LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT

MARTIN VENICE MARINE TERMINAL
485 JUMP BASIN ROAD
VENICE, PLAQUEMINES PARISH, LOUISIANA
29°16'16.83"N / 89°21'9.06"W
TOWNSHIP 21 SOUTH, RANGE 31 EAST, SECTION 17
ALTEC PROJECT NO. SA03085

Site Description

The Venice Marine Terminal is located on the western bank of Grand Pass at 485 Jump Basin Road. The site is a vacant marine bulk fuel terminal consisting of 15 aboveground storage tanks (ASTs) in a concrete containment area, six (6) fueling stations, an elevated office, several mobile trailers, and potable water tanks. Several piles of material dredged from the marine slip are located on the property.

Limited Phase II Environmental Site Assessment (ESA)

On May 22, 2017, ALTEC Environmental Consulting, LLC (ALTEC) collected surface soil samples at the property at six (6) locations depicted on the figure in **Attachment A**. Soil samples were placed in appropriate laboratory-supplied containers, labeled, placed in a cooler with ice, and transported with chain-of-custody documentation to SGS Accutest Laboratories in Scott, LA for **RUSH** analysis. All soil samples were analyzed for the following parameters:

- Polycyclic Aromatic Hydrocarbons (PAH), and
- Extractable Petroleum Hydrocarbons (EPH).

One (1) duplicate was collected for laboratory QA/QC purposes.

Results

The soil analytical results were compared to previously established Louisiana Department of Environmental Quality (LDEQ) Risk Evaluation Corrective Action Program (RECAP) standards for each constituent. Results of laboratory analyses indicate that COC concentrations detected in all the soil samples were below their respective RECAP standards.

A summary of the soil analytical results is provided in **Attachment B – Table 1**.

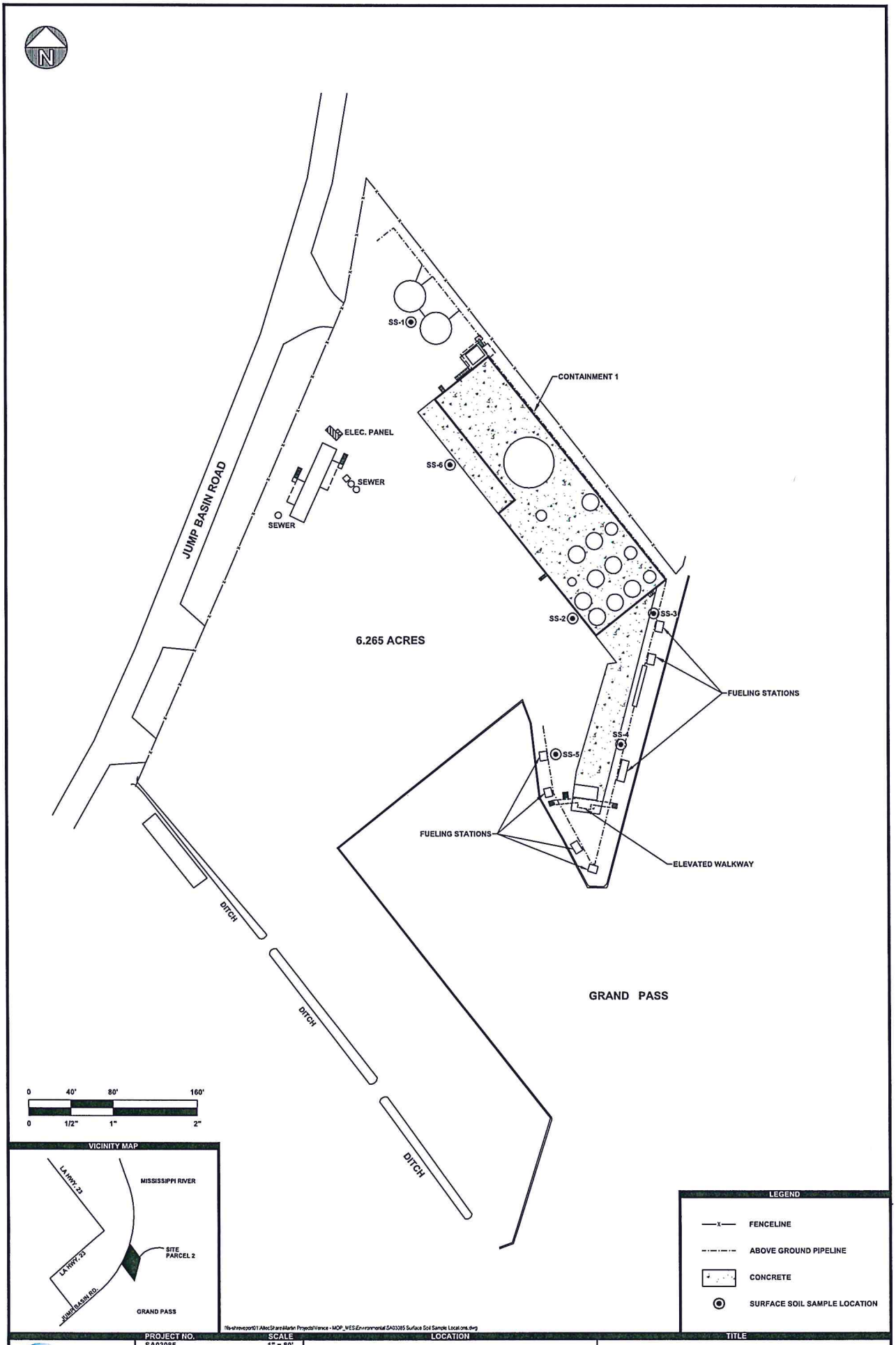
A complete copy of the laboratory results and chain-of-custody documentation is provided in **Attachment C**.

Conclusions

Based on the findings of this Limited Phase II ESA, ALTEC concludes no further site investigation or remediation activities are warranted at the property.

ATTACHMENT A

FIGURE



\\la-shreveport01\AltecShare\Martin Projects\Venice - MOP_MES\Environmental\SA03085 Surface Soil Sample Locations.dwg

PROJECT NO.	SCALE
SA03085	1" = 80'
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1	CAC
SHEET	DATE
B - 11 X 17	05/24/17

ALTEC ENVIRONMENTAL CONSULTING, LLC

LOCATION

MARTIN / L&L FUEL TERMINAL
485 JUMP BASIN ROAD
VENICE, PLAQUEMINES PARISH, LOUISIANA

TITLE

SURFACE SOIL SAMPLE LOCATIONS

ATTACHMENT B

TABLE 1

TABLE 1

MARTIN VENICE MARINE TERMINAL
485 JUMP BASIN ROAD, VENICE, LOUISIANA

SOIL ANALYTICAL SUMMARY (mg/kg)

May 22, 2017

Sample ID / Parameter	SS-1 0-0.5'	SS-2 0-0.5'	SS-3 0-0.5'	SS-4 0-0.5'	SS-5 0-0.5'	SS-6 0-0.5'	DUPE (Duplicate of SS-4)	RECAP SS for Soil
Polycyclic Aromatic Hydrocarbons (PAH) by Method SW846 8270D								
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	1.7
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	220
Acenaphthylene	0.015	ND	ND	ND	ND	ND	ND	88
Anthracene	ND	ND	ND	ND	ND	ND	0.0102	120
Benz(a)anthracene	0.036	0.0354	ND	0.0259	0.0302	0.0549	0.0522	2.9
Benzo(a)pyrene	0.0311	0.0308	ND	0.0196	0.0252	0.051	0.05	0.33
Benzo(b)fluoranthene	0.0558	0.0613	ND	0.0252	0.035	0.0716	0.0643	2.9
Benzo(k)fluoranthene	ND	ND	ND	0.0109	ND	0.0194	0.0213	29
Chrysene	0.0301	0.0264	ND	0.0185	0.023	0.0481	0.0513	76
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	0.33
Fluoranthene	0.0522	0.0464	ND	0.0378	0.0455	0.0835	0.0959	1,200
Fluorene	ND	ND	ND	ND	ND	ND	ND	230
Indeno(1,2,3-cd)pyrene	0.0191	0.0193	ND	0.0118	0.0125	0.0258	0.0268	2.9
Naphthalene	ND	ND	ND	ND	ND	ND	ND	1.5
Phenanthrene	0.0197	0.0146	ND	0.0142	0.0172	0.0236	0.0362	660
Pyrene	0.0473	0.0419	ND	0.0318	0.0388	0.0699	0.0836	1,100
Extractable Petroleum Hydrocarbons (EPH) by MADEP Method								
C10-C12 Aliphatics	ND	ND	ND	ND	ND	ND	ND	2,000
C10-C12 Aromatics	ND	ND	ND	ND	ND	ND	ND	100
C12-C16 Aliphatics	ND	ND	ND	ND	ND	ND	ND	3,800
C12-C16 Aromatics	ND	ND	ND	ND	ND	ND	ND	200
C16-C21 Aromatics	ND	ND	ND	ND	ND	ND	ND	1,700
C16-C35 Aliphatics	ND	45.7	ND	ND	ND	ND	ND	10,000
C21-C35 Aromatics	ND	ND	ND	ND	ND	ND	ND	2,500

Notes: All concentrations are listed in milligrams per kilogram (mg/kg)
RECAP SS = lower of SoilSSi and SoilGWSS
ND = Not Detected
Bold = greater than RECAP SS

ATTACHMENT C

LABORATORY RESULTS

AND

CHAIN-OF-CUSTODY DOCUMENTATION

e-Hardcopy 2.0
Automated Report

Technical Report for

Altec Environmental Consulting, LLC

ALTEC-Martin/Venice

SA03085

SGS Accutest Job Number: LA33684

Sampling Date: 05/22/17

Report to:

Altec Environmental Consulting, LLC
PO Box 17867
Shreveport, LA 71138-0867
dana.beck@altecenv.com; teresa.doyle@altecenv.com;
james.meleton@altecenv.com
ATTN: James Meleton

Total number of pages in report: 35

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Ron Benjamin
Lab Director

Client Service contact: Rebecca Hebert 337-237-4775

Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), AZ(AZ0805), FL(E87657), IL(200082), KY(#31), NC(487), SC(73004001), NJ(LA007), TX(T104704186-15-7), WV(257)

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Sections: 1 2 3 4 5 6

Sample Summary

Altec Environmental Consulting, LLC

Job No: LA33684

ALTEC-Martin/Venice
Project No: SA03085

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
LA33684-1	05/22/17	14:30	DB	05/23/17	SO	Soil	SS1
LA33684-2	05/22/17	14:45	DB	05/23/17	SO	Soil	SS2
LA33684-3	05/22/17	14:55	DB	05/23/17	SO	Soil	SS3
LA33684-4	05/22/17	15:15	DB	05/23/17	SO	Soil	SS4
LA33684-5	05/22/17	15:30	DB	05/23/17	SO	Soil	SS5
LA33684-6	05/22/17	15:55	DB	05/23/17	SO	Soil	SS6
LA33684-7	05/22/17	16:00	DB	05/23/17	SO	Soil	DUPE

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

2

Summary of Hits

Job Number: LA33684
Account: Altec Environmental Consulting, LLC
Project: ALTEC-Martin/Venice
Collected: 05/22/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
LA33684-1	**SS1**					
Acenaphthylene		15.0	9.8		ug/kg	SW846 8270D
Benzo(a)anthracene		36.0	9.8		ug/kg	SW846 8270D
Benzo(a)pyrene		31.1	9.8		ug/kg	SW846 8270D
Benzo(b)fluoranthene		55.8	9.8		ug/kg	SW846 8270D
Chrysene		30.1	9.8		ug/kg	SW846 8270D
Fluoranthene		52.2	9.8		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		19.1	9.8		ug/kg	SW846 8270D
Phenanthrene		19.7	9.8		ug/kg	SW846 8270D
Pyrene		47.3	9.8		ug/kg	SW846 8270D
LA33684-2	**SS2**					
Benzo(a)anthracene		35.4	10		ug/kg	SW846 8270D
Benzo(a)pyrene		30.8	10		ug/kg	SW846 8270D
Benzo(b)fluoranthene		61.3	10		ug/kg	SW846 8270D
Chrysene		26.4	10		ug/kg	SW846 8270D
Fluoranthene		46.4	10		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		19.3	10		ug/kg	SW846 8270D
Phenanthrene		14.6	10		ug/kg	SW846 8270D
Pyrene		41.9	10		ug/kg	SW846 8270D
Aliphatics > C16-C35 (Unadj.)		45700	7400		ug/kg	MADEP EPH REV 1.1
LA33684-3	**SS3**					
No hits reported in this sample.						
LA33684-4	**SS4**					
Benzo(a)anthracene		25.9	10		ug/kg	SW846 8270D
Benzo(a)pyrene		19.6	10		ug/kg	SW846 8270D
Benzo(b)fluoranthene		25.2	10		ug/kg	SW846 8270D
Benzo(k)fluoranthene		10.9	10		ug/kg	SW846 8270D
Chrysene		18.5	10		ug/kg	SW846 8270D
Fluoranthene		37.8	10		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		11.8	10		ug/kg	SW846 8270D
Phenanthrene		14.2	10		ug/kg	SW846 8270D
Pyrene		31.8	10		ug/kg	SW846 8270D
LA33684-5	**SS5**					
Benzo(a)anthracene		30.2	9.9		ug/kg	SW846 8270D
Benzo(a)pyrene		25.2	9.9		ug/kg	SW846 8270D
Benzo(b)fluoranthene		35.0	9.9		ug/kg	SW846 8270D

Summary of Hits

Job Number: LA33684
Account: Altec Environmental Consulting, LLC
Project: ALTEC-Martin/Venice
Collected: 05/22/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Chrysene		23.0	9.9		ug/kg	SW846 8270D
Fluoranthene		45.5	9.9		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		12.5	9.9		ug/kg	SW846 8270D
Phenanthrene		17.2	9.9		ug/kg	SW846 8270D
Pyrene		38.8	9.9		ug/kg	SW846 8270D
LA33684-6	**SS6**					
Benzo(a)anthracene		54.9	9.8		ug/kg	SW846 8270D
Benzo(a)pyrene		51.0	9.8		ug/kg	SW846 8270D
Benzo(b)fluoranthene		71.6	9.8		ug/kg	SW846 8270D
Benzo(k)fluoranthene		19.4	9.8		ug/kg	SW846 8270D
Chrysene		48.1	9.8		ug/kg	SW846 8270D
Fluoranthene		83.5	9.8		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		25.8	9.8		ug/kg	SW846 8270D
Phenanthrene		23.6	9.8		ug/kg	SW846 8270D
Pyrene		69.9	9.8		ug/kg	SW846 8270D
LA33684-7	**DUPE**					
Anthracene		10.2	9.8		ug/kg	SW846 8270D
Benzo(a)anthracene		52.2	9.8		ug/kg	SW846 8270D
Benzo(a)pyrene		50.0	9.8		ug/kg	SW846 8270D
Benzo(b)fluoranthene		64.3	9.8		ug/kg	SW846 8270D
Benzo(k)fluoranthene		21.3	9.8		ug/kg	SW846 8270D
Chrysene		51.3	9.8		ug/kg	SW846 8270D
Fluoranthene		95.9	9.8		ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		26.8	9.8		ug/kg	SW846 8270D
Phenanthrene		36.2	9.8		ug/kg	SW846 8270D
Pyrene		83.6	9.8		ug/kg	SW846 8270D

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SS1		
Lab Sample ID:	LA33684-1	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0026757.D	1	05/25/17 13:20	IK	05/24/17 06:00	OP8456	EC1104
Run #2							

	Initial Weight	Final Volume
Run #1	20.5 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	9.8	ug/kg	
208-96-8	Acenaphthylene	15.0	9.8	ug/kg	
120-12-7	Anthracene	ND	9.8	ug/kg	
56-55-3	Benzo(a)anthracene	36.0	9.8	ug/kg	
50-32-8	Benzo(a)pyrene	31.1	9.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	55.8	9.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	9.8	ug/kg	
218-01-9	Chrysene	30.1	9.8	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	9.8	ug/kg	
206-44-0	Fluoranthene	52.2	9.8	ug/kg	
86-73-7	Fluorene	ND	9.8	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	19.1	9.8	ug/kg	
91-57-6	2-Methylnaphthalene	ND	9.8	ug/kg	
91-20-3	Naphthalene	ND	9.8	ug/kg	
85-01-8	Phenanthrene	19.7	9.8	ug/kg	
129-00-0	Pyrene	47.3	9.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	95%		43-128%
321-60-8	2-Fluorobiphenyl	90%		47-126%
1718-51-0	Terphenyl-d14	102%		56-124%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS1		
Lab Sample ID:	LA33684-1	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0043203.D	1	05/25/17 12:48	PP	05/24/17 06:00	OP8445	GLB1052
Run #2	Y0043203.D	1	05/25/17 12:49	PP	05/24/17 06:00	OP8445	GLB1053

	Initial Weight	Final Volume
Run #1	20.1 g	10.0 ml
Run #2	20.1 g	10.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.)	ND [b]	7500	ug/kg	
	Aliphatics > C12-C16 (Unadj.)	ND [b]	7500	ug/kg	
	Aliphatics > C16-C35 (Unadj.)	ND [b]	7500	ug/kg	
	Aromatics > C10-C12 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C12-C16 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C16-C21 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C21-C35 (Unadj.)	ND	7500	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		84%	40-140%
84-15-1	o-Terphenyl	85%		40-140%
321-60-8	2-Fluorobiphenyl	87%		40-140%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS2		
Lab Sample ID:	LA33684-2	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0026759.D	1	05/25/17 14:05	IK	05/24/17 06:00	OP8456	EC1104
Run #2							

	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	10	ug/kg	
208-96-8	Acenaphthylene	ND	10	ug/kg	
120-12-7	Anthracene	ND	10	ug/kg	
56-55-3	Benzo(a)anthracene	35.4	10	ug/kg	
50-32-8	Benzo(a)pyrene	30.8	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	61.3	10	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	10	ug/kg	
218-01-9	Chrysene	26.4	10	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	10	ug/kg	
206-44-0	Fluoranthene	46.4	10	ug/kg	
86-73-7	Fluorene	ND	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	19.3	10	ug/kg	
91-57-6	2-Methylnaphthalene	ND	10	ug/kg	
91-20-3	Naphthalene	ND	10	ug/kg	
85-01-8	Phenanthrene	14.6	10	ug/kg	
129-00-0	Pyrene	41.9	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		43-128%
321-60-8	2-Fluorobiphenyl	76%		47-126%
1718-51-0	Terphenyl-d14	84%		56-124%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS2		
Lab Sample ID:	LA33684-2	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0043204.D	1	05/25/17 13:13	PP	05/24/17 06:00	OP8445	GLB1052
Run #2	Y0043204.D	1	05/25/17 13:14	PP	05/24/17 06:00	OP8445	GLB1053

	Initial Weight	Final Volume
Run #1	20.3 g	10.0 ml
Run #2	20.3 g	10.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.)	ND [b]	7400	ug/kg	
	Aliphatics > C12-C16 (Unadj.)	ND [b]	7400	ug/kg	
	Aliphatics > C16-C35 (Unadj.)	45700 [b]	7400	ug/kg	
	Aromatics > C10-C12 (Unadj.)	ND	7400	ug/kg	
	Aromatics > C12-C16 (Unadj.)	ND	7400	ug/kg	
	Aromatics > C16-C21 (Unadj.)	ND	7400	ug/kg	
	Aromatics > C21-C35 (Unadj.)	ND	7400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		86%	40-140%
84-15-1	o-Terphenyl	82%		40-140%
321-60-8	2-Fluorobiphenyl	93%		40-140%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS3		
Lab Sample ID:	LA33684-3	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0026760.D	1	05/25/17 14:27	IK	05/24/17 06:00	OP8456	EC1104
Run #2							

	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	10	ug/kg	
208-96-8	Acenaphthylene	ND	10	ug/kg	
120-12-7	Anthracene	ND	10	ug/kg	
56-55-3	Benzo(a)anthracene	ND	10	ug/kg	
50-32-8	Benzo(a)pyrene	ND	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	10	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	10	ug/kg	
218-01-9	Chrysene	ND	10	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	10	ug/kg	
206-44-0	Fluoranthene	ND	10	ug/kg	
86-73-7	Fluorene	ND	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	10	ug/kg	
91-57-6	2-Methylnaphthalene	ND	10	ug/kg	
91-20-3	Naphthalene	ND	10	ug/kg	
85-01-8	Phenanthrene	ND	10	ug/kg	
129-00-0	Pyrene	ND	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	86%		43-128%
321-60-8	2-Fluorobiphenyl	79%		47-126%
1718-51-0	Terphenyl-d14	90%		56-124%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS3		
Lab Sample ID:	LA33684-3	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0043208.D	1	05/25/17 14:57	PP	05/24/17 06:00	OP8445	GLB1052
Run #2	Y0043208.D	1	05/25/17 14:58	PP	05/24/17 06:00	OP8445	GLB1053

	Initial Weight	Final Volume
Run #1	20.1 g	10.0 ml
Run #2	20.1 g	10.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.)	ND [b]	7500	ug/kg	
	Aliphatics > C12-C16 (Unadj.)	ND [b]	7500	ug/kg	
	Aliphatics > C16-C35 (Unadj.)	ND [b]	7500	ug/kg	
	Aromatics > C10-C12 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C12-C16 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C16-C21 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C21-C35 (Unadj.)	ND	7500	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		84%	40-140%
84-15-1	o-Terphenyl	86%		40-140%
321-60-8	2-Fluorobiphenyl	98%		40-140%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS4		
Lab Sample ID:	LA33684-4	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0026761.D	1	05/25/17 14:48	IK	05/24/17 06:00	OP8456	EC1104
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	10	ug/kg	
208-96-8	Acenaphthylene	ND	10	ug/kg	
120-12-7	Anthracene	ND	10	ug/kg	
56-55-3	Benzo(a)anthracene	25.9	10	ug/kg	
50-32-8	Benzo(a)pyrene	19.6	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	25.2	10	ug/kg	
207-08-9	Benzo(k)fluoranthene	10.9	10	ug/kg	
218-01-9	Chrysene	18.5	10	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	10	ug/kg	
206-44-0	Fluoranthene	37.8	10	ug/kg	
86-73-7	Fluorene	ND	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	11.8	10	ug/kg	
91-57-6	2-Methylnaphthalene	ND	10	ug/kg	
91-20-3	Naphthalene	ND	10	ug/kg	
85-01-8	Phenanthrene	14.2	10	ug/kg	
129-00-0	Pyrene	31.8	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	89%		43-128%
321-60-8	2-Fluorobiphenyl	83%		47-126%
1718-51-0	Terphenyl-d14	96%		56-124%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS4		
Lab Sample ID:	LA33684-4	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0043209.D	1	05/25/17 15:23	PP	05/24/17 06:00	OP8445	GLB1052
Run #2	Y0043209.D	1	05/25/17 15:24	PP	05/24/17 06:00	OP8445	GLB1053

	Initial Weight	Final Volume
Run #1	20.3 g	10.0 ml
Run #2	20.3 g	10.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.)	ND [b]	7400	ug/kg	
	Aliphatics > C12-C16 (Unadj.)	ND [b]	7400	ug/kg	
	Aliphatics > C16-C35 (Unadj.)	ND [b]	7400	ug/kg	
	Aromatics > C10-C12 (Unadj.)	ND	7400	ug/kg	
	Aromatics > C12-C16 (Unadj.)	ND	7400	ug/kg	
	Aromatics > C16-C21 (Unadj.)	ND	7400	ug/kg	
	Aromatics > C21-C35 (Unadj.)	ND	7400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		103%	40-140%
84-15-1	o-Terphenyl	94%		40-140%
321-60-8	2-Fluorobiphenyl	89%		40-140%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS5		
Lab Sample ID:	LA33684-5	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0026762.D	1	05/25/17 15:10	IK	05/24/17 06:00	OP8456	EC1104
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	9.9	ug/kg	
208-96-8	Acenaphthylene	ND	9.9	ug/kg	
120-12-7	Anthracene	ND	9.9	ug/kg	
56-55-3	Benzo(a)anthracene	30.2	9.9	ug/kg	
50-32-8	Benzo(a)pyrene	25.2	9.9	ug/kg	
205-99-2	Benzo(b)fluoranthene	35.0	9.9	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	9.9	ug/kg	
218-01-9	Chrysene	23.0	9.9	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	9.9	ug/kg	
206-44-0	Fluoranthene	45.5	9.9	ug/kg	
86-73-7	Fluorene	ND	9.9	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	12.5	9.9	ug/kg	
91-57-6	2-Methylnaphthalene	ND	9.9	ug/kg	
91-20-3	Naphthalene	ND	9.9	ug/kg	
85-01-8	Phenanthrene	17.2	9.9	ug/kg	
129-00-0	Pyrene	38.8	9.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	71%		43-128%
321-60-8	2-Fluorobiphenyl	66%		47-126%
1718-51-0	Terphenyl-d14	75%		56-124%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS5		
Lab Sample ID:	LA33684-5	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0043210.D	1	05/25/17 15:48	PP	05/24/17 06:00	OP8445	GLB1052
Run #2	Y0043210.D	1	05/25/17 15:49	PP	05/24/17 06:00	OP8445	GLB1053

	Initial Weight	Final Volume
Run #1	20.1 g	10.0 ml
Run #2	20.1 g	10.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.)	ND [b]	7500	ug/kg	
	Aliphatics > C12-C16 (Unadj.)	ND [b]	7500	ug/kg	
	Aliphatics > C16-C35 (Unadj.)	ND [b]	7500	ug/kg	
	Aromatics > C10-C12 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C12-C16 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C16-C21 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C21-C35 (Unadj.)	ND	7500	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		98%	40-140%
84-15-1	o-Terphenyl	96%		40-140%
321-60-8	2-Fluorobiphenyl	95%		40-140%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS6		
Lab Sample ID:	LA33684-6	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0026763.D	1	05/25/17 15:32	IK	05/24/17 06:00	OP8456	EC1104
Run #2							

	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	9.8	ug/kg	
208-96-8	Acenaphthylene	ND	9.8	ug/kg	
120-12-7	Anthracene	ND	9.8	ug/kg	
56-55-3	Benzo(a)anthracene	54.9	9.8	ug/kg	
50-32-8	Benzo(a)pyrene	51.0	9.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	71.6	9.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	19.4	9.8	ug/kg	
218-01-9	Chrysene	48.1	9.8	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	9.8	ug/kg	
206-44-0	Fluoranthene	83.5	9.8	ug/kg	
86-73-7	Fluorene	ND	9.8	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	25.8	9.8	ug/kg	
91-57-6	2-Methylnaphthalene	ND	9.8	ug/kg	
91-20-3	Naphthalene	ND	9.8	ug/kg	
85-01-8	Phenanthrene	23.6	9.8	ug/kg	
129-00-0	Pyrene	69.9	9.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	88%		43-128%
321-60-8	2-Fluorobiphenyl	82%		47-126%
1718-51-0	Terphenyl-d14	90%		56-124%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS6		
Lab Sample ID:	LA33684-6	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0043211.D	1	05/25/17 16:12	PP	05/24/17 06:00	OP8445	GLB1052
Run #2	Y0043211.D	1	05/25/17 16:13	PP	05/24/17 06:00	OP8445	GLB1053

	Initial Weight	Final Volume
Run #1	20.3 g	10.0 ml
Run #2	20.3 g	10.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.)	ND [b]	7400	ug/kg	
	Aliphatics > C12-C16 (Unadj.)	ND [b]	7400	ug/kg	
	Aliphatics > C16-C35 (Unadj.)	ND [b]	7400	ug/kg	
	Aromatics > C10-C12 (Unadj.)	ND	7400	ug/kg	
	Aromatics > C12-C16 (Unadj.)	ND	7400	ug/kg	
	Aromatics > C16-C21 (Unadj.)	ND	7400	ug/kg	
	Aromatics > C21-C35 (Unadj.)	ND	7400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		93%	40-140%
84-15-1	o-Terphenyl	76%		40-140%
321-60-8	2-Fluorobiphenyl	78%		40-140%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUPE		
Lab Sample ID:	LA33684-7	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	SW846 8270D SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0026764.D	1	05/25/17 15:54	IK	05/24/17 06:00	OP8456	EC1104
Run #2							

	Initial Weight	Final Volume
Run #1	20.5 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	9.8	ug/kg	
208-96-8	Acenaphthylene	ND	9.8	ug/kg	
120-12-7	Anthracene	10.2	9.8	ug/kg	
56-55-3	Benzo(a)anthracene	52.2	9.8	ug/kg	
50-32-8	Benzo(a)pyrene	50.0	9.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	64.3	9.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	21.3	9.8	ug/kg	
218-01-9	Chrysene	51.3	9.8	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	9.8	ug/kg	
206-44-0	Fluoranthene	95.9	9.8	ug/kg	
86-73-7	Fluorene	ND	9.8	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	26.8	9.8	ug/kg	
91-57-6	2-Methylnaphthalene	ND	9.8	ug/kg	
91-20-3	Naphthalene	ND	9.8	ug/kg	
85-01-8	Phenanthrene	36.2	9.8	ug/kg	
129-00-0	Pyrene	83.6	9.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		43-128%
321-60-8	2-Fluorobiphenyl	81%		47-126%
1718-51-0	Terphenyl-d14	90%		56-124%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUPE		
Lab Sample ID:	LA33684-7	**Date Sampled:**	05/22/17
Matrix:	SO - Soil	**Date Received:**	05/23/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	n/a [a]
Project:	ALTEC-Martin/Venice		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0043212.D	1	05/25/17 16:39	PP	05/24/17 06:00	OP8445	GLB1052
Run #2	Y0043212.D	1	05/25/17 16:40	PP	05/24/17 06:00	OP8445	GLB1053

	Initial Weight	Final Volume
Run #1	20.1 g	10.0 ml
Run #2	20.1 g	10.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.)	ND [b]	7500	ug/kg	
	Aliphatics > C12-C16 (Unadj.)	ND [b]	7500	ug/kg	
	Aliphatics > C16-C35 (Unadj.)	ND [b]	7500	ug/kg	
	Aromatics > C10-C12 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C12-C16 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C16-C21 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C21-C35 (Unadj.)	ND	7500	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		81%	40-140%
84-15-1	o-Terphenyl	84%		40-140%
321-60-8	2-Fluorobiphenyl	86%		40-140%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LA 33684

ALTEC ENVIRONMENTAL CONSULTING, LLC
P.O. BOX 17867
SHREVEPORT, LA 71138-0867

ALTEC ENVIRONMENTAL CONSULTING, LLC

Phone # (318) 687-3771
Fax # (318) 687-9923

ALTEC's Client: Martin Resource Management
Address:
City & State: Kilgore, LA

Project Name: ALTEC-Martin/Venice - Project #SA03085
Project Manager: James Meleton
Sampler Name (Print): Dana Beck

PRESERVATIVE P/G: G | G
Preservative: 4° | 4°
PARAMETERS: PAH | EPH

	Field Sample ID	Source or Sample Description	# of containers	Water	Soil	Sludge	Liquid	Solid	G=grab, C=composite	Date Sampled (2017)	Time Sampled	PAH	EPH	
1	SS1	Surface Sample #1	2		X				G	5/23	930	X	X	2
2	SS2	Surface Sample #2	3 ~~2~~		X				G	5/23	1445	X	X	3
3	SS3	Surface Sample #3	3 ~~2~~		X				G	5/23	1455	X	X	3
4	SS4	Surface Sample #4	3 ~~2~~		X				G	5/23	1515	X	X	3
5	SS5	Surface Sample #5	3 ~~2~~		X				G	5/23	1530	X	X	3
6	SS6	Surface Sample #6	3 ~~2~~		X				G	5/23	1555	X	X	3
7	DUPE	Duplicate Sample	3 ~~2~~		X				G	5/23	1600	X	X	3

RUSH

SS-1 = 2-1L jars   Naslov
SS-2-6/Dupe = 3-4oz jars   Temp: 1.8 DV418   (12) D3   BSM-12 (7) B3

CUSTODY RECORD

Received by:	Date / Time	Relinquished by:	Date / Time
[signature]	5/23/17 0900	[signature]	5/23/17 0900
[signature]	5/23/17 1430	[signature]	5/23/17 1430
[signature]	5-23-17 16:03	[signature]	5/23/17 1603

TAT: RUSH (2 day)

Special Instructions: Email results
james.meleton@altecenv.com
teresa.doyle@altecenv.com

QC Deliverables:

	None
X	Level 2 (Batch QC)
	Level 3
	Level 4

REMARKS:

4.1 4

LA33684: Chain of Custody
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Accutest Laboratories Sample Receipt Summary

Job Number: LA33684 **Client:** ALTEC ENV. CONSULTING **Project:** ALTEC- MARTIN/VENICE

Date / Time Received: 5/23/2017 4:03:00 PM **Delivery Method:** Accutest Courier **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (1.8/1.8);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☐		☑	3. COC Present:	☑		☐
2. Custody Seals Intact:	☐		☑	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:	;		
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

4.1

4

LA33684: Chain of Custody
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LA33684

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

ALTEC ENVIRONMENTAL CONSULTING, LLC
P.O. BOX 17867
SHREVEPORT, LA 71138-0867
Phone # (318) 687-3771
Fax # (318) 687-9923

ALTEC ENVIRONMENTAL CONSULTING, LLC

ALTEC's Client: Martin Resource Management
Address:
City & State: Kilgore, LA

Project Name: ALTEC-Martin/Venice - Project #SA03085
Project Manager: James Meleton
Sampler Name (Print): Dana Beck

Field Sample ID	Source or Sample Description	No. of Containers	Water	Soil	Sludge	Liquid	Solid	Grab/Composite	2017 Date Sampled	Time Sampled	Preservative	PAH (G, 4°)	EPH (G, 4°)
SS1	Surface Sample #1	2		X				G	5/23	930		X	X
SS2	Surface Sample #2	3 2		X				G	5/23	1445		X	X
SS3	Surface Sample #3	3 2		X				G	5/23	1455		X	X
SS4	Surface Sample #4	3 2		X				G	5/23	1515		X	X
SS5	Surface Sample #5	3 2		X				G	5/23	1530		X	X
SS6	Surface Sample #6	3 2		X				G	5/23	1555		X	X
DUPE	Duplicate Sample	3 2		X				G	5/23	1600		X	X

SS-1 = 2-1L jars
SS-2-6/Dupe = 3-4oz jars

Samples collected 5/22, not 5/23

TAT	Special Instructions:	QC Deliverables	REMARKS:
RUSH (2 day)	Email results james.meleton@altecenv.com teresa.doyle@altecenv.com	None X Level 2 (Batch QC) Level 3 Level 4	

CUSTODY RECORD

Relinquished by:	Date: 5/23/17 Time: 0900	Received by:	Date: 5/23/17 Time: 0900
Relinquished by:	Date: Time:	Received by:	Date: Time:
Relinquished by:	Date: Time:	Received by:	Date: Time:

4.1

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GC/MS Semi-volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA33684
Account: ALTECLAS Altec Environmental Consulting, LLC
Project: ALTEC-Martin/Venice

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8456-MB	C0026745.D	1	05/25/17	IK	05/24/17	OP8456	EC1104

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA33684-1, LA33684-2, LA33684-3, LA33684-4, LA33684-5, LA33684-6, LA33684-7

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	10	ug/kg	
208-96-8	Acenaphthylene	ND	10	ug/kg	
120-12-7	Anthracene	ND	10	ug/kg	
56-55-3	Benzo(a)anthracene	ND	10	ug/kg	
50-32-8	Benzo(a)pyrene	ND	10	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	10	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	10	ug/kg	
218-01-9	Chrysene	ND	10	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	10	ug/kg	
206-44-0	Fluoranthene	ND	10	ug/kg	
86-73-7	Fluorene	ND	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	10	ug/kg	
91-57-6	2-Methylnaphthalene	ND	10	ug/kg	
91-20-3	Naphthalene	ND	10	ug/kg	
85-01-8	Phenanthrene	ND	10	ug/kg	
129-00-0	Pyrene	ND	10	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	88%	15-133%
4165-62-2	Phenol-d5	90%	21-127%
118-79-6	2,4,6-Tribromophenol	85%	7-142%
4165-60-0	Nitrobenzene-d5	91%	43-128%
321-60-8	2-Fluorobiphenyl	87%	47-126%
1718-51-0	Terphenyl-d14	96%	56-124%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA33684
Account: ALTECLAS Altec Environmental Consulting, LLC
Project: ALTEC-Martin/Venice

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8456-BS	C0026746.D	1	05/25/17	IK	05/24/17	OP8456	EC1104
OP8456-BSD	C0026747.D	1	05/25/17	IK	05/24/17	OP8456	EC1104

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA33684-1, LA33684-2, LA33684-3, LA33684-4, LA33684-5, LA33684-6, LA33684-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	2500	2080	83	2120	85	2	68-103/30
208-96-8	Acenaphthylene	2500	2160	86	2200	88	2	66-108/30
120-12-7	Anthracene	2500	2180	87	2150	86	1	66-112/30
56-55-3	Benzo(a)anthracene	2500	1970	79	2020	81	3	61-106/30
50-32-8	Benzo(a)pyrene	2500	2200	88	2200	88	0	71-112/30
205-99-2	Benzo(b)fluoranthene	2500	2160	86	2180	87	1	66-108/30
207-08-9	Benzo(k)fluoranthene	2500	2130	85	2060	82	3	64-116/30
218-01-9	Chrysene	2500	2010	80	2020	81	0	66-106/30
53-70-3	Dibenzo(a,h)anthracene	2500	2060	82	2020	81	2	49-117/30
206-44-0	Fluoranthene	2500	2190	88	2180	87	0	65-112/30
86-73-7	Fluorene	2500	2120	85	2140	86	1	67-108/30
193-39-5	Indeno(1,2,3-cd)pyrene	2500	2050	82	2040	82	0	68-110/30
91-57-6	2-Methylnaphthalene	2500	2060	82	2130	85	3	65-107/30
91-20-3	Naphthalene	2500	2010	80	2100	84	4	64-107/30
85-01-8	Phenanthrene	2500	2040	82	2050	82	0	63-110/30
129-00-0	Pyrene	2500	2090	84	2130	85	2	60-112/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	81%	88%	15-133%
4165-62-2	Phenol-d5	85%	92%	21-127%
118-79-6	2,4,6-Tribromophenol	85%	84%	7-142%
4165-60-0	Nitrobenzene-d5	88%	93%	43-128%
321-60-8	2-Fluorobiphenyl	85%	88%	47-126%
1718-51-0	Terphenyl-d14	89%	91%	56-124%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: LA33684
Account: ALTECLAS Altec Environmental Consulting, LLC
Project: ALTEC-Martin/Venice

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8456-MS	C0026748.D	1	05/25/17	IK	05/24/17	OP8456	EC1104
LA33684-1	C0026757.D	1	05/25/17	IK	05/24/17	OP8456	EC1104

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA33684-1, LA33684-2, LA33684-3, LA33684-4, LA33684-5, LA33684-6, LA33684-7

CAS No.	Compound	LA33684-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
83-32-9	Acenaphthene	ND		2480	1920	78	36-126
208-96-8	Acenaphthylene	15.0		2480	2030	81	40-129
120-12-7	Anthracene	8.7		2480	2070	83	35-133
56-55-3	Benzo(a)anthracene	36.0		2480	1980	79	31-130
50-32-8	Benzo(a)pyrene	31.1		2480	2180	87	23-144
205-99-2	Benzo(b)fluoranthene	55.8		2480	2160	85	31-133
207-08-9	Benzo(k)fluoranthene	ND		2480	2040	82	34-140
218-01-9	Chrysene	30.1		2480	2000	80	18-153
53-70-3	Dibenzo(a,h)anthracene	4.5		2480	1970	79	20-140
206-44-0	Fluoranthene	52.2		2480	2200	87	31-132
86-73-7	Fluorene	ND		2480	1980	80	33-133
193-39-5	Indeno(1,2,3-cd)pyrene	19.1		2480	2030	81	23-136
91-57-6	2-Methylnaphthalene	ND		2480	1960	79	43-124
91-20-3	Naphthalene	6.1		2480	1930	78	44-123
85-01-8	Phenanthrene	19.7		2480	2000	80	30-132
129-00-0	Pyrene	47.3		2480	2110	83	32-139

CAS No.	Surrogate Recoveries	MS	LA33684-1	Limits
367-12-4	2-Fluorophenol	79%		15-133%
4165-62-2	Phenol-d5	84%		21-127%
118-79-6	2,4,6-Tribromophenol	84%		7-142%
4165-60-0	Nitrobenzene-d5	87%	95%	43-128%
321-60-8	2-Fluorobiphenyl	81%	90%	47-126%
1718-51-0	Terphenyl-d14	89%	102%	56-124%

* = Outside of Control Limits.

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA33684
Account: ALTECLAS Altec Environmental Consulting, LLC
Project: ALTEC-Martin/Venice

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8445-MB	X0043198.D	1	05/25/17	PP	05/24/17	OP8445	GLB1052

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA33684-1, LA33684-2, LA33684-3, LA33684-4, LA33684-5, LA33684-6, LA33684-7

CAS No.	Compound	Result	RL	Units	Q
	Aromatics > C10-C12 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C12-C16 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C16-C21 (Unadj.)	ND	7500	ug/kg	
	Aromatics > C21-C35 (Unadj.)	ND	7500	ug/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	98%	40-140%
321-60-8	2-Fluorobiphenyl	88%	40-140%

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Method Blank Summary

Job Number: LA33684
Account: ALTECLAS Altec Environmental Consulting, LLC
Project: ALTEC-Martin/Venice

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8445-MB	Y0043198.D	1	05/25/17	PP	05/24/17	OP8445	GLB1053

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA33684-1, LA33684-2, LA33684-3, LA33684-4, LA33684-5, LA33684-6, LA33684-7

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.)	ND	7500	ug/kg	
	Aliphatics > C12-C16 (Unadj.)	ND	7500	ug/kg	
	Aliphatics > C16-C35 (Unadj.)	ND	7500	ug/kg	

CAS No.	Surrogate Recoveries		Limits
3386-33-2	1-Chlorooctadecane	106%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA33684
Account: ALTECLAS Altec Environmental Consulting, LLC
Project: ALTEC-Martin/Venice

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8445-BS	X0043199.D	1	05/25/17	PP	05/24/17	OP8445	GLB1052
OP8445-BSD	X0043200.D	1	05/25/17	PP	05/24/17	OP8445	GLB1052

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA33684-1, LA33684-2, LA33684-3, LA33684-4, LA33684-5, LA33684-6, LA33684-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
	Aromatics > C10-C12 (Unadj.)	5000	3930	79	4190	84	6	40-140/30
	Aromatics > C12-C16 (Unadj.)	15000	13200	88	14300	95	8	40-140/30
	Aromatics > C16-C21 (Unadj.)	25000	23200	93	25000	100	7	40-140/30
	Aromatics > C21-C35 (Unadj.)	40000	36600	92	40700	102	11	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	94%	98%	40-140%
321-60-8	2-Fluorobiphenyl	83%	90%	40-140%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA33684
Account: ALTECLAS Altec Environmental Consulting, LLC
Project: ALTEC-Martin/Venice

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8445-BS	Y0043199.D	1	05/25/17	PP	05/24/17	OP8445	GLB1053
OP8445-BSD	Y0043200.D	1	05/25/17	PP	05/24/17	OP8445	GLB1053

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA33684-1, LA33684-2, LA33684-3, LA33684-4, LA33684-5, LA33684-6, LA33684-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
	Aliphatics > C10-C12 (Unadj.)	5000	4290	86	3960	79	8	40-140/30
	Aliphatics > C12-C16 (Unadj.)	10000	8890	89	8160	82	9	40-140/30
	Aliphatics > C16-C35 (Unadj.)	45000	39100	87	37600	84	4	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
3386-33-2	1-Chlorooctadecane	100%	96%	40-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA33684
Account: ALTECLAS Altec Environmental Consulting, LLC
Project: ALTEC-Martin/Venice

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8445-MS	X0043201.D	1	05/25/17	PP	05/24/17	OP8445	GLB1052
OP8445-MSD	X0043202.D	1	05/25/17	PP	05/24/17	OP8445	GLB1052
LA33684-2	X0043204.D	1	05/25/17	PP	05/24/17	OP8445	GLB1052

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA33684-1, LA33684-2, LA33684-3, LA33684-4, LA33684-5, LA33684-6, LA33684-7

CAS No.	Compound	LA33684-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
	Aromatics > C10-C12 (Unadj.)	ND		4980	3670	74	4930	3570	72	3	40-140/50
	Aromatics > C12-C16 (Unadj.)	ND		14900	12700	85	14800	12100	82	5	40-140/50
	Aromatics > C16-C21 (Unadj.)	3290		24900	31200	112	24600	23900	84	26	40-140/50
	Aromatics > C21-C35 (Unadj.)	4030		39800	54700	127	39400	40000	91	31	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	LA33684-2	Limits
84-15-1	o-Terphenyl	90%	87%	82%	40-140%
321-60-8	2-Fluorobiphenyl	92%	89%	93%	40-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA33684
Account: ALTECLAS Altec Environmental Consulting, LLC
Project: ALTEC-Martin/Venice

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8445-MS	Y0043201.D	1	05/25/17	PP	05/24/17	OP8445	GLB1053
OP8445-MSD	Y0043202.D	1	05/25/17	PP	05/24/17	OP8445	GLB1053
LA33684-2	Y0043204.D	1	05/25/17	PP	05/24/17	OP8445	GLB1053

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA33684-1, LA33684-2, LA33684-3, LA33684-4, LA33684-5, LA33684-6, LA33684-7

CAS No.	Compound	LA33684-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
	Aliphatics > C10-C12 (Unadj.)	ND		4970	3530	71	4930	3210	65	9	40-140/50
	Aliphatics > C12-C16 (Unadj.)	ND		9950	8960	90	9850	8500	86	5	40-140/50
	Aliphatics > C16-C35 (Unadj.)	45700		44800	70400	55	44300	63500	40	10	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	LA33684-2	Limits
3386-33-2	1-Chlorooctadecane	90%	83%	86%	40-140%

* = Outside of Control Limits.