AECOM
3995 Via Oro Avenue
Long Beach, California

562-420-2933 tel
562-420-2915 fax

Letter of Transmittal

Attention:	Ms. Elizabeth Overstreet	Date:	1/15/2010
Project reference:	Report on Limited Remedial Excavation Activities of PAH Impacted Soil	Project number:	60132933.600

We are sending you the following:

Number of originals:	Number of copies:	Description:
1		Report on Limited Remedial Excavation Activities of PAH Impacted Soil

Should you have any questions please call me at 562-420-2933.

for: Samantha Fernandes, Senior Project Manager

AECOM
3995 Via Oro Avenue
Long Beach, CA 90810

562.420.2933 tel
562.420.2915 fax

January 15, 2010

Ms. Elizabeth Overstreet
City of Torrance Public Works Department
20500 Madrona Avenue
Torrance, California 90503

Subject: Report on Limited Remedial Excavation Activities of PAH Impacted Soil
City of Torrance Utility Easement at Dow Chemical Facility
305 Crenshaw Boulevard, Torrance, California 90503

Dear Ms. Overstreet,

AECOM Environment (AECOM) is pleased to submit this report describing limited remedial excavation activities associated with removal and disposal of polynuclear aromatic hydrocarbons (PAH) impacted soil located within the City of Torrance utility easement on a portion of the Dow Chemical Facility (Site), located at 305 Crenshaw Boulevard in Torrance, California (Figure 1). The scope of work performed for this remedial effort was in accordance with the proposal submitted to the City of Torrance Public Works Department (PWD) on July 13, 2009.

Previous Work

During Phase II Investigation completed by AECOM in June 2009 at the Site, two areas within the City of Torrance utility easement were found to contain certain PAH that exceeded their respective US Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for industrial and residential soil. The two areas were at soil borings DOW-SB1 and DOW-SB4 located near the northwest corner of the Dow Chemical property and along the north side of the baseball field, respectively, as shown in Figure 1. In July, 2009, additional investigation was completed around soil borings locations DOW-SB1 and DOW-SB4 to assess the vertical and lateral extent of PAH impacted soil. Soil analytical data showed that the vertical extent of PAH impacts was limited to 3 feet below grade (fbg) and that the PAH's, benzo(a)anthracene, benzo(a)pyrene, benzo(a)fluoranthene, and indeno(1,2,3-cd)pyrene, were detected at concentrations greater than their respective residential and/or industrial soil regional screening levels in four of six step-out locations completed. Based on these results and discussions with the City of Torrance PWD, remedial excavation was proposed and selected to address clean-up of the PAH impacted soil.

Fieldwork

In December 2009, AECOM excavated the PAH impacted soil at the Site in the areas surrounding soil borings DOW-SB1 and DOW-SB4. The following sections describe soil remediation activities completed by AECOM.

Fieldwork Preparation

Prior to the initiation of fieldwork associated with the excavation, AECOM completed the following:

- Notified the South Coast Air Quality Management District (AQMD) of the pending excavation activities, per the requirements of AQMD Rule 1166, on December 8, 2009
- Marked excavation boundaries and notified Underground Service Alert (USA) on December 8, 2009 of the pending excavation activities
- Conducted a "meet and mark" with utility company representatives on December 10, 2009
- Conducted a geophysical survey using a private utility locator to clear the proposed excavation areas of utilities and subsurface structures on December 10, 2009

Excavation Activities

Innovative Construction Solutions, Inc. (ICS), under the supervision of AECOM field personnel, excavated to 3 fbg two 10-foot by 10-foot areas on December 10, 2009. The excavations were centered on the locations of soil borings DOW-SB1 and DOW-SB4 (Figure 1). Excavation activities were completed using backhoe equipment. Excavated soil was monitored for volatile organic compounds (VOCs) using a photo-ionization detector (PID), in accordance with the requirements of AQMD Rule 1166, and then immediately loaded into dump trucks staged onsite.

Confirmation Soil Sampling

Upon the completion of each excavation, one confirmation soil sample was collected from each excavation sidewall and from the base of each excavation. A stainless steel trowel was used to scrape away surface soil at the sample sites to expose undisturbed soil. The undisturbed soil was then placed into laboratory-supplied glass jars. The hand trowel was decontaminated between samples using a solution of Alconox and de-ionized water followed double rinse with de-ionized water. The soil samples were then labeled, placed into a cooler with ice, and transported to TestAmerica Laboratory, a California Department of Heath Services Environmental Laboratory Accreditation Program (ELAP) certified laboratory located in Irvine, California, under standard chain-of-custody procedures. Soil samples were analyzed for PAHs using EPA Method 8270C on a 48-hour turnaround time.

Backfill Operations

Following the collection of confirmation soil samples, the excavations were backfilled with clean soil obtained from West Coast Sand and Gravel which was mined from the Corona virgin quarry site. The excavations were then compacted and graded using the equipment onsite.

Waste Management

Excavated soil was transported to WM / Thermal Remediation Solutions in Azusa, California for treatment/disposal. Copies of the waste manifests are included in Attachment 1.

Results and Conclusions

Analytical results for the confirmation soil samples are summarized in Table 1. Laboratory reports and chain-of-custody forms are provided in Attachment 2. Confirmation soil samples collected on December 10, 2009, following excavation activities, contained no PAHs at concentrations above their respective reporting limits. These analytical data indicate that the remedial excavation was successful in removing the PAH impacted soil in proximity to boreholes DOW-SB1 and DOW-SB4.

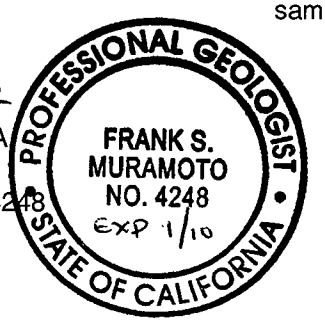
Should you have any questions or need further information regarding the above, please contact Samantha Fernandes with AECOM at (562) 420-2933.

Yours sincerely,

Daniel Buckley
Staff Specialist II
daniel.buckley@aecom.com

Samantha Fernandes, P.G.
Senior Project Manager
California Professional Geologist #8509
samantha.fernandes@aecom.com

Frank Muramoto, P.G., C.HG, R.E.A
Senior Program Manager
California Professional Geologist #4248
frank.muramoto@aecom.com



cc: Eric Wilson – AECOM
Shannon Daniels – AECOM

Enclosures: Figure 1 – Soil Boring Location Map
Table 1 – Excavation Soil Sample Results – PAHs
Attachment 1 – Waste Manifests
Attachment 2 – Laboratory Report

Table

Excavation Soil Sample Results - PAHs
Limited Soil Remediation
Dow Chemical Facility, Torrance, CA

Parameters	Soil Screening Levels [1]		Protection of Groundwater SSLs [1]		Location ID: / Sample Date: / Sample ID: / Sample Depth (feet below grade): / Units:	DOW-SB1 12/10/2009 DOW-SB1-Northsidewall-121009 2.5	DOW-SB1 12/10/2009 DOW-SB1-Eastsidewall-121009 2.5	DOW-SB1 12/10/2009 DOW-SB1-Southsidewall-121009 2.5	DOW-SB1 12/10/2009 DOW-SB1-Westsidewall-121009 2.5	DOW-SB1 12/10/2009 DOW-SB1-Excavationbase-121009 3.0	DOW-SB4 12/10/2009 DOW-SB4-Northsidewall-121009 2.5	DOW-SB4 12/10/2009 DOW-SB4-Eastsidewall-121009 2.5	DOW-SB4 12/10/2009 DOW-SB4-Southsidewall-121009 2.5	DOW-SB4 12/10/2009 DOW-SB4-Westsidewall-121009 2.5	DOW-SB4 12/10/2009 DOW-SB4-Excavationbase-121009 3.0
PAHs	Residential RSL	Industrial RSL	Risk-Based SSL:	MCL-based SSL:											
Acenaphthene	3,400	33,000	27	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Acenaphthylene	NE	NE	NE	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Anthracene	17,000	170,000	450	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Benzo(a)anthracene	0.15	2.1	0.014	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Benzo(a)pyrene	0.015	0.21	0.0046	0.31	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Benzo(b)fluoranthene	0.15	2.1	0.047	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Benzo(g,h,i)perylene	NE	NE	NE	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Benzo(k)fluoranthene	1.5	21	0.46	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Chrysene	15	210	1.4	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Dibenz(a,h)anthracene	0.015	0.21	0.015	NE	mg/kg	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42
Fluoranthene	2,300	22,000	210	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Fluorene	2,300	22,000	33	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Indeno(1,2,3-cd)pyrene	0.15	2.1	0.16	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
2-Methylnaphthalene	310	4,100	0.90	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Naphthalene	3.9	20	0.00055	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Phenanthrene	NE	NE	NE	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Pyrene	1,700	17,000	150	NE	mg/kg	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33

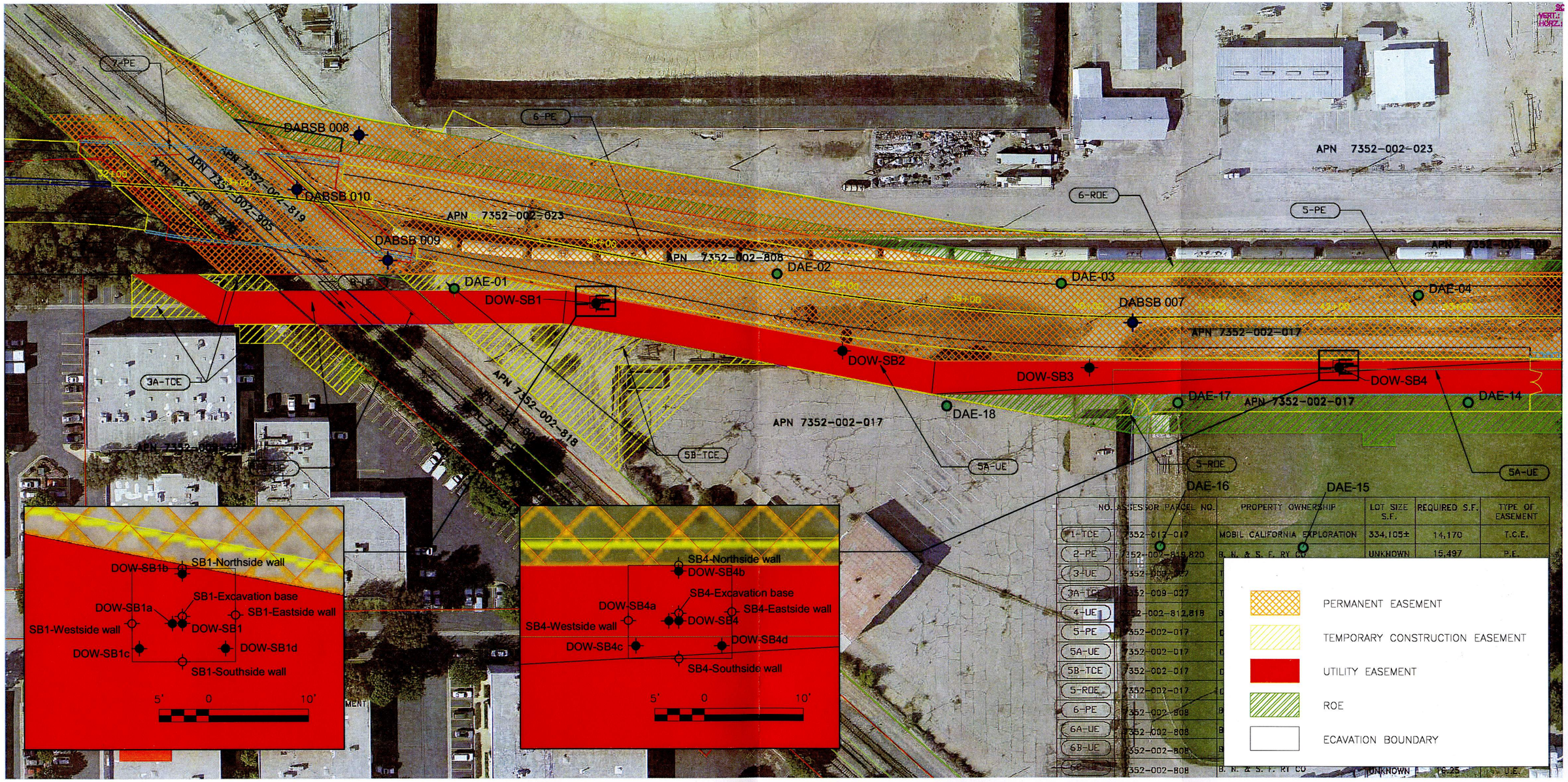
Notes:
PAHs = polycyclic aromatic hydrocarbons
< = Analyte not detected above laboratory method detection limit
mg/kg = milligrams per kilogram
RSL = regional screening level
SSL = soil screening level
NE = not established
1. Source: Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites.
United States Environmental Protection Agency, April 2009.

Prepared by: D.B.
Checked by: S.F.

January 2010

Figure

File: J:\ENSR\EDAW\DOW Phase II Soils Investigation\02450-070-400\SB Location Map_B1.dwg Layout: ANSI_B1_LJ User: mexias Plotted: Dec 28, 2009 - 8:52am Xref's:



NO.	ASSESSOR PARCEL NO.	PROPERTY OWNERSHIP	LOT SIZE S.F.	REQUIRED S.F.	TYPE OF EASEMENT
1-TCE	7352-013-017	MOBIL CALIFORNIA EXPLORATION	334,105±	14,170	T.C.E.
2-PE	7352-002-818,820	B. N. & S. F. RY CO	UNKNOWN	15,497	P.E.
3-UE	7352-009-027				
3A-TCE	7352-009-027				
4-UE	7352-002-812,818				
5-PE	7352-002-017				
5A-UE	7352-002-017				
5B-TCE	7352-002-017				
5-ROE	7352-002-017				
6-PE	7352-002-808				
6A-UE	7352-002-808				
6B-UE	7352-002-808				
6C-TE	7352-002-808	B. N. & S. F. RY CO	UNKNOWN	16.25	U.E.

PERMANENT EASEMENT
TEMPORARY CONSTRUCTION EASEMENT
UTILITY EASEMENT
ROE
ECAVATION BOUNDARY

LEGEND

SB1-Northside Wall	AECOM SOIL BORING LOCATIONS (DECEMBER 2009)
DOW-SB1	AECOM SOIL BORING LOCATIONS (JUNE/JULY 2009)
DAE-15	URS SOIL BORING LOCATIONS (2004)
DABSB 007	EDAW SOIL BORING LOCATIONS (2001)

N

40 0 80

SCALE IN FEET

NOTES:
- Soil boring locations are approximate.

SOURCES:
- EDAW Inc., Phase II Soil Investigation Report, Del Amo Boulevard Extension, Torrance, California – Figure 9. July 2001.
- URS Corp., Del Amo Boulevard Corridor, Phase II Field Sampling Investigation Report, The Dow Chemical Company, Torrance, California – Figure 2. October 2004.
- City of Torrance Public Works Department, Right-Of-Way Requirement Map 3, December 31, 2006.

AECOM

DOW CHEMICAL FACILITY
305 CRENSHAW BLVD.
TORRANCE, CALIFORNIA

SOIL BORING LOCATION MAP

DATE: 07/20/09 | DRWN: SM | CKD: DB | PROJ#: 60132933-600 | **FIGURE 1**

Attachment 1

Waste Manifests

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone (714) 334-3306	4. Waste Tracking Number Manifest/Load No.: 001

GENERATOR

5. Generator's Name and Mailing Address

City of Torrance - Department of Public Works
20500 Madrona Avenue, Torrance, California 90503

Generator's Phone: (310) 618-3074 Attn: Elizabeth Overstreet

Generator's Site Address (if different than mailing address)

305 Crenshaw Boulevard
Torrance, California 90503

6. Transporter 1 Company Name: Martins Trucking (626) 354-7676 — U.S. EPA ID Number:

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address — U.S. EPA ID Number:

WM / Thermal Remediation Solutions
1211 West Gladestone Avenue, Azusa, California 91702

Facility's Phone: (626) 338-3939

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non Hazardous Soil (Soil with Hydrocarbons)	001	DT	15	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

Soil: 99 - 100% WM/TRS Profile No.: 113320CA Rule 1166 VOC Soil: Yes___ No___

Debris: 0 - 1% Wear appropriate Personal Protective Equipment as necessary

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Douglas Butler (on behalf of the City of Torrance) Signature: [signature] Month: 12 Day: 10 Year: 09

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Origoo Signature: [signature] Month: 12 Day: 10 Year: 09

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number:

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Miguel Marcelo 2:00pm Signature: [signature] Month: 12 Day: 10 Year: 09

169-BLC-O 6 10498 (Rev. 8/05) DESIGNATED FACILITY TO GENERATOR

WASTE MANAGEMENT

Thermal Remediation Solutions
1211 W. Gladstone St
Azusa, CA, 91702
Ph: (626) 334-0719

Original
Ticket# 4895

Customer Name INNOVATIVECONSTSOLU INNOVATIV
Ticket Date 12/10/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 001
Destination
PO 09-1464

Carrier GT EQUIP GT EQUIP
Vehicle# 003 Volume 11.0
Container
Driver
Check#
Billing # 0000001
Gen EPA ID
VehicleLicense: 7f34074
Generator 144-CITY OF TORRANCE2 City of To
Profile 113320CA (C3 PHCS Soil RGC~Innov

	Time	Scale	Weighmaster	Inbound		
In	12/10/2009 13:29:26	Scale 1	Claudia Felix		Gross	60960 lb*
Out	12/10/2009 14:02:30	Scale 2	Claudia Felix		Tare	24660 lb*
			* Manual Weight		Net	36300 lb
					Tons	18.15

Comments

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	C3 PHCS Soil RGC-T	100	18.15	Tons				Torrance
2	FUEL-Fuel Surcharg	100		%				Torrance
3	Evf8-Env Fee $8 Lg	100	1	Load				Torrance

Weighmaster Certificate

Total Tax
Total Ticket

THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature appears on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Dept. of Food and Agriculture.

DRIVER: _____

403WMCA

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number:

2. Page 1 of: 1

3. Emergency Response Phone: (714) 334-3306

4. Waste Tracking Number: Manifest/Load No.: 002

GENERATOR

5. Generator's Name and Mailing Address:
City of Torrance - Department of Public Works
20500 Madrona Avenue, Torrance, California 90503
Generator's Phone: (310) 618-3074 Attn: Elizabeth Overstreet

Generator's Site Address (if different than mailing address):
305 Crenshaw Boulevard
Torrance, California 90503

6. Transporter 1 Company Name: Martins Trucking (626) 354-7676
U.S. EPA ID Number: N/A

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address:
WM / Thermal Remediation Solutions
1211 West Gladestone Avenue, Azusa, California 91702
Facility's Phone: (626) 338-3939
U.S. EPA ID Number:

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non Hazardous Soil (Soil with Hydrocarbons)	001	DT	15	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

Soil: 99 -100% WM/TRS Profile No.: 113320CA Rule 1166 VOC Soil: Yes___ No___

Debris: 0 - 1% Wear appropriate Personal Protective Equipment as necessary

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Douglas Burton (on behalf of the City of Torrance) Signature: Douglas Burton Month: 12 Day: 10 Year: 09

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Robert Kostikyan Signature: Month: 12 Day: 10 Year: 09

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Miguel Morales Signature: Month: 12 Day: 10 Year: 09

7:02 am

169-BLC-O 6 10498 (Rev. 8/06) DESIGNATED FACILITY TO GENERATOR

WASTE MANAGEMENT

Thermal Remediation Solutions
1211 W. Gladstone St
Azusa, CA, 91702
Ph: (626) 334-0719

Original
Ticket# 4896

Customer Name INNOVATIVECONSTSOLU INNOVATIV
Ticket Date 12/10/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 002
Destination
PO 09-1464

Carrier MARTIN MARTIN TRK
Vehicle# S 10
Container
Driver
Check#
Billing # 0000001
Gen EPA ID
VehicleLicense: 7Y89390
Generator 144-CITY OF TORRANCE2 City of To
Profile 113320CA (C3 PHCS Soil RGC~Innov

Volume 11.0

	Time	Scale	Weighmaster	Inbound		
In	12/10/2009 13:36:01	Scale 1	Claudia Felix		Gross	49360 lb*
Out	12/10/2009 14:02:05	Scale 2	Claudia Felix		Tare	23760 lb
			* Manual Weight		Net	25600 lb
					Tons	12.80

Comments

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	C3 PHCS Soil RGC-T	100	12.80	Tons				Torrance
2	FUEL-Fuel Surcharg	100		%				Torrance
3	Evf8-Env Fee $8 Lg	100	1	Load				Torrance

Weighmaster Certificate

Total Tax
Total Ticket

THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature appears on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Dept. of Food and Agriculture.

DRIVER: _____

403WMCA

Attachment 2

Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

LABORATORY REPORT

Prepared For: AECOM Inc - Long Beach
3995 Via Oro Ave
Long Beach, CA 90810
Attention: Samantha Fernandes

Project: City of Torrance, Dow Chemical
60132933-600

Sampled: 12/10/09
Received: 12/10/09
Issued: 12/14/09 15:54

NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

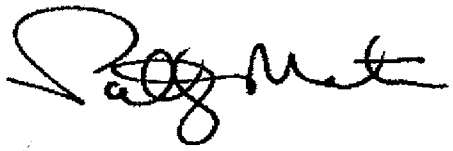
QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
ISL1375-01	DOW-SB1-Northsidewall-121009	Soil
ISL1375-02	DOW-SB1-Eastsidewall-121009	Soil
ISL1375-03	DOW-SB1-Southsidewall-121009	Soil
ISL1375-04	DOW-SB1-Westsidewall-121009	Soil
ISL1375-05	DOW-SB1-Excavationbase-121009	Soil
ISL1375-06	DOW-SB4-Northsidewall-121009	Soil
ISL1375-07	DOW-SB4-Eastsidewall-121009	Soil
ISL1375-08	DOW-SB4-Southsidewall-121009	Soil
ISL1375-09	DOW-SB4-Westsidewall-121009	Soil
ISL1375-10	DOW-SB4-Excavationbase-121009	Soil

Reviewed By:



TestAmerica Irvine

Patty Mata
Project Manager

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

COM Inc - Long Beach
5 Via Oro Ave
Long Beach, CA 90810
Attention: Samantha Fernandes

Project ID: City of Torrance, Dow Chemical
60132933-600
Report Number: ISL1375

Sampled: 12/10/09
Received: 12/10/09

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL1375-01 (DOW-SB1-Northsidewall-121009 - Soil)								
Reporting Units: ug/kg								
Acenaphthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Acenaphthylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(b)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(g,h,i)perylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(k)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Chrysene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Dibenz(a,h)anthracene	EPA 8270C	9L11103	420	ND	1	12/11/2009	12/12/2009	
Fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Fluorene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Indeno(1,2,3-cd)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
2-Methylnaphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Naphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
P ıthrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Surrogate: 2-Fluorobiphenyl (35-120%)				*72 %*				
Surrogate: Nitrobenzene-d5 (30-120%)				*71 %*				
Surrogate: Terphenyl-d14 (40-135%)				*92 %*				
Sample ID: ISL1375-02 (DOW-SB1-Eastsidewall-121009 - Soil)								
Reporting Units: ug/kg								
Acenaphthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Acenaphthylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(b)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(g,h,i)perylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(k)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Chrysene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Dibenz(a,h)anthracene	EPA 8270C	9L11103	420	ND	1	12/11/2009	12/12/2009	
Fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Fluorene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Indeno(1,2,3-cd)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
2-Methylnaphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Naphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Phenanthrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Surrogate: 2-Fluorobiphenyl (35-120%)				*77 %*				

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Project Manager

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COM Inc - Long Beach
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Attention: Samantha Fernandes

Project ID: City of Torrance, Dow Chemical
60132933-600
Report Number: ISL1375

Sampled: 12/10/09
Received: 12/10/09

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL1375-02 (DOW-SB1-Eastsidewall-121009 - Soil) - cont.								
Reporting Units: ug/kg								
Surrogate: Nitrobenzene-d5 (30-120%)				*75 %*				
Surrogate: Terphenyl-d14 (40-135%)				*91 %*				
Sample ID: ISL1375-03 (DOW-SB1-Southsidewall-121009 - Soil)								
Reporting Units: ug/kg								
Acenaphthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Acenaphthylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(b)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(g,h,i)perylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(k)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Chrysene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Dibenz(a,h)anthracene	EPA 8270C	9L11103	420	ND	1	12/11/2009	12/12/2009	
F anthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
F ene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Indeno(1,2,3-cd)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
2-Methylnaphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Naphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Phenanthrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Surrogate: 2-Fluorobiphenyl (35-120%)				*74 %*				
Surrogate: Nitrobenzene-d5 (30-120%)				*73 %*				
Surrogate: Terphenyl-d14 (40-135%)				*92 %*				
Sample ID: ISL1375-04 (DOW-SB1-Westsidewall-121009 - Soil)								
Reporting Units: ug/kg								
Acenaphthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Acenaphthylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(b)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(g,h,i)perylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(k)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Chrysene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Dibenz(a,h)anthracene	EPA 8270C	9L11103	420	ND	1	12/11/2009	12/12/2009	
Fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Fluorene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Indeno(1,2,3-cd)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
2 thylnaphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	

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Attention: Samantha Fernandes

Project ID: City of Torrance, Dow Chemical
60132933-600
Report Number: ISL1375

Sampled: 12/10/09
Received: 12/10/09

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL1375-04 (DOW-SB1-Westsidewall-121009 - Soil) - cont.								
Reporting Units: ug/kg								
Naphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Phenanthrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Surrogate: 2-Fluorobiphenyl (35-120%)				*71 %*				
Surrogate: Nitrobenzene-d5 (30-120%)				*69 %*				
Surrogate: Terphenyl-d14 (40-135%)				*87 %*				
Sample ID: ISL1375-05 (DOW-SB1-Excavationbase-121009 - Soil)								
Reporting Units: ug/kg								
Acenaphthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Acenaphthylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(b)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
[illegible](g,h,i)perylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
[illegible](k)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Chrysene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Dibenz(a,h)anthracene	EPA 8270C	9L11103	420	ND	1	12/11/2009	12/12/2009	
Fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Fluorene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Indeno(1,2,3-cd)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
2-Methylnaphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Naphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Phenanthrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Surrogate: 2-Fluorobiphenyl (35-120%)				*64 %*				
Surrogate: Nitrobenzene-d5 (30-120%)				*64 %*				
Surrogate: Terphenyl-d14 (40-135%)				*80 %*				

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Project ID: City of Torrance, Dow Chemical
60132933-600
Report Number: ISL1375

Sampled: 12/10/09
Received: 12/10/09

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL1375-06 (DOW-SB4-Northsidewall-121009 - Soil)								
Reporting Units: ug/kg								
Acenaphthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Acenaphthylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(b)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(g,h,i)perylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(k)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Chrysene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Dibenz(a,h)anthracene	EPA 8270C	9L11103	420	ND	1	12/11/2009	12/12/2009	
Fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Fluorene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Indeno(1,2,3-cd)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
2-Methylnaphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Naphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
I[illegible]nthrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Surrogate: 2-Fluorobiphenyl (35-120%)				*67 %*				
Surrogate: Nitrobenzene-d5 (30-120%)				*65 %*				
Surrogate: Terphenyl-d14 (40-135%)				*83 %*				
Sample ID: ISL1375-07 (DOW-SB4-Eastsidewall-121009 - Soil)								
Reporting Units: ug/kg								
Acenaphthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Acenaphthylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(b)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(g,h,i)perylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(k)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Chrysene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Dibenz(a,h)anthracene	EPA 8270C	9L11103	420	ND	1	12/11/2009	12/12/2009	
Fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Fluorene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Indeno(1,2,3-cd)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
2-Methylnaphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Naphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Phenanthrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Surrogate: 2-Fluorobiphenyl (35-120%)				*71 %*				

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Project ID: City of Torrance, Dow Chemical
60132933-600
Report Number: ISL1375
Sampled: 12/10/09
Received: 12/10/09

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL1375-07 (DOW-SB4-Eastsidewall-121009 - Soil) - cont.								
Reporting Units: ug/kg								
Surrogate: Nitrobenzene-d5 (30-120%)				*69 %*				
Surrogate: Terphenyl-d14 (40-135%)				*87 %*				
Sample ID: ISL1375-08 (DOW-SB4-Southsidewall-121009 - Soil)								
Reporting Units: ug/kg								
Acenaphthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Acenaphthylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(b)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(g,h,i)perylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(k)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Chrysene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Dibenz(a,h)anthracene	EPA 8270C	9L11103	420	ND	1	12/11/2009	12/12/2009	
F' unthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
F. .ene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Indeno(1,2,3-cd)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
2-Methylnaphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Naphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Phenanthrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Surrogate: 2-Fluorobiphenyl (35-120%)				*71 %*				
Surrogate: Nitrobenzene-d5 (30-120%)				*69 %*				
Surrogate: Terphenyl-d14 (40-135%)				*85 %*				
Sample ID: ISL1375-09 (DOW-SB4-Westsidewall-121009 - Soil)								
Reporting Units: ug/kg								
Acenaphthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Acenaphthylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(b)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(g,h,i)perylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(k)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Chrysene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Dibenz(a,h)anthracene	EPA 8270C	9L11103	420	ND	1	12/11/2009	12/12/2009	
Fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Fluorene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Indeno(1,2,3-cd)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
2 hylnaphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	

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Project ID: City of Torrance, Dow Chemical
60132933-600
Report Number: ISL1375

Sampled: 12/10/09
Received: 12/10/09

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL1375-09 (DOW-SB4-Westsidewall-121009 - Soil) - cont.								
Reporting Units: ug/kg								
Naphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Phenanthrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Surrogate: 2-Fluorobiphenyl (35-120%)				*67 %*				
Surrogate: Nitrobenzene-d5 (30-120%)				*67 %*				
Surrogate: Terphenyl-d14 (40-135%)				*82 %*				
Sample ID: ISL1375-10 (DOW-SB4-Excavationbase-121009 - Soil)								
Reporting Units: ug/kg								
Acenaphthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Acenaphthylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)anthracene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(a)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Benzo(b)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
B ›(g,h,i)perylene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
B. .o(k)fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Chrysene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Dibenz(a,h)anthracene	EPA 8270C	9L11103	420	ND	1	12/11/2009	12/12/2009	
Fluoranthene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Fluorene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Indeno(1,2,3-cd)pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
2-Methylnaphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Naphthalene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Phenanthrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Pyrene	EPA 8270C	9L11103	330	ND	1	12/11/2009	12/12/2009	
Surrogate: 2-Fluorobiphenyl (35-120%)				*72 %*				
Surrogate: Nitrobenzene-d5 (30-120%)				*71 %*				
Surrogate: Terphenyl-d14 (40-135%)				*86 %*				

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Project Manager

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

COM Inc - Long Beach
5 Via Oro Ave
Long Beach, CA 90810
Attention: Samantha Fernandes

Project ID: City of Torrance, Dow Chemical
60132933-600
Report Number: ISL1375

Sampled: 12/10/09
Received: 12/10/09

METHOD BLANK/QC DATA

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9L11103 Extracted: 12/11/09										
Blank Analyzed: 12/12/2009 (9L11103-BLK1)										
Acenaphthene	ND	330	ug/kg							
Acenaphthylene	ND	330	ug/kg							
Anthracene	ND	330	ug/kg							
Benzo(a)anthracene	ND	330	ug/kg							
Benzo(a)pyrene	ND	330	ug/kg							
Benzo(b)fluoranthene	ND	330	ug/kg							
Benzo(g,h,i)perylene	ND	330	ug/kg							
Benzo(k)fluoranthene	ND	330	ug/kg							
Chrysene	ND	330	ug/kg							
Dibenz(a,h)anthracene	ND	420	ug/kg							
Fluoranthene	ND	330	ug/kg							
Fluorene	ND	330	ug/kg							
Indeno(1,2,3-cd)pyrene	ND	330	ug/kg							
2-Methylnaphthalene	ND	330	ug/kg							
Naphthalene	ND	330	ug/kg							
Phenanthrene	ND	330	ug/kg							
Pyrene	ND	330	ug/kg							
Surrogate: 2-Fluorobiphenyl	*2820*		*ug/kg*	*3330*		*85*	*35-120*			
Surrogate: Nitrobenzene-d5	*2680*		*ug/kg*	*3330*		*80*	*30-120*			
Surrogate: Terphenyl-d14	*3370*		*ug/kg*	*3330*		*101*	*40-135*			
LCS Analyzed: 12/12/2009 (9L11103-BS1)										
Acenaphthene	2440	330	ug/kg	3330		73	50-120			
Acenaphthylene	2620	330	ug/kg	3330		79	50-120			
Anthracene	2700	330	ug/kg	3330		81	55-120			
Benzo(a)anthracene	2580	330	ug/kg	3330		78	55-120			
Benzo(a)pyrene	2860	330	ug/kg	3330		86	50-125			
Benzo(b)fluoranthene	2700	330	ug/kg	3330		81	45-125			
Benzo(g,h,i)perylene	3550	330	ug/kg	3330		106	35-130			
Benzo(k)fluoranthene	2740	330	ug/kg	3330		82	45-125			
Chrysene	2630	330	ug/kg	3330		79	55-120			
Dibenz(a,h)anthracene	3260	420	ug/kg	3330		98	40-135			
Fluoranthene	2450	330	ug/kg	3330		73	55-120			
Fluorene	2670	330	ug/kg	3330		80	55-120			
Indeno(1,2,3-cd)pyrene	3600	330	ug/kg	3330		108	30-135			
2-Methylnaphthalene	2490	330	ug/kg	3330		75	45-120			

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COM Inc - Long Beach
3 Via Oro Ave
Long Beach, CA 90810
Attention: Samantha Fernandes

Project ID: City of Torrance, Dow Chemical
60132933-600
Report Number: ISL1375

Sampled: 12/10/09
Received: 12/10/09

METHOD BLANK/QC DATA

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9L11103 Extracted: 12/11/09										
LCS Analyzed: 12/12/2009 (9L11103-BS1)										
Naphthalene	2380	330	ug/kg	3330		71	45-120			
Phenanthrene	2690	330	ug/kg	3330		81	50-120			
Pyrene	2600	330	ug/kg	3330		78	45-125			
Surrogate: 2-Fluorobiphenyl	*2660*		*ug/kg*	*3330*		*80*	*35-120*			
Surrogate: Nitrobenzene-d5	*2530*		*ug/kg*	*3330*		*76*	*30-120*			
Surrogate: Terphenyl-d14	*2950*		*ug/kg*	*3330*		*88*	*40-135*			
Matrix Spike Analyzed: 12/12/2009 (9L11103-MS1)					**Source: ISL1375-10**					
Acenaphthene	2420	330	ug/kg	3330	ND	73	45-120			
Acenaphthylene	2580	330	ug/kg	3330	ND	78	45-120			
A cene	2720	330	ug/kg	3330	ND	82	55-120			
Bc...o(a)anthracene	2540	330	ug/kg	3330	ND	76	50-120			
Benzo(a)pyrene	2820	330	ug/kg	3330	ND	85	45-125			
Benzo(b)fluoranthene	2650	330	ug/kg	3330	ND	80	45-125			
Benzo(g,h,i)perylene	3410	330	ug/kg	3330	ND	102	25-130			
Benzo(k)fluoranthene	2870	330	ug/kg	3330	ND	86	45-125			
Chrysene	2560	330	ug/kg	3330	ND	77	55-120			
Dibenz(a,h)anthracene	3050	420	ug/kg	3330	ND	92	25-135			
Fluoranthene	2490	330	ug/kg	3330	ND	75	45-120			
Fluorene	2610	330	ug/kg	3330	ND	78	50-120			
Indeno(1,2,3-cd)pyrene	3310	330	ug/kg	3330	ND	99	20-130			
2-Methylnaphthalene	2490	330	ug/kg	3330	ND	75	40-120			
Naphthalene	2410	330	ug/kg	3330	ND	72	40-120			
Phenanthrene	2730	330	ug/kg	3330	ND	82	50-120			
Pyrene	2550	330	ug/kg	3330	ND	77	40-125			
Surrogate: 2-Fluorobiphenyl	*2570*		*ug/kg*	*3330*		*77*	*35-120*			
Surrogate: Nitrobenzene-d5	*2560*		*ug/kg*	*3330*		*77*	*30-120*			
Surrogate: Terphenyl-d14	*2820*		*ug/kg*	*3330*		*85*	*40-135*			

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[illegible]OM Inc - Long Beach	Project ID: City of Torrance, Dow Chemical	
[illegible] Via Oro Ave	60132933-600	Sampled: 12/10/09
Long Beach, CA 90810	Report Number: ISL1375	Received: 12/10/09
Attention: Samantha Fernandes		

METHOD BLANK/QC DATA

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9L11103 Extracted: 12/11/09										
Matrix Spike Dup Analyzed: 12/12/2009 (9L11103-MSD1)					**Source: ISL1375-10**					
Acenaphthene	2410	330	ug/kg	3330	ND	72	45-120	0	25	
Acenaphthylene	2590	330	ug/kg	3330	ND	78	45-120	0	20	
Anthracene	2720	330	ug/kg	3330	ND	82	55-120	0	25	
Benzo(a)anthracene	2600	330	ug/kg	3330	ND	78	50-120	2	25	
Benzo(a)pyrene	2940	330	ug/kg	3330	ND	88	45-125	4	25	
Benzo(b)fluoranthene	2820	330	ug/kg	3330	ND	85	45-125	6	30	
Benzo(g,h,i)perylene	3510	330	ug/kg	3330	ND	105	25-130	3	30	
Benzo(k)fluoranthene	2910	330	ug/kg	3330	ND	87	45-125	2	30	
Chrysene	2700	330	ug/kg	3330	ND	81	55-120	5	25	
Di[illegible]nz(a,h)anthracene	3190	420	ug/kg	3330	ND	96	25-135	4	30	
F [illegible]thene	2540	330	ug/kg	3330	ND	76	45-120	2	25	
Fluorene	2650	330	ug/kg	3330	ND	80	50-120	2	25	
Indeno(1,2,3-cd)pyrene	3480	330	ug/kg	3330	ND	104	20-130	5	30	
2-Methylnaphthalene	2490	330	ug/kg	3330	ND	75	40-120	0	20	
Naphthalene	2370	330	ug/kg	3330	ND	71	40-120	2	25	
Phenanthrene	2730	330	ug/kg	3330	ND	82	50-120	0	25	
Pyrene	2610	330	ug/kg	3330	ND	78	40-125	2	30	
Surrogate: 2-Fluorobiphenyl	*2610*		*ug/kg*	*3330*		*78*	*35-120*			
Surrogate: Nitrobenzene-d5	*2550*		*ug/kg*	*3330*		*76*	*30-120*			
Surrogate: Terphenyl-d14	*2900*		*ug/kg*	*3330*		*87*	*40-135*			

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Project Manager

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[illegible]OM Inc - Long Beach	Project ID: City of Torrance, Dow Chemical	
[illegible]5 Via Oro Ave	60132933-600	Sampled: 12/10/09
Long Beach, CA 90810	Report Number: ISL1375	Received: 12/10/09
Attention: Samantha Fernandes		

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

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[illegible]OM Inc - Long Beach	Project ID: City of Torrance, Dow Chemical	
[illegible]5 Via Oro Ave	60132933-600	Sampled: 12/10/09
Long Beach, CA 90810	Report Number: ISL1375	Received: 12/10/09
Attention: Samantha Fernandes		

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EPA 8270C	Soil	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

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Project Manager

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Chain of Custody

Page 1 of

Facility	City, State (Facility)	Project Manager (Consultant)	Project No.	Laboratory Name
Dow Chemical Facility	Torrance, CA	Samantha Fernandes	60132933-600	TestAmerica
Engineer	**Telephone No.**	**Telephone No. (Consultant)**	**Fax No. (Consultant)**	
Elizabeth Overstreet	(310) 618-3074	(562) 420-2933	(562) 420-2915	
Consultant Company	**Consultant Address**			**Method of Shipment**
AECOM Environment	3995 Via Oro Ave., Long Beach, CA 90810			Courier

Sample I.D.	Lab Sample No.	No. of Containers	Matrix: Soil	Water	Air	Other	Prsv.: Yes	No	Sampling Date	Sampling Time	PAHs (EPA Method 8270C)	HOLD (see remarks)	Turn Around Time (Business Days)
DOW-SB1-Northsidewall-121009		1	X					X	12/10/2009	10:38	X		2-day
DOW-SB1-Eastsidewall-121009		1	X					X	12/10/2009	10:30	X		2-day
DOW-SB1-Southsidewall-121009		1	X					X	12/10/2009	10:34	X		2-day
DOW-SB1-Westsidewall-121009		1	X					X	12/10/2009	10:36	X		2-day
DOW-SB1-Excavationbase-121009		1	X					X	12/10/2009	10:32	X		2-day
DOW-SB4-Northsidewall-121009		1	X					X	12/10/2009	12:22	X		2-day
DOW-SB4-Eastsidewall-121009		1	X					X	12/10/2009	12:24	X		2-day
DOW-SB4-Southsidewall-121009		1	X					X	12/10/2009	12:26	X		2-day
DOW-SB4-Westsidewall-121009		1	X					X	12/10/2009	12:28	X		2-day
DOW-SB4-Excavationbase-121009		1	X					X	12/10/2009	12:20	X		2-day

Special Detection Limit/Reporting:

Remarks:

Please email results to samantha.fernandes@aecom.com and daniel.buckley@aecom.com

Sample Received Intact: Yes No		Temperature received: Ice No ice		Lab Work No.
Relinq. by sampler (Sign & Print Name) Daniel Buckley	Date 12/10/09	Time 1640	Received by (Sign & Print Name) Gary Scalyan	
Relinquished by Gary Scalyan	Date 12/10/09	Time 1750	Received by	
Relinquished by	Date	Time	Received by laboratory	Date 12.10.09 Time 18:25

Rev. 02/03/05

#182 2.4