.0	50.00	0	81.6	40	144				
Chlorobenzene	39	5.0	50.00	0	77.2	45	131				
Chloroethane	55	5.0	50.00	0	109	43	147				
Chloroform	38	5.0	50.00	0	75.6	40	138				
Chloromethane	59	5.0	50.00	0	118	32	151				
cis-1,3-Dichloropropene	37	5.0	50.00	0	74.6	44	137				
Dibromochloromethane	38	5.0	50.00	0	76.5	43	139				
Ethylbenzene	39	5.0	50.00	0	77.5	52	138				
Methylene chloride	14	10	50.00	0	28.5	20	120				
Tetrachloroethene	41	5.0	50.00	0	81.9	34	123				
Toluene	40	5.0	50.00	0	79.1	46	135				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2934

Sample ID LCS-2934 | SampType: LCS | TestCode: 8260_S | Units: µg/Kg | Prep Date: 11/14/2014 | RunNo: 5015
Client ID: LCSS | Batch ID: 2934 | TestNo: SW8260C | SW5035A | Analysis Date: 11/14/2014 | SeqNo: 93645

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,2-Dichloroethene	40	5.0	50.00	0	79.6	43	137				
trans-1,3-Dichloropropene	39	5.0	50.00	0	78.6	48	135				
Trichloroethene	42	5.0	50.00	0	83.2	44	135				
Trichlorofluoromethane	56	5.0	50.00	0	112	52	149				
Vinyl chloride	63	5.0	50.00	0	125	49	154				
Surr: 4-Bromofluorobenzene	50		50.00		99.3	50	139				
Surr: Dibromofluoromethane	49		50.00		98.9	50	139				
Surr: Toluene-d8	49		50.00		99.0	71	120				

Sample ID MB-2934 | SampType: MBLK | TestCode: 8260_S | Units: µg/Kg | Prep Date: 11/14/2014 | RunNo: 5015
Client ID: PBS | Batch ID: 2934 | TestNo: SW8260C | SW5035A | Analysis Date: 11/14/2014 | SeqNo: 93646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0									U
1,1,1-Trichloroethane	ND	5.0									U
1,1,2,2-Tetrachloroethane	ND	5.0									U
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.0									U
1,1,2-Trichloroethane	ND	5.0									U
1,1-Dichloroethane	ND	5.0									U
1,1-Dichloroethene	ND	5.0									U
1,1-Dichloropropene	ND	5.0									U
1,2,3-Trichlorobenzene	ND	5.0									U
1,2,3-Trichloropropane	ND	5.0									U
1,2,4,5-Tetramethylbenzene	ND	5.0									U
1,2,4-Trichlorobenzene	ND	5.0									U

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2934

Sample ID MB-2934	SampType: MBLK	TestCode: 8260_S	Units: µg/Kg	Prep Date: 11/14/2014	RunNo: 5015
Client ID: PBS	Batch ID: 2934	TestNo: SW8260C	SW5035A	Analysis Date: 11/14/2014	SeqNo: 93646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	ND	5.0									U
1,2-Dibromo-3-chloropropane	ND	5.0									U
1,2-Dibromoethane	ND	5.0									U
1,2-Dichlorobenzene	ND	5.0									U
1,2-Dichloroethane	ND	5.0									U
1,2-Dichloropropane	ND	5.0									U
1,3,5-Trimethylbenzene	ND	5.0									U
1,3-Dichlorobenzene	ND	5.0									U
1,3-dichloropropane	ND	5.0									U
1,4-Dichlorobenzene	ND	5.0									U
1,4-Dioxane	ND	5.0									U
2,2-Dichloropropane	ND	5.0									U
2-Butanone	ND	10									U*
2-Chloroethyl vinyl ether	ND	5.0									U*
2-Chlorotoluene	ND	5.0									U
2-Hexanone	ND	10									U
2-Propanol	ND	5.0									U
4-Chlorotoluene	ND	5.0									U
4-Isopropyltoluene	ND	5.0									U
4-Methyl-2-pentanone	ND	10									U
Acetone	ND	10									U*
Benzene	ND	5.0									U
Bromobenzene	ND	5.0									U
Bromochloromethane	ND	5.0									U
Bromodichloromethane	ND	5.0									U
Bromoform	ND	5.0									U

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2934

Sample ID MB-2934	SampType: MBLK	TestCode: 8260_S	Units: µg/Kg	Prep Date: 11/14/2014	RunNo: 5015
Client ID: PBS	Batch ID: 2934	TestNo: SW8260C	SW5035A	Analysis Date: 11/14/2014	SeqNo: 93846

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromomethane	ND	5.0									U
Carbon disulfide	ND	5.0									U
Carbon tetrachloride	ND	5.0									U
Chlorobenzene	ND	5.0									U
Chlorodifluoromethane	ND	5.0									U
Chloroethane	ND	5.0									U
Chloroform	ND	5.0									U
Chloromethane	ND	5.0									U
cis-1,2-Dichloroethene	ND	5.0									U
cis-1,3-Dichloropropene	ND	5.0									U
Cyclohexane	ND	5.0									U
Dibromochloromethane	ND	5.0									U
Dibromomethane	ND	5.0									U
Dichlorodifluoromethane	ND	5.0									U
Diisopropyl ether	ND	5.0									U
Ethanol	ND	20									U
Ethylbenzene	ND	5.0									U
Freon-114	ND	5.0									U
Hexachlorobutadiene	ND	5.0									U
Isopropylbenzene	ND	5.0									U
m,p-Xylene	ND	10									U
Methyl Acetate	ND	5.0									U
Methyl tert-butyl ether	ND	5.0									U
Methylene chloride	ND	10									U*
n-Butylbenzene	ND	5.0									U
n-Propylbenzene	ND	5.0									U

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2934

Sample ID MB-2934	SampType: MBLK	TestCode: 8260_S	Units: µg/Kg	Prep Date: 11/14/2014	RunNo: 5015
Client ID: PBS	Batch ID: 2934	TestNo: SW8260C	SW5035A	Analysis Date: 11/14/2014	SeqNo: 93646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	5.0									U
o-Xylene	ND	5.0									U
p-Diethylbenzene	ND	5.0									U
p-Ethyltoluene	ND	5.0									U
sec-Butylbenzene	ND	5.0									U
Styrene	ND	5.0									U
t-Butyl alcohol	ND	5.0									U
tert-Butylbenzene	ND	5.0									U
Tetrachloroethene	ND	5.0									U
Toluene	ND	5.0									U
trans-1,2-Dichloroethene	ND	5.0									U
trans-1,3-Dichloropropene	ND	5.0									U
Trichloroethene	ND	5.0									U
Trichlorofluoromethane	ND	5.0									U
Vinyl acetate	ND	5.0									U
Vinyl chloride	ND	5.0									U
Surr: 4-Bromofluorobenzene	51		50.00		102	50	139				
Surr: Dibromofluoromethane	48		50.00		96.7	50	138				
Surr: Toluene-d8	49		50.00		97.1	71	120				

Sample ID 1411089-003AMS	SampType: MS	TestCode: 8260_S	Units: µg/Kg-dry	Prep Date: 11/14/2014	RunNo: 5015
Client ID: 92X Test Hole #3	Batch ID: 2934	TestNo: SW8260C	SW5035A	Analysis Date: 11/14/2014	SeqNo: 93650

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	39	5.9	58.53	0	67.2	22	144				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2934

Sample ID 1411089-003AMS SampType: MS TestCode: 8260_S Units: µg/Kg-dry Prep Date: 11/14/2014 RunNo: 5015
Client ID: 92X Test Hole #3 Batch ID: 2934 TestNo: SW8260C SW5035A Analysis Date: 11/14/2014 SeqNo: 93650

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	32	5.9	58.53	0	55.3	21	133				
1,1,2-Trichloroethane	40	5.9	58.53	0	67.9	24	130				
1,1-Dichloroethane	36	5.9	58.53	0	62.1	29	138				
1,1-Dichloroethene	39	5.9	58.53	0	66.1	25	143				
1,2-Dichlorobenzene	37	5.9	58.53	0	62.7	14	130				
1,2-Dichloroethane	37	5.9	58.53	0	63.1	24	137				
1,2-Dichloropropane	39	5.9	58.53	0	66.5	30	132				
1,3-Dichlorobenzene	39	5.9	58.53	0	65.8	14	131				
1,4-Dichlorobenzene	37	5.9	58.53	0	63.2	19	128				
2-Chloroethyl vinyl ether	38	5.9	58.53	0	65.1	13	123				
Benzene	37	5.9	58.53	0	63.7	20	142				
Bromodichloromethane	40	5.9	58.53	0	67.7	24	126				
Bromoform	38	5.9	58.53	0	65.5	20	135				
Bromomethane	48	5.9	58.53	0	82.4	21	137				
Carbon tetrachloride	41	5.9	58.53	0	70.6	20	143				
Chlorobenzene	39	5.9	58.53	0	66.7	21	129				
Chloroethane	55	5.9	58.53	0	93.4	25	147				
Chloroform	37	5.9	58.53	0	63.7	34	133				
Chloromethane	58	5.9	58.53	0	98.8	30	148				
cis-1,3-Dichloropropene	39	5.9	58.53	0	66.3	20	130				
Dibromochloromethane	42	5.9	58.53	0	71.3	20	130				
Ethylbenzene	39	5.9	58.53	0	66.9	20	130				
Methylene chloride	15	12	58.53	0	26.1	20	130				
Tetrachloroethene	43	5.9	58.53	0	72.7	20	120				
Toluene	40	5.9	58.53	0	68.7	21	142				
trans-1,2-Dichloroethene	38	5.9	58.53	0	65.0	28	132				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2934

Sample ID 1411089-003AMS | SampType: MS | TestCode: 8260_S | Units: µg/Kg-dry | Prep Date: 11/14/2014 | RunNo: 5015
Client ID: 92X Test Hole #3 | Batch ID: 2934 | TestNo: SW8260C | SW5035A | Analysis Date: 11/14/2014 | SeqNo: 93650

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropene	41	5.9	58.53	0	70.2	20	130				
Trichloroethene	42	5.9	58.53	0	72.6	22	147				
Trichlorofluoromethane	56	5.9	58.53	0	96.5	42	149				
Vinyl chloride	61	5.9	58.53	0	104	35	152				
Surr: 4-Bromofluorobenzene	63		58.53		107	50	139				
Surr: Dibromofluoromethane	57		58.53		97.8	50	138				
Surr: Toluene-d8	59		58.53		101	71	120				

Sample ID 1411089-003AMSD | SampType: MSD | TestCode: 8260_S | Units: µg/Kg-dry | Prep Date: 11/14/2014 | RunNo: 5015
Client ID: 92X Test Hole #3 | Batch ID: 2934 | TestNo: SW8260C | SW5035A | Analysis Date: 11/14/2014 | SeqNo: 93651

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	41	6.0	60.06	0	67.7	22	144	39.33	3.26	20	
1,1,2,2-Tetrachloroethane	33	6.0	60.06	0	55.7	21	133	32.38	3.19	20	
1,1,2-Trichloroethane	38	6.0	60.06	0	63.0	24	130	39.76	5.03	20	
1,1-Dichloroethane	37	6.0	60.06	0	60.9	29	138	36.36	0.528	20	
1,1-Dichloroethene	40	6.0	60.06	0	67.1	25	143	38.69	4.02	20	
1,2-Dichlorobenzene	37	6.0	60.06	0	61.9	14	130	36.70	1.33	20	
1,2-Dichloroethane	36	6.0	60.06	0	59.6	24	137	36.94	3.16	20	
1,2-Dichloropropane	37	6.0	60.06	0	62.3	30	132	38.94	4.04	20	
1,3-Dichlorobenzene	39	6.0	60.06	0	65.1	14	131	38.51	1.57	20	
1,4-Dichlorobenzene	38	6.0	60.06	0	63.2	19	128	36.99	2.61	20	
2-Chloroethyl vinyl ether	38	6.0	60.06	0	63.1	13	123	38.08	0.545	20	*
Benzene	38	6.0	60.06	0	62.9	20	142	37.26	1.41	20	
Bromodichloromethane	40	6.0	60.06	0	66.3	24	126	39.65	0.489	20	

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2934

Sample ID 1411089-003AMSD	SampType: MSD	TestCode: 8260_S	Units: µg/Kg-dry	Prep Date: 11/14/2014	RunNo: 5015
Client ID: 92X Test Hole #3	Batch ID: 2934	TestNo: SW8260C	SW5035A	Analysis Date: 11/14/2014	SeqNo: 93651

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	39	6.0	60.06	0	65.4	20	135	38.35	2.33	20	
Bromomethane	52	6.0	60.06	0	86.0	21	137	48.23	6.80	20	
Carbon tetrachloride	42	6.0	60.06	0	70.0	20	143	41.32	1.75	20	
Chlorobenzene	40	6.0	60.06	0	67.2	21	129	39.05	3.35	20	
Chloroethane	54	6.0	60.06	0	90.0	25	147	54.67	1.15	20	
Chloroform	37	6.0	60.06	0	62.3	34	133	37.31	0.292	20	
Chloromethane	58	6.0	60.06	0	96.1	30	148	57.81	0.132	20	
cis-1,3-Dichloropropene	37	6.0	60.06	0	62.0	20	130	38.79	4.13	20	
Dibromochloromethane	40	6.0	60.06	0	66.0	20	130	41.75	5.17	20	
Ethylbenzene	41	6.0	60.06	0	68.1	20	130	39.18	4.26	20	
Methylene chloride	15	12	60.06	0	24.4	20	130	15.26	3.92	20	
Tetrachloroethene	43	6.0	60.06	0	71.8	20	120	42.54	1.33	20	
Toluene	40	6.0	60.06	0	67.4	21	142	40.20	0.696	20	
trans-1,2-Dichloroethene	39	6.0	60.06	0	65.2	28	132	38.06	2.91	20	
trans-1,3-Dichloropropene	40	6.0	60.06	0	65.8	20	130	41.11	3.89	20	
Trichloroethene	44	6.0	60.06	0	72.6	22	147	42.49	2.63	20	
Trichlorofluoromethane	60	6.0	60.06	0	99.5	42	149	56.49	5.64	20	
Vinyl chloride	64	6.0	60.06	0	106	35	152	61.09	4.25	20	
Surr: 4-Bromofluorobenzene	63		60.06		104	50	139		0	20	
Surr: Dibromofluoromethane	56		60.06		92.9	50	138		0	20	
Surr: Toluene-d8	59		60.06		98.8	71	120		0	20	

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID MB-2946	SampType: MBLK	TestCode: 8270_S	Units: µg/Kg	Prep Date: 11/17/2014	RunNo: 4955
Client ID: PBS	Batch ID: 2946	TestNo: SW8270D	SW3546	Analysis Date: 11/17/2014	SeqNo: 92618

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3,3'-Dichlorobenzidine	ND	250									U
Atrazine	ND	250									U
Benzaldehyde	ND	500									U*
Benzidine	ND	500									U*
Caprolactam	ND	250									U

Sample ID LCS-2946	SampType: LCS	TestCode: 8270_S	Units: µg/Kg	Prep Date: 11/17/2014	RunNo: 4955
Client ID: LCSS	Batch ID: 2946	TestNo: SW8270D	SW3546	Analysis Date: 11/17/2014	SeqNo: 92619

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3,3'-Dichlorobenzidine	ND	250		0	0	10	106				U
Atrazine	1500	250	2000	0	72.5	20	130				
Benzaldehyde	2000	500	2000	0	98.2	20	130				*
Benzidine	ND	500		0	0	1	100				U*
Caprolactam	1400	250	2000	0	69.4	20	130				

Sample ID 1411032-016BMS	SampType: MS	TestCode: 8270_S	Units: µg/Kg-dry	Prep Date: 11/17/2014	RunNo: 4955
Client ID: BatchQC	Batch ID: 2946	TestNo: SW8270D	SW3546	Analysis Date: 11/17/2014	SeqNo: 92621

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3,3'-Dichlorobenzidine	ND	270		0	0	15	120				U
Atrazine	1600	270	2174	0	74.2	50	120				
Benzaldehyde	2200	540	2174	0	103	20	120				*

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID 1411032-016BMS SampType: MS TestCode: 8270_S Units: µg/Kg-dry Prep Date: 11/17/2014 RunNo: 4955
Client ID: BatchQC Batch ID: 2946 TestNo: SW8270D SW3546 Analysis Date: 11/17/2014 SeqNo: 92621

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzidine	ND	540		0	0	1	137				U*
Caprolactam	1600	270	2174	0	71.5	20	130				

Sample ID 1411032-016BMSD SampType: MSD TestCode: 8270_S Units: µg/Kg-dry Prep Date: 11/17/2014 RunNo: 4955
Client ID: BatchQC Batch ID: 2946 TestNo: SW8270D SW3546 Analysis Date: 11/17/2014 SeqNo: 92622

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
3,3'-Dichlorobenzidine	ND	270		0	0	15	120	0	0	20	U
Atrazine	1500	270	2191	0	68.3	50	120	0	200	20	R
Benzaldehyde	2100	550	2191	0	94.9	20	120	0	200	20	R*
Benzidine	ND	550		0	0	1	137	0	0	20	U*
Caprolactam	1400	270	2191	0	65.7	20	130	0	200	20	R

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID MB-2946	SampType: MBLK	TestCode: 8270_S	Units: µg/Kg	Prep Date: 11/17/2014	RunNo: 4954
Client ID: PBS	Batch ID: 2946	TestNo: SW8270D	SW3546	Analysis Date: 11/17/2014	SeqNo: 92602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Biphenyl	ND	250									U
1,2,4-Trichlorobenzene	ND	250									U
1,2-Dichlorobenzene	ND	250									U
1,3-Dichlorobenzene	ND	250									U
1,4-Dichlorobenzene	ND	250									U
2,4,5-Trichlorophenol	ND	250									U
2,4,6-Trichlorophenol	ND	250									U
2,4-Dichlorophenol	ND	250									U
2,4-Dimethylphenol	ND	250									U
2,4-Dinitrophenol	ND	500									U*
2,4-Dinitrotoluene	ND	250									U
2,6-Dinitrotoluene	ND	250									U
2-Chloronaphthalene	ND	250									U
2-Chlorophenol	ND	250									U
2-Methylnaphthalene	ND	250									U
2-Methylphenol	ND	250									U
2-Nitroaniline	ND	250									U
2-Nitrophenol	ND	250									U
3+4-Methylphenol	ND	250									U
3-Nitroaniline	ND	250									U
4,6-Dinitro-2-methylphenol	ND	500									U*
4-Bromophenyl phenyl ether	ND	250									U
4-Chloro-3-methylphenol	ND	250									U
4-Chloroaniline	ND	250									U
4-Chlorophenyl phenyl ether	ND	250									U
4-Nitroaniline	ND	250									U

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing

Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID MB-2946	SampType: MBLK	TestCode: 8270_S	Units: µg/Kg	Prep Date: 11/17/2014	RunNo: 4954
Client ID: PBS	Batch ID: 2946	TestNo: SW8270D	SW3546	Analysis Date: 11/17/2014	SeqNo: 92602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Nitrophenol	ND	500									U
Acenaphthene	ND	250									U
Acenaphthylene	ND	250									U
Acetophenone	ND	250									U
Aniline	ND	250									U
Anthracene	ND	250									U
Azobenzene	ND	250									U
Benzo(a)anthracene	ND	250									U
Benzo(a)pyrene	ND	150									U
Benzo(b)fluoranthene	ND	250									U
Benzo(g,h,i)perylene	ND	250									U
Benzo(k)fluoranthene	ND	250									U
Benzoic acid	ND	500									U*
Benzyl alcohol	ND	250									U
Bis(2-chloroethoxy)methane	ND	250									U
Bis(2-chloroethyl)ether	ND	250									U
Bis(2-chloroisopropyl)ether	ND	250									U
Bis(2-ethylhexyl)phthalate	250	250									J
Butyl benzyl phthalate	250	250									
Carbazole	ND	250									U
Chrysene	ND	250									U
Di-n-butyl phthalate	ND	250									U
Di-n-octyl phthalate	ND	500									U*
Dibenzo(a,h)anthracene	ND	150									U
Dibenzofuran	ND	250									U
Diethyl phthalate	62	250									J

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing

Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID MB-2946	SampType: MBLK	TestCode: 8270_S	Units: µg/Kg	Prep Date: 11/17/2014	RunNo: 4954
Client ID: PBS	Batch ID: 2946	TestNo: SW8270D	SW3546	Analysis Date: 11/17/2014	SeqNo: 92602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dimethyl phthalate	ND	250									U
Fluoranthene	ND	250									U
Fluorene	ND	250									U
Hexachlorobenzene	ND	250									U
Hexachlorobutadiene	ND	250									U
Hexachlorocyclopentadiene	ND	250									U
Hexachloroethane	ND	250									U
Indeno(1,2,3-c,d)pyrene	ND	250									U
Isophorone	ND	250									U
N-Nitrosodi-n-propylamine	ND	150									U
N-Nitrosodimethylamine	ND	250									U
N-Nitrosodiphenylamine	ND	250									U
Naphthalene	ND	250									U
Nitrobenzene	ND	250									U
Parathion	ND	500									U*
Pentachlorophenol	ND	500									U
Phenanthrene	ND	250									U
Phenol	ND	250									U
Pyrene	ND	250									U
Pyridine	ND	250									U
Surr: 2,4,6-Tribromophenol	1300		2000		65.7	14	144				
Surr: 2-Fluorobiphenyl	840		1000		83.5	17	129				
Surr: 2-Fluorophenol	1400		2000		69.6	21	149				
Surr: 4-Terphenyl-d14	940		1000		93.6	18	134				
Surr: Nitrobenzene-d5	800		1000		80.0	18	125				
Surr: Phenol-d6	1500		2000		74.0	20	147				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID MB-2946	SampType: MBLK	TestCode: 8270_S	Units: µg/Kg	Prep Date: 11/17/2014	RunNo: 4954
Client ID: PBS	Batch ID: 2946	TestNo: SW8270D	SW3546	Analysis Date: 11/17/2014	SeqNo: 92602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID LCS-2946	SampType: LCS	TestCode: 8270_S	Units: µg/Kg	Prep Date: 11/17/2014	RunNo: 4954
Client ID: LCSS	Batch ID: 2946	TestNo: SW8270D	SW3546	Analysis Date: 11/17/2014	SeqNo: 92603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Biphenyl	1300	250	2000	0	62.5	28	126				
1,2,4-Trichlorobenzene	1200	250	2000	0	58.4	20	126				
1,2-Dichlorobenzene	1200	250	2000	0	60.6	23	128				
1,3-Dichlorobenzene	1200	250	2000	0	59.5	22	121				
1,4-Dichlorobenzene	1200	250	2000	0	58.5	20	128				
2,4,5-Trichlorophenol	ND	250		0	0	23	135				U
2,4,6-Trichlorophenol	1300	250	2000	0	62.6	20	128				
2,4-Dichlorophenol	1300	250	2000	0	62.7	20	125				
2,4-Dimethylphenol	1100	250	2000	0	53.3	16	122				
2,4-Dinitrophenol	1100	500	2000	0	52.5	1	112				
2,4-Dinitrotoluene	1200	250	2000	0	61.0	20	127				
2,6-Dinitrotoluene	1100	250	2000	0	53.5	12	125				
2-Chloronaphthalene	1300	250	2000	0	64.1	21	124				
2-Chlorophenol	1300	250	2000	0	63.3	23	133				
2-Methylnaphthalene	ND	250		0	0	22	120				U
2-Methylphenol	ND	250		0	0	24	130				U
2-Nitroaniline	ND	250		0	0	14	115				U
2-Nitrophenol	1200	250	2000	0	60.3	15	129				
3+4-Methylphenol	ND	250		0	0	18	140				U
3-Nitroaniline	ND	250		0	0	14	120				U

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing

Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID LCS-2946	SampType: LCS	TestCode: 8270_S	Units: µg/Kg	Prep Date: 11/17/2014	RunNo: 4954
Client ID: LCSS	Batch ID: 2946	TestNo: SW8270D	SW3546	Analysis Date: 11/17/2014	SeqNo: 92603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,6-Dinitro-2-methylphenol	1200	500	2000	0	59.8	10	120				*
4-Bromophenyl phenyl ether	1300	250	2000	0	64.4	21	134				
4-Chloro-3-methylphenol	1300	250	2000	0	65.6	16	132				
4-Chloroaniline	ND	250		0	0	10	101				U
4-Chlorophenyl phenyl ether	1300	250	2000	0	65.1	20	127				
4-Nitroaniline	ND	250		0	0	20	133				U
4-Nitrophenol	1300	500	2000	0	64.3	5	125				
Acenaphthene	1200	250	2000	0	61.9	14	132				
Acenaphthylene	1300	250	2000	0	63.6	17	130				
Acetophenone	1300	250	2000	0	65.8	34	129				
Aniline	ND	250		0	0	5	105				U
Anthracene	1300	250	2000	0	64.1	20	132				
Azobenzene	ND	250		0	0	26	144				U
Benzo(a)anthracene	1300	250	2000	0	66.7	20	138				
Benzo(a)pyrene	1300	150	2000	0	65.6	14	130				
Benzo(b)fluoranthene	1300	250	2000	0	64.4	20	130				
Benzo(g,h,i)perylene	1300	250	2000	0	63.4	10	142				
Benzo(k)fluoranthene	1400	250	2000	0	69.3	20	137				m
Benzoic acid	ND	500		0	0	1	114				U*
Benzyl alcohol	ND	250		0	0	20	130				U
Bis(2-chloroethoxy)methane	1300	250	2000	0	62.7	19	128				
Bis(2-chloroethyl)ether	1300	250	2000	0	62.6	20	139				
Bis(2-chloroisopropyl)ether	1300	250	2000	0	63.6	11	134				
Bis(2-ethylhexyl)phthalate	1500	250	2000	0	73.6	18	143				B
Butyl benzyl phthalate	1500	250	2000	0	73.4	20	148				B
Carbazole	ND	250		0	0	21	135				U

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID LCS-2946	SampType: LCS	TestCode: 8270_S	Units: µg/Kg	Prep Date: 11/17/2014	RunNo: 4954
Client ID: LCSS	Batch ID: 2946	TestNo: SW8270D	SW3546	Analysis Date: 11/17/2014	SeqNo: 92603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chrysene	1300	250	2000	0	65.2	20	136				
Di-n-butyl phthalate	1500	250	2000	0	72.9	20	141				
Di-n-octyl phthalate	1500	500	2000	0	75.1	16	142				*
Dibenzo(a,h)anthracene	1300	150	2000	0	64.8	11	140				
Dibenzofuran	ND	250		0	0	21	131				U
Diethyl phthalate	1400	250	2000	0	67.7	20	138				B
Dimethyl phthalate	1300	250	2000	0	62.7	20	130				
Fluoranthene	1300	250	2000	0	66.9	16	130				
Fluorene	1300	250	2000	0	65.2	20	131				
Hexachlorobenzene	1200	250	2000	0	61.7	20	132				
Hexachlorobutadiene	1200	250	2000	0	61.4	20	126				
Hexachlorocyclopentadiene	1200	250	2000	0	57.7	14	128				
Hexachloroethane	1300	250	2000	0	62.8	20	132				
Indeno(1,2,3-c,d)pyrene	1300	250	2000	0	63.9	20	137				m
Isophorone	1200	250	2000	0	61.6	20	134				
N-Nitrosodi-n-propylamine	1300	150	2000	0	64.3	20	142				
N-Nitrosodimethylamine	1100	250	2000	0	56.7	15	138				
N-Nitrosodiphenylamine	1200	250	2000	0	59.3	5	100				
Naphthalene	1200	250	2000	0	61.2	20	131				
Nitrobenzene	1200	250	2000	0	60.1	21	131				
Parathion	ND	500		0	0	21	130				U*
Pentachlorophenol	1300	500	2000	0	64.4	10	128				
Phenanthrene	1300	250	2000	0	62.8	11	133				m
Phenol	1200	250	2000	0	60.6	22	132				
Pyrene	1400	250	2000	0	69.3	11	137				
Pyridine	ND	250		0	0	1	101				U

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY **BatchID:** 2946

Sample ID LCS-2946	SampType: LCS	TestCode: 8270_S	Units: µg/Kg	Prep Date: 11/17/2014	RunNo: 4954
Client ID: LCSS	Batch ID: 2946	TestNo: SW8270D	SW3546	Analysis Date: 11/17/2014	SeqNo: 92603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	1500		2000		74.3	14	144				
Surr: 2-Fluorobiphenyl	740		1000		73.5	17	129				
Surr: 2-Fluorophenol	1400		2000		68.6	21	149				
Surr: 4-Terphenyl-d14	850		1000		84.5	18	134				
Surr: Nitrobenzene-d5	740		1000		73.5	18	125				
Surr: Phenol-d6	1500		2000		73.2	20	147				

Sample ID 1411032-016BMS	SampType: MS	TestCode: 8270_S	Units: µg/Kg-dry	Prep Date: 11/17/2014	RunNo: 4954
Client ID: BatchQC	Batch ID: 2946	TestNo: SW8270D	SW3546	Analysis Date: 11/17/2014	SeqNo: 92613

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Biphenyl	1400	270	2174	0	64.5	20	147				
1,2,4-Trichlorobenzene	1300	270	2174	0	61.0	23	136				
1,2-Dichlorobenzene	1400	270	2174	0	62.2	17	137				
1,3-Dichlorobenzene	1300	270	2174	0	59.0	19	137				
1,4-Dichlorobenzene	1300	270	2174	0	59.0	17	139				
2,4,5-Trichlorophenol	ND	270		0	0	26	138				U
2,4,6-Trichlorophenol	1500	270	2174	0	69.3	21	143				
2,4-Dichlorophenol	1500	270	2174	0	69.3	20	144				
2,4-Dimethylphenol	1400	270	2174	0	66.1	24	139				
2,4-Dinitrophenol	480	540	2174	0	22.1	5	129				J*
2,4-Dinitrotoluene	1400	270	2174	0	62.2	10	144				
2,6-Dinitrotoluene	1300	270	2174	0	57.8	12	125				
2-Chloronaphthalene	1400	270	2174	0	64.4	25	143				
2-Chlorophenol	1400	270	2174	0	65.7	19	144				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID 1411032-016BMS SampType: MS TestCode: 8270_S Units: µg/Kg-dry Prep Date: 11/17/2014 RunNo: 4954
Client ID: BatchQC Batch ID: 2946 TestNo: SW8270D SW3546 Analysis Date: 11/17/2014 SeqNo: 92613

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Methylnaphthalene	44	270		39.47	0	20	130				J
2-Methylphenol	ND	270		0	0	29	136				U
2-Nitroaniline	ND	270		0	0	25	137				U
2-Nitrophenol	1500	270	2174	0	69.0	13	139				
3+4-Methylphenol	ND	270		0	0	10	137				U
3-Nitroaniline	ND	270		0	0	20	120				U
4,6-Dinitro-2-methylphenol	960	540	2174	0	44.4	10	125				*
4-Bromophenyl phenyl ether	1500	270	2174	0	68.0	29	139				
4-Chloro-3-methylphenol	1600	270	2174	0	72.8	25	139				
4-Chloroaniline	ND	270		0	0	18	120				U
4-Chlorophenyl phenyl ether	1400	270	2174	0	66.6	27	136				
4-Nitroaniline	ND	270		0	0	23	130				U
4-Nitrophenol	1400	540	2174	0	66.2	22	147				
Acenaphthene	1400	270	2174	150.8	59.1	28	133				
Acenaphthylene	1500	270	2174	55.88	64.7	22	147				
Acetophenone	1500	270	2174	0	69.6	20	135				
Aniline	ND	270		0	0	10	110				U
Anthracene	1600	270	2174	379.5	56.7	24	140				
Azobenzene	ND	270		0	0	20	151				U
Benzo(a)anthracene	2100	270	2174	1275	39.6	20	144				
Benzo(a)pyrene	2000	160	2174	1160	37.1	21	143				
Benzo(b)fluoranthene	2000	270	2174	1002	45.1	20	145				
Benzo(g,h,i)perylene	1600	270	2174	781.2	39.1	20	143				
Benzo(k)fluoranthene	1600	270	2174	853.8	41.3	20	143				m
Benzoic acid	ND	540		0	0	10	120				U*
Benzyl alcohol	ND	270		0	0	25	125				U

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID 1411032-016BMS SampType: MS TestCode: 8270_S Units: µg/Kg-dry Prep Date: 11/17/2014 RunNo: 4954
Client ID: BatchQC Batch ID: 2946 TestNo: SW8270D SW3546 Analysis Date: 11/17/2014 SeqNo: 92613

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bis(2-chloroethoxy)methane	1400	270	2174	0	64.8	22	137				
Bis(2-chloroethyl)ether	1400	270	2174	0	65.3	20	143				
Bis(2-chloroisopropyl)ether	1400	270	2174	0	66.4	20	149				
Bis(2-ethylhexyl)phthalate	2000	270	2174	364.2	74.7	27	146				B
Butyl benzyl phthalate	1900	270	2174	0	85.3	20	147				B
Carbazole	66	270		91.43	0	27	120				J
Chrysene	2000	270	2174	1236	35.7	22	142				
Di-n-butyl phthalate	1700	270	2174	0	78.5	27	145				
Di-n-octyl phthalate	1900	540	2174	0	87.2	28	145				*
Dibenzo(a,h)anthracene	1500	160	2174	164.4	59.8	23	142				
Dibenzofuran	51	270		79.11	0	21	133				J
Diethyl phthalate	1500	270	2174	72.33	67.0	19	136				B
Dimethyl phthalate	1400	270	2174	0	65.8	20	137				
Fluoranthene	2400	270	2174	2447	-1.87	20	147				S
Fluorene	1500	270	2174	108.8	64.7	20	138				
Hexachlorobenzene	1300	270	2174	0	61.9	20	140				
Hexachlorobutadiene	1400	270	2174	0	63.6	20	136				
Hexachlorocyclopentadiene	250	270	2174	0	11.6	4	139				J
Hexachloroethane	1300	270	2174	0	61.6	13	139				
Indeno(1,2,3-c,d)pyrene	1700	270	2174	834.1	41.3	26	144				m
Isophorone	1500	270	2174	0	67.2	24	145				
N-Nitrosodi-n-propylamine	1500	160	2174	0	69.3	22	146				
N-Nitrosodimethylamine	1200	270	2174	0	53.5	17	134				
N-Nitrosodiphenylamine	1400	270	2174	0	65.3	16	143				
Naphthalene	1500	270	2174	96.56	63.1	13	143				
Nitrobenzene	1400	270	2174	0	63.6	20	138				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID 1411032-016BMS SampType: MS TestCode: 8270_S Units: µg/Kg-dry Prep Date: 11/17/2014 RunNo: 4954
Client ID: BatchQC Batch ID: 2946 TestNo: SW8270D SW3546 Analysis Date: 11/17/2014 SeqNo: 92613

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Parathion	ND	540		0	0	21	142				U*
Pentachlorophenol	1300	540	2174	0	61.5	18	144				
Phenanthrene	1900	270	2174	1501	19.0	21	140				S
Phenol	1400	270	2174	0	64.7	13	143				
Pyrene	2600	270	2174	2496	3.36	19	144				S
Pyridine	ND	270		0	0	17	120				U
Surr: 2,4,6-Tribromophenol	1800		2174		83.6	14	144				
Surr: 2-Fluorobiphenyl	830		1087		76.0	17	129				
Surr: 2-Fluorophenol	1700		2174		76.0	21	149				
Surr: 4-Terphenyl-d14	950		1087		87.2	18	134				
Surr: Nitrobenzene-d5	900		1087		83.0	18	125				
Surr: Phenol-d6	1700		2174		78.1	20	147				

Sample ID 1411032-016BMSD SampType: MSD TestCode: 8270_S Units: µg/Kg-dry Prep Date: 11/17/2014 RunNo: 4954
Client ID: BatchQC Batch ID: 2946 TestNo: SW8270D SW3546 Analysis Date: 11/17/2014 SeqNo: 92614

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Biphenyl	1300	270	2191	0	60.1	20	147	1401	6.29	20	
1,2,4-Trichlorobenzene	1300	270	2191	0	57.6	23	136	1326	5.04	20	
1,2-Dichlorobenzene	1200	270	2191	0	56.7	17	137	1353	8.45	20	
1,3-Dichlorobenzene	1200	270	2191	0	54.8	19	137	1283	6.53	20	
1,4-Dichlorobenzene	1200	270	2191	0	55.3	17	139	1282	5.72	20	
2,4,5-Trichlorophenol	ND	270		0	0	26	138	0	0	20	U
2,4,6-Trichlorophenol	1400	270	2191	0	63.3	21	143	1507	8.32	20	
2,4-Dichlorophenol	1400	270	2191	0	63.6	20	144	1505	7.66	20	

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing

Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID 1411032-016BMSD SampType: MSD TestCode: 8270_S Units: µg/Kg-dry Prep Date: 11/17/2014 RunNo: 4954

Client ID: BatchQC Batch ID: 2946 TestNo: SW8270D SW3546 Analysis Date: 11/17/2014 SeqNo: 92614

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4-Dimethylphenol	1300	270	2191	0	61.5	24	139	1437	6.44	20	
2,4-Dinitrophenol	240	550	2191	0	10.8	5	129	479.4	67.9	20	JR*
2,4-Dinitrotoluene	1200	270	2191	0	56.4	10	144	1351	8.86	20	
2,6-Dinitrotoluene	1200	270	2191	0	54.0	12	125	1256	6.07	20	
2-Chloronaphthalene	1300	270	2191	0	60.5	25	143	1400	5.44	20	
2-Chlorophenol	1300	270	2191	0	60.6	19	144	1427	7.20	20	
2-Methylnaphthalene	46	270		39.47	0	20	130	44.09	5.17	20	J
2-Methylphenol	ND	270		0	0	29	138	0	0	20	U
2-Nitroaniline	ND	270		0	0	25	137	0	0	20	U
2-Nitrophenol	1400	270	2191	0	63.1	13	139	1500	8.10	20	
3+4-Methylphenol	ND	270		0	0	10	137	0	0	20	Um
3-Nitroaniline	ND	270		0	0	20	120	0	0	20	U
4,6-Dinitro-2-methylphenol	710	550	2191	0	32.5	10	125	964.3	30.2	20	R*
4-Bromophenyl phenyl ether	1400	270	2191	0	61.8	29	139	1479	8.85	20	
4-Chloro-3-methylphenol	1500	270	2191	0	66.7	25	139	1583	8.04	20	
4-Chloroaniline	ND	270		0	0	18	120	0	0	20	U
4-Chlorophenyl phenyl ether	1300	270	2191	0	60.2	27	136	1448	9.39	20	
4-Nitroaniline	ND	270		0	0	23	130	0	0	20	U
4-Nitrophenol	1300	550	2191	0	59.9	22	147	1438	9.13	20	
Acenaphthene	1500	270	2191	150.8	59.3	28	133	1434	1.10	20	
Acenaphthylene	1400	270	2191	55.88	60.9	22	147	1463	5.09	20	
Acetophenone	1400	270	2191	0	63.7	20	135	1513	8.12	20	
Aniline	ND	270		0	0	10	110	0	0	20	U
Anthracene	1600	270	2191	379.5	57.5	24	140	1611	1.77	20	
Azobenzene	ND	270		0	0	20	151	0	0	20	U
Benzo(a)anthracene	2500	270	2191	1275	55.3	20	144	2135	15.2	20	

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing

Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID 1411032-016BMSD SampType: MSD TestCode: 8270_S Units: µg/Kg-dry Prep Date: 11/17/2014 RunNo: 4954

Client ID: BatchQC Batch ID: 2946 TestNo: SW8270D SW3546 Analysis Date: 11/17/2014 SeqNo: 92614

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(a)pyrene	2200	160	2191	1160	48.1	21	143	1966	11.9	20	
Benzo(b)fluoranthene	2200	270	2191	1002	56.3	20	145	1983	12.0	20	
Benzo(g,h,i)perylene	1700	270	2191	781.2	43.5	20	143	1631	6.21	20	
Benzo(k)fluoranthene	2100	270	2191	853.8	55.1	20	143	1752	16.2	20	m
Benzoic acid	ND	550		0	0	10	120	0	0	20	U*
Benzyl alcohol	ND	270		0	0	25	125	0	0	20	U
Bis(2-chloroethoxy)methane	1300	270	2191	0	60.2	22	137	1408	6.54	20	
Bis(2-chloroethyl)ether	1300	270	2191	0	60.7	20	143	1419	6.51	20	
Bis(2-chloroisopropyl)ether	1300	270	2191	0	60.0	20	149	1444	9.42	20	
Bis(2-ethylhexyl)phthalate	1900	270	2191	364.2	70.2	27	146	1988	4.42	20	B
Butyl benzyl phthalate	1700	270	2191	0	78.8	20	147	1854	7.16	20	B
Carbazole	220	270		91.43	0	27	120	65.62	108	20	JR
Chrysene	2500	270	2191	1238	55.7	22	142	2013	19.9	20	
Di-n-butyl phthalate	1500	270	2191	0	69.2	27	145	1705	11.8	20	
Di-n-octyl phthalate	1800	550	2191	0	81.4	28	145	1895	6.03	20	*
Dibenzo(a,h)anthracene	1500	160	2191	164.4	59.0	23	142	1464	0.501	20	
Dibenzofuran	110	270		79.11	0	21	133	50.63	73.2	20	JR
Diethyl phthalate	1400	270	2191	72.33	60.0	19	136	1530	9.86	20	B
Dimethyl phthalate	1300	270	2191	0	59.9	20	137	1429	8.56	20	
Fluoranthene	3400	270	2191	2447	44.2	20	147	2406	34.6	20	R
Fluorene	1500	270	2191	108.8	62.5	20	138	1515	2.48	20	
Hexachlorobenzene	1300	270	2191	0	58.2	20	140	1345	5.37	20	
Hexachlorobutadiene	1300	270	2191	0	60.2	20	136	1383	4.77	20	
Hexachlorocyclopentadiene	120	270	2191	0	5.42	4	139	251.4	71.7	20	JR
Hexachloroethane	1200	270	2191	0	53.1	13	139	1340	14.2	20	
Indeno(1,2,3-c,d)pyrene	1900	270	2191	834.1	48.9	26	144	1732	9.55	20	m

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing

Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2946

Sample ID 1411032-016BMSD	SampType: MSD	TestCode: 8270_S	Units: µg/Kg-dry	Prep Date: 11/17/2014	RunNo: 4954
Client ID: BatchQC	Batch ID: 2946	TestNo: SW8270D	SW3546	Analysis Date: 11/17/2014	SeqNo: 92614

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isophorone	1400	270	2191	0	63.0	24	145	1461	5.63	20	
N-Nitrosodi-n-propylamine	1400	160	2191	0	63.4	22	146	1505	8.06	20	
N-Nitrosodimethylamine	1100	270	2191	0	49.5	17	134	1164	7.05	20	
N-Nitrosodiphenylamine	1300	270	2191	0	59.6	16	143	1420	8.44	20	
Naphthalene	1400	270	2191	96.56	58.9	13	143	1469	5.79	20	
Nitrobenzene	1300	270	2191	0	60.1	20	138	1381	4.73	20	
Parathion	ND	550		0	0	21	142	0	0	20	U*
Pentachlorophenol	1200	550	2191	0	53.4	18	144	1337	13.4	20	
Phenanthrene	2800	270	2191	1501	57.6	21	140	1913	36.3	20	R
Phenol	1300	270	2191	0	58.7	13	143	1405	8.93	20	
Pyrene	3300	270	2191	2496	38.8	19	144	2569	26.3	20	R
Pyridine	ND	270		0	0	17	120	0	0	20	U
Surr: 2,4,6-Tribromophenol	1600		2191		72.2	14	144		0	20	
Surr: 2-Fluorobiphenyl	780		1095		70.9	17	129		0	20	
Surr: 2-Fluorophenol	1500		2191		68.9	21	149		0	20	
Surr: 4-Terphenyl-d14	860		1095		78.7	18	134		0	20	
Surr: Nitrobenzene-d5	840		1095		76.8	18	125		0	20	
Surr: Phenol-d6	1600		2191		71.3	20	147		0	20	

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing

Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2955

Sample ID MB-2955	SampType: MBLK	TestCode: 8082_S	Units: %REC	Prep Date: 11/18/2014	RunNo: 5060
Client ID: PBS	Batch ID: 2955	TestNo: SW8082A	SW3546	Analysis Date: 11/21/2014	SeqNo: 95014

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: DCB	16		25.00		64.0	12	151				
Surr: TCX	19		25.00		74.1	18	147				

Sample ID LCS-2955	SampType: LCS	TestCode: 8082_S	Units: %REC	Prep Date: 11/18/2014	RunNo: 5060
Client ID: LCSS	Batch ID: 2955	TestNo: SW8082A	SW3546	Analysis Date: 11/21/2014	SeqNo: 95015

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: DCB	29		25.00		115	12	151				
Surr: TCX	19		25.00		74.6	18	147				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY
BatchID: 2955

Sample ID MB-2955	SampType: MBLK	TestCode: 8082_S	Units: µg/Kg	Prep Date: 11/18/2014	RunNo: 5059
Client ID: PBS	Batch ID: 2955	TestNo: SW8082A	SW3546	Analysis Date: 11/21/2014	SeqNo: 94997

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	20									U
Aroclor 1221	ND	20									U
Aroclor 1232	ND	20									U
Aroclor 1242	ND	20									U
Aroclor 1248	ND	20									U
Aroclor 1254	ND	20									U
Aroclor 1260	ND	20									U
Aroclor 1262	ND	20									U
Aroclor 1268	ND	20									U
Surr: DCB	15		25.00		61.4	12	151				
Surr: TCX	18		25.00		73.0	18	147				

Sample ID LCS-2955	SampType: LCS	TestCode: 8082_S	Units: µg/Kg	Prep Date: 11/18/2014	RunNo: 5059
Client ID: LCSS	Batch ID: 2955	TestNo: SW8082A	SW3546	Analysis Date: 11/21/2014	SeqNo: 94998

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1232	220	20	250.0	0	89.6	30	140				
Aroclor 1268	170	20	250.0	0	68.9	35	135				
Surr: DCB	26		25.00		103	12	151				
Surr: TCX	19		25.00		76.9	18	147				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2956

Sample ID MB-2956	SampType: MBLK	TestCode: 8081_S	Units: µg/Kg	Prep Date: 11/18/2014	RunNo: 5107
Client ID: PBS	Batch ID: 2956	TestNo: SW8081B	SW3546	Analysis Date: 11/21/2014	SeqNo: 96775

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Endrin aldehyde	ND	2.5									U
Hexachlorocyclopentadiene	ND	3.0									U
Surr: DCB	26		25.00		102	16	148				
Surr: TCX	21		25.00		82.5	19	145				

Sample ID LCS-2956	SampType: LCS	TestCode: 8081_S	Units: µg/Kg	Prep Date: 11/18/2014	RunNo: 5107
Client ID: LCSS	Batch ID: 2956	TestNo: SW8081B	SW3546	Analysis Date: 11/21/2014	SeqNo: 96776

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachlorocyclopentadiene	13	3.0	10.00	0	134	23	148				
Surr: DCB	28		25.00		111	16	148				
Surr: TCX	21		25.00		85.6	19	145				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing

Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2956

Sample ID MB-2956	SampType: MBLK	TestCode: 8081_S	Units: µg/Kg	Prep Date: 11/18/2014	RunNo: 5106
Client ID: PBS	Batch ID: 2956	TestNo: SW8081B	SW3546	Analysis Date: 11/21/2014	SeqNo: 96749

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDD	ND	2.5									U
4,4'-DDE	ND	2.5									U
4,4'-DDT	ND	2.5									U*
Aldrin	ND	2.5									U
alpha-BHC	ND	2.5									U
alpha-Chlordane	ND	10									U
beta-BHC	ND	2.5									U
Chlorobenzilate	ND	2.5									U
DBCP	ND	2.5									U
delta-BHC	ND	2.5									U
Dieldrin	ND	2.5									U
Endosulfan I	ND	2.5									U
Endosulfan II	ND	2.5									U
Endosulfan sulfate	ND	2.5									U
Endrin	ND	2.5									U
Endrin ketone	ND	2.5									U
gamma-BHC	ND	2.5									U
gamma-Chlordane	ND	10									U
Heptachlor	ND	3.0									U
Heptachlor epoxide	ND	2.5									U
Hexachlorobenzene	ND	2.5									U*
Methoxychlor	ND	2.5									U
Toxaphene	ND	25									
Surr: DCB	27		25.00		107	16	148				
Surr: TCX	19		25.00		76.4	19	145				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing

Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2956

Sample ID LCS-2956	SampType: LCS	TestCode: 8081_S	Units: µg/Kg	Prep Date: 11/18/2014	RunNo: 5106
Client ID: LCSS	Batch ID: 2956	TestNo: SW8081B	SW3546	Analysis Date: 11/21/2014	SeqNo: 96750

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DBCP	11	2.5	10.00	0	106	11	146				
Hexachlorobenzene	4.1	2.5	10.00	0	40.6	13	151				
Toxaphene	320	25	350.0	0	92.5	30	145				
Surr: DCB	25		25.00		99.1	16	148				
Surr: TCX	19		25.00		75.2	19	145				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2957

Sample ID MBS111714A	SampType: MBLK	TestCode: ICPSCAN_S	Units: mg/Kg	Prep Date: 11/17/2014	RunNo: 4974
Client ID: PBS	Batch ID: 2957	TestNo: SW6010C	SW3050B	Analysis Date: 11/18/2014	SeqNo: 92958

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.400									U
Antimony	ND	0.500									U
Arsenic	ND	0.500									U
Barium	ND	0.400									U
Beryllium	ND	0.400									U
Boron	ND	0.400									U
Cadmium	ND	0.400									U
Calcium	ND	0.500									U
Chromium	ND	0.400									U
Cobalt	ND	0.400									U
Copper	ND	0.400									U
Iron	ND	0.400									U
Lead	ND	0.400									U
Magnesium	ND	0.400									U
Manganese	ND	0.400									U
Molybdenum	ND	0.400									U
Nickel	ND	0.400									U
Potassium	ND	0.500									U
Selenium	ND	0.500									U
Silicon	ND	0.500									U
Silver	ND	0.400									U
Sodium	ND	0.500									U
Thallium	ND	0.500									U
Tin	ND	0.400									U
Titanium	ND	0.400									U
Vanadium	ND	0.400									U

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing

Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2957

Sample ID	MBS111714A	SampType: MBLK	TestCode: ICPSCAN_S	Units: mg/Kg	Prep Date: 11/17/2014	RunNo: 4974
Client ID:	PBS	Batch ID: 2957	TestNo: SW6010C	SW3050B	Analysis Date: 11/18/2014	SeqNo: 92958

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	0.400									U

Sample ID	LCSS111714A	SampType: LCS	TestCode: ICPSCAN_S	Units: mg/Kg	Prep Date: 11/17/2014	RunNo: 4974
Client ID:	LCSS	Batch ID: 2957	TestNo: SW6010C	SW3050B	Analysis Date: 11/18/2014	SeqNo: 92959

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	40.2	0.400	40.00	0	101	80	120				
Antimony	40.3	0.500	40.00	0	101	80	120				
Arsenic	40.6	0.500	40.00	0	101	80	120				
Barium	40.5	0.400	40.00	0	101	80	120				
Beryllium	40.3	0.400	40.00	0	101	80	120				
Cadmium	40.5	0.400	40.00	0	101	80	120				
Calcium	40.5	0.500	40.00	0	101	80	120				
Chromium	40.5	0.400	40.00	0	101	80	120				
Cobalt	40.4	0.400	40.00	0	101	80	120				
Copper	40.5	0.400	40.00	0	101	80	120				
Iron	40.4	0.400	40.00	0	101	80	120				
Lead	40.4	0.400	40.00	0	101	80	120				
Magnesium	40.5	0.400	40.00	0	101	80	120				
Manganese	40.2	0.400	40.00	0	100	80	120				
Molybdenum	40.5	0.400	40.00	0	101	80	120				
Nickel	40.7	0.400	40.00	0	102	80	120				
Potassium	406	0.500	400.0	0	101	80	120				
Selenium	40.6	0.500	40.00	0	102	80	120				
Silver	40.3	0.400	40.00	0	101	80	120				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2957

Sample ID LCSS111714A | SampType: LCS | TestCode: ICPSCAN_S | Units: mg/Kg | Prep Date: 11/17/2014 | RunNo: 4974
Client ID: LCSS | Batch ID: 2957 | TestNo: SW6010C | SW3050B | Analysis Date: 11/18/2014 | SeqNo: 92959

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	40.5	0.500	40.00	0	101	80	120				
Thallium	40.3	0.500	40.00	0	101	80	120				
Vanadium	40.5	0.400	40.00	0	101	80	120				
Zinc	40.4	0.400	40.00	0	101	80	120				

Sample ID 1411093-001BMS | SampType: MS | TestCode: ICPSCAN_S | Units: mg/Kg-dry | Prep Date: 11/17/2014 | RunNo: 4974
Client ID: BatchQC | Batch ID: 2957 | TestNo: SW6010C | SW3050B | Analysis Date: 11/18/2014 | SeqNo: 92965

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1700	0.428	21.38	1726	-112	75	125				S
Antimony	19.6	0.534	21.38	0	91.7	75	125				
Arsenic	21.5	0.534	21.38	0.9877	95.8	75	125				
Barium	28.9	0.428	21.38	8.683	94.8	75	125				
Beryllium	19.8	0.428	21.38	0	92.8	75	125				
Cadmium	20.6	0.428	21.38	0.5229	94.0	75	125				
Calcium	324	0.534	21.38	303.4	94.6	75	125				
Chromium	26.7	0.428	21.38	6.168	95.9	75	125				
Cobalt	17.2	0.428	21.38	0	80.7	75	125				
Copper	36.2	0.428	21.38	15.76	95.9	75	125				
Iron	2770	0.428	21.38	2823	-248	75	125				S
Lead	60.8	0.428	21.38	42.02	87.6	75	125				
Magnesium	282	0.428	21.38	268.9	59.9	75	125				S
Manganese	40.9	0.428	21.38	21.50	90.5	75	125				
Molybdenum	21.3	0.428	21.38	0.4561	97.5	75	125				
Nickel	23.7	0.428	21.38	3.562	94.2	75	125				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2957

Sample ID 1411093-001BMS SampType: MS TestCode: ICPSCAN_S Units: mg/Kg-dry Prep Date: 11/17/2014 RunNo: 4974
Client ID: BatchQC Batch ID: 2957 TestNo: SW6010C SW3050B Analysis Date: 11/18/2014 SeqNo: 92965

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	332	0.534	213.6	107.9	105	75	125				
Selenium	20.0	0.534	21.38	0	93.7	75	125				
Silver	18.5	0.428	21.38	0	86.4	75	125				
Sodium	32.9	0.534	21.38	12.67	94.6	75	125				
Thallium	19.3	0.534	21.38	0	90.1	75	125				
Vanadium	26.0	0.428	21.38	5.188	97.2	75	125				
Zinc	69.9	0.428	21.38	50.74	89.4	75	125				

Sample ID 1411093-001BMSD SampType: MSD TestCode: ICPSCAN_S Units: mg/Kg-dry Prep Date: 11/17/2014 RunNo: 4974
Client ID: BatchQC Batch ID: 2957 TestNo: SW6010C SW3050B Analysis Date: 11/18/2014 SeqNo: 92966

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1690	0.424	21.21	1726	-157	75	125	1701	0.545	20	S
Antimony	19.6	0.530	21.21	0	92.5	75	125	19.60	0.0476	20	
Arsenic	21.5	0.530	21.21	0.9877	96.5	75	125	21.48	0.0709	20	
Barium	28.8	0.424	21.21	8.683	94.7	75	125	28.95	0.643	20	
Beryllium	19.8	0.424	21.21	0	93.2	75	125	19.84	0.424	20	
Cadmium	20.6	0.424	21.21	0.5229	94.7	75	125	20.63	0.105	20	
Calcium	322	0.530	21.21	303.4	90.1	75	125	323.6	0.342	20	
Chromium	26.5	0.424	21.21	6.188	95.9	75	125	26.68	0.554	20	
Cobalt	17.1	0.424	21.21	0	80.5	75	125	17.25	1.03	20	
Copper	36.1	0.424	21.21	15.76	96.0	75	125	36.25	0.375	20	
Iron	2760	0.424	21.21	2823	-288	75	125	2770	0.287	20	S
Lead	60.4	0.424	21.21	42.02	86.8	75	125	60.79	0.595	20	
Magnesium	280	0.424	21.21	268.9	51.6	75	125	281.7	0.658	20	S

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing

Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2957

Sample ID	1411093-001BMSD	SampType: MSD		TestCode: ICPSCAN_S		Units: mg/Kg-dry		Prep Date: 11/17/2014			RunNo: 4974		
Client ID:	BatchQC	Batch ID: 2957		TestNo: SW6010C		SW3050B		Analysis Date: 11/18/2014			SeqNo: 92866		
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese			40.5	0.424	21.21	21.50	89.8	75	125	40.85	0.748	20	
Molybdenum			21.3	0.424	21.21	0.4561	98.2	75	125	21.29	0.0644	20	
Nickel			23.6	0.424	21.21	3.562	94.6	75	125	23.70	0.327	20	
Potassium			332	0.530	212.1	107.9	106	75	125	331.5	0.0444	20	
Selenium			20.1	0.530	21.21	0	94.9	75	125	20.03	0.458	20	
Silver			18.5	0.424	21.21	0	87.3	75	125	18.48	0.141	20	
Sodium			32.7	0.530	21.21	12.67	94.3	75	125	32.91	0.729	20	
Thallium			19.1	0.530	21.21	0	89.8	75	125	19.26	1.07	20	
Vanadium			25.8	0.424	21.21	5.188	97.2	75	125	25.98	0.664	20	
Zinc			69.6	0.424	21.21	50.74	89.0	75	125	69.85	0.346	20	

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2960

Sample ID	MBS111714A	SampType: MBLK	TestCode: HG_S	Units: mg/Kg	Prep Date: 11/17/2014	RunNo: 4973
Client ID:	PBS	Batch ID: 2960	TestNo: SW7471B	SW7471B	Analysis Date: 11/18/2014	SeqNo: 92928

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0120									U

Sample ID	LCSS111714A	SampType: LCS	TestCode: HG_S	Units: mg/Kg	Prep Date: 11/17/2014	RunNo: 4973
Client ID:	LCSS	Batch ID: 2960	TestNo: SW7471B	SW7471B	Analysis Date: 11/18/2014	SeqNo: 92929

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.193	0.0120	0.2000	0	96.5	80	120				

Sample ID	1411093-001BMS	SampType: MS	TestCode: HG_S	Units: mg/Kg-dry	Prep Date: 11/17/2014	RunNo: 4973
Client ID:	BatchQC	Batch ID: 2960	TestNo: SW7471B	SW7471B	Analysis Date: 11/18/2014	SeqNo: 92934

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.240	0.0127	0.2117	0.05345	88.0	80	120				

Sample ID	1411093-001BMSD	SampType: MSD	TestCode: HG_S	Units: mg/Kg-dry	Prep Date: 11/17/2014	RunNo: 4973
Client ID:	BatchQC	Batch ID: 2960	TestNo: SW7471B	SW7471B	Analysis Date: 11/18/2014	SeqNo: 92935

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.245	0.0126	0.2096	0.05345	91.5	80	120	0.2397	2.27	20	

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY
BatchID: 2969

Sample ID MBS111814A	SampType: MBLK	TestCode: Cr6_S	Units: mg/Kg	Prep Date: 11/18/2014	RunNo: 4979
Client ID: PBS	Batch ID: 2969	TestNo: SW7196A	SW3060A	Analysis Date: 11/18/2014	SeqNo: 93017

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.500									U

Sample ID LCSS111814A	SampType: LCS	TestCode: Cr6_S	Units: mg/Kg	Prep Date: 11/18/2014	RunNo: 4979
Client ID: LCSS	Batch ID: 2969	TestNo: SW7196A	SW3060A	Analysis Date: 11/18/2014	SeqNo: 93018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	10.1	0.500	10.00	0	101	80	120				

Sample ID 1411102-002AMS	SampType: MS	TestCode: Cr6_S	Units: mg/Kg	Prep Date: 11/18/2014	RunNo: 4979
Client ID: BatchQC	Batch ID: 2969	TestNo: SW7196A	SW3060A	Analysis Date: 11/18/2014	SeqNo: 93024

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	9.48	0.500	10.00	0	94.8	75	125				

Sample ID 1411102-002AMSD	SampType: MSD	TestCode: Cr6_S	Units: mg/Kg	Prep Date: 11/18/2014	RunNo: 4979
Client ID: BatchQC	Batch ID: 2969	TestNo: SW7196A	SW3060A	Analysis Date: 11/18/2014	SeqNo: 93025

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	9.36	0.500	10.00	0	93.6	75	125	9.480	1.27	0	

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY
BatchID: 2978

Sample ID MB-2978	SampType: MBLK	TestCode: 8151_S	Units: %REC	Prep Date: 11/19/2014	RunNo: 5065
Client ID: PBS	Batch ID: 2978	TestNo: SW8151A	SW8151A	Analysis Date: 11/21/2014	SeqNo: 95069

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4-DCAA	570		16.66		3440	16	152				PS

Sample ID LCS-2978	SampType: LCS	TestCode: 8151_S	Units: %REC	Prep Date: 11/19/2014	RunNo: 5065
Client ID: LCSS	Batch ID: 2978	TestNo: SW8151A	SW8151A	Analysis Date: 11/21/2014	SeqNo: 95070

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4-DCAA	490		16.66		2940	16	152				PS

Sample ID 1411124-001BMS	SampType: MS	TestCode: 8151_S	Units: %REC	Prep Date: 11/19/2014	RunNo: 5065
Client ID: BatchQC	Batch ID: 2978	TestNo: SW8151A	SW8151A	Analysis Date: 11/21/2014	SeqNo: 95075

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4-DCAA	13		19.24		69.1	16	152				P

Sample ID 1411124-001BMSD	SampType: MSD	TestCode: 8151_S	Units: %REC	Prep Date: 11/19/2014	RunNo: 5065
Client ID: BatchQC	Batch ID: 2978	TestNo: SW8151A	SW8151A	Analysis Date: 11/21/2014	SeqNo: 95076

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4-DCAA	44		19.30		227	16	152		0	0	PS

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2978

Sample ID MB-2978 | SampType: MBLK | TestCode: 8151_S | Units: µg/Kg | Prep Date: 11/19/2014 | RunNo: 5064
Client ID: PBS | Batch ID: 2978 | TestNo: SW8151A | SW8151A | Analysis Date: 11/21/2014 | SeqNo: 95079

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-T	ND	3.0									U
2,4,5-TP	ND	3.0									U
2,4-D	ND	3.0									U
Dicamba	ND	3.0									U
Surr: 2,4-DCAA	170		16.66		995	16	152				PS

Sample ID LCS-2978 | SampType: LCS | TestCode: 8151_S | Units: µg/Kg | Prep Date: 11/19/2014 | RunNo: 5064
Client ID: LCSS | Batch ID: 2978 | TestNo: SW8151A | SW8151A | Analysis Date: 11/21/2014 | SeqNo: 95080

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-T	15	3.0	33.33	0	46.0	20	131				
2,4,5-TP	10	3.0	33.33	0	30.1	23	137				
2,4-D	29	3.0	33.33	0	88.3	25	139				P
Dicamba	15	3.0	33.33	0	44.1	20	138				
Surr: 2,4-DCAA	150		16.66		929	16	152				PS

Sample ID 1411124-001BMS | SampType: MS | TestCode: 8151_S | Units: µg/Kg-dry | Prep Date: 11/19/2014 | RunNo: 5064
Client ID: BatchQC | Batch ID: 2978 | TestNo: SW8151A | SW8151A | Analysis Date: 11/21/2014 | SeqNo: 95085

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-T	25	3.5	38.49	0	64.7	20	125				
2,4,5-TP	20	3.5	38.49	0	52.3	23	130				
2,4-D	28	3.5	38.49	0	72.9	20	132				

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2978

Sample ID 1411124-001BMS | SampType: MS | TestCode: 8151_S | Units: µg/Kg-dry | Prep Date: 11/19/2014 | RunNo: 5064
Client ID: BatchQC | Batch ID: 2978 | TestNo: SW8151A | SW8151A | Analysis Date: 11/21/2014 | SeqNo: 95085

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dicamba	22	3.5	38.49	1.216	53.5	20	120				P
Surr: 2,4-DCAA	81		19.24		422	16	152				PS

Sample ID 1411124-001BMSD | SampType: MSD | TestCode: 8151_S | Units: µg/Kg-dry | Prep Date: 11/19/2014 | RunNo: 5064
Client ID: BatchQC | Batch ID: 2978 | TestNo: SW8151A | SW8151A | Analysis Date: 11/21/2014 | SeqNo: 95086

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-T	27	3.5	38.62	0	70.7	20	125	24.69	9.23	20	P
2,4,5-TP	19	3.5	38.62	0	49.8	23	130	20.12	4.55	20	P
2,4-D	37	3.5	38.62	0	94.7	20	132	28.06	26.4	20	P*
Dicamba	22	3.5	38.62	1.216	53.0	20	120	21.62	0.637	20	P
Surr: 2,4-DCAA	65		19.30		335	16	152		0	0	PS

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY
BatchID: 2993

Sample ID BL	SampType: MBLK	TestCode: CN_S	Units: mg/Kg	Prep Date: 11/20/2014	RunNo: 5031
Client ID: PBS	Batch ID: 2993	TestNo: SW9012B	SW9012B	Analysis Date: 11/20/2014	SeqNo: 93852

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Total & Amenable: Auto Colorimetric	ND	0.100									U

Sample ID LCS	SampType: LCS	TestCode: CN_S	Units: mg/Kg	Prep Date: 11/20/2014	RunNo: 5031
Client ID: LCSS	Batch ID: 2993	TestNo: SW9012B	SW9012B	Analysis Date: 11/20/2014	SeqNo: 93853

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Total & Amenable: Auto Colorimetric	1.85	0.100	2.000	0	92.5	80	120				

Sample ID 1411089-003BMS	SampType: MS	TestCode: CN_S	Units: mg/Kg-dry	Prep Date: 11/20/2014	RunNo: 5031
Client ID: 92X Test Hole #3	Batch ID: 2993	TestNo: SW9012B	SW9012B	Analysis Date: 11/20/2014	SeqNo: 93859

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Total & Amenable: Auto Colorimetric	2.13	0.120	2.393	0	89.0	63	123				

Sample ID 1411089-003BMSD	SampType: MSD	TestCode: CN_S	Units: mg/Kg-dry	Prep Date: 11/20/2014	RunNo: 5031
Client ID: 92X Test Hole #3	Batch ID: 2993	TestNo: SW9012B	SW9012B	Analysis Date: 11/20/2014	SeqNo: 93860

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Total & Amenable: Auto Colorimetric	2.12	0.120	2.393	0	88.5	63	123	2.129	0.563	20	

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089
26-Nov-14

Client: Armstrong Roofing
Project: NYC SCA PS 92X, Bronx, NY

BatchID: 2993

Sample ID	1411089-003BMSD	SampType: MSD	TestCode: CN_S	Units: mg/Kg-dry	Prep Date: 11/20/2014	RunNo: 5031							
Client ID:	92X Test Hole #3	Batch ID: 2993	TestNo: SW9012B	SW9012B	Analysis Date: 11/20/2014	SeqNo: 93860							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original

QC SUMMARY REPORT

WO#: 1411089

26-Nov-14

Client: Armstrong Roofing

Project: NYC SCA PS 92X, Bronx, NY

BatchID: R4980

Sample ID	MB-R4980	SampType: MBLK	TestCode: CR3_S	Units: mg/Kg	Prep Date:				RunNo: 4980		
Client ID:	PBS	Batch ID: R4980	TestNo: SW6010C		Analysis Date: 11/19/2014				SeqNo: 93026		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Trivalent	ND	0.400									U

Qualifiers: R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

Original