

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: 660-70475-1

Client Project/Site: City of Hollywood
Revision: 1

For:

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



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Sample Summary

Client: Langan Engineering & Environmental Srvcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
660-70475-1	LB11 (0-2)	Solid	11/16/15 11:40	11/17/15 08:50
660-70475-2	LB11 (2-4)	Solid	11/16/15 12:00	11/17/15 08:50
660-70475-3	CS1 (0-4)	Solid	11/16/15 12:15	11/17/15 08:50
660-70475-4	LB12 (0-2)	Solid	11/16/15 10:00	11/17/15 08:50
660-70475-5	LB12 (2-4)	Solid	11/16/15 10:20	11/17/15 08:50
660-70475-6	LB10 (0-2)	Solid	11/16/15 14:00	11/17/15 08:50
660-70475-7	LB10 (2-4)	Solid	11/16/15 14:20	11/17/15 08:50

Case Narrative

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Job ID: 660-70475-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative 660-70475-1

Comments

No additional comments.

Receipt

The samples were received on 11/17/2015 8:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4° C and 3.2° C.

Laboratory Comments

Due to system limitations Total Endosulfans are not included in this report. The data for this summary analytes has been calculated by hand and entered into the accompanying EDD.

GC/MS VOA

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 163525 recovered outside acceptance criteria, low biased, for Dichlorodifluoromethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

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

GC/MS Semi VOA

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

GC Semi VOA

Method(s) 8141B: The initial calibration verification (ICV) result for batch 280-305431 was above the upper control limit for o,o,o-TEPT on the primary column (+21%). Sample results were non-detects, and have been reported from the confirmation column.

Method(s) 8141B: The continuing calibration verification (CCV) associated with batch 280-305431 recovered above the upper control limit for Dichlorvos on the confirmation column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method(s) 8081B/8082A: The following sample was diluted due to the nature of the sample matrix: LB12 (2-4) (660-70475-5). Elevated reporting limits (RLs) are provided.

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

Metals

Method(s) 6020A: The method blank for batch 680-411130 contained Chromium above the method detection limit (MDL). Associated samples were not re-analyzed because the method blank results were less than the practical quantitation limit (PQL).

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

Subcontract non-Sister

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

Organic Prep

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

PROJECT NARRATIVE H5K180409

The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

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The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

For solid and sediments samples, when percent moisture is included in the report header field, the sample results are reported on a dry weight basis. When percent moisture is not contained in the header field, sample results are reported on an as received or wet weight basis.

All positive 2378-TCDF results at or above the minimum level were confirmed on a DB-225 column. Samples CS1 (0-4) and LB12 (2-4) exhibited a co-eluting non-2378-TCDF interference on the DB-225 column which falsely elevated the 2378-TCDF calculated amount. The lower 2378-TCDF result reported for these samples were from the Rtx-5 column. The Rtx-5 column is not isomer specific for 2378-TCDF and should be considered the highest amount possible. The result is qualified with an "X" to indicate this.

The following flags are used to qualify results for chlorinated dioxin and furan results:

J – The reported result is an estimate. The amount reported is below the Minimum Level (ML). The qualitative definition of the ML is "the lowest level at which the analytical system must give a reliable signal and an acceptable calibration point". The ML was introduced in EPA Methods 1624 and 1625 in 1980 and was promulgated in these methods in 1984 at 40 CFR Part 136, Appendix A. For the purposes of this report, the ML is qualitatively defined as described above, and quantitatively defined as follows:

Minimum Level: The concentration or mass of analyte in the sample that corresponds to the lowest calibration level in the initial calibration. It represents a concentration (in the sample extract) equivalent to that of the lowest calibration standard, after corrections for method-specified sample weights, volumes and cleanup procedures has been employed.

Example: The lowest calibration level for TCDD in the initial calibration is 0.5 pg/uL. A mass of 10 pg of 2,3,7,8-TCDD in the sample would result in a concentration of 0.5 pg/uL in the sample extract (at a final volume of 20 uL). Since the concentration in the sample extract corresponds to the concentration in the lowest calibration standard, the 10 pg mass in the sample components is the ML. If the sample extract is further diluted, the ML will increase by the dilution factor.

PROJECT NARRATIVE

H5K180409

Example: A 1/10 dilution is performed on the sample extract described above. The ML for 2,3,7,8-TCDD becomes 100 pg rather than the default of 10 pg.

E – The reported result is an estimate. The amount reported is above the Upper Calibration Level (UCL) described below. The quantitative definition of the UCL is listed below:

Upper Calibration Level: The concentration or mass of analyte in the sample that corresponds to the highest calibration level in the initial calibration. It is equivalent to the concentration of the highest calibration standard, assuming that all method-specified sample weights, volumes, and cleanup procedures have been employed.

Example: The maximum calibration level for TCDD in the initial calibration is 200 pg/uL. A mass of 4000 pg of 2,3,7,8-TCDD in the sampling components would result in a concentration of 200 pg/uL in the sample extract (at a final volume of 20 uL). Since the concentration in the sample extract corresponds to the concentration in the highest calibration standard, the 4000 pg mass in the sample components is the UCL. If the sample extract is further diluted, the ML will increase by the dilution factor.

Example: A 1/10 dilution is performed on the sample extract described above. The UCL for 2,3,7,8-TCDD becomes 40,000 pg rather than the default of 4000 pg. In this example, all positive 2,3,7,8-TCDD results above 40,000 pg are flagged with an E.

B – The analyte is present in the associated method blank at a detectable level. For this analysis, there is no method specified reporting level other than the qualitative criterion that peaks must exhibit a signal-to-noise ratio of ≥ 2.5 to 1. Therefore, the presence of any reportable amount of the analyte in the blank will result in a B qualifier on all associated samples.

Q – Estimated maximum possible concentration. This qualifier is used when the result is generated from chromatographic data that does not meet all the qualitative criteria for a positive identification given in the method. These may include one or more of the following:

- Ion abundance ratios must be within specified limits (+/-15% of theoretical ion abundance ratio).
- Retention time criteria (relative to the method-specified isotope labeled retention time standard).
- Co-maximization criterion. The two quantitation ion peaks must reach their maxima within 2 seconds of each other.
- 2,3,7,8-TCDF result is reported from the non-isomer specific Rtx-5 column.
- Polychlorinated dibenzofuran purity. An interference may be present on the indicated polychlorinated dibenzofuran when a polychlorinated diphenyl ether peak is present and maximizes within +/- 3 seconds of the dibenzofuran candidate.

S – Ion suppression evident. The trace indicating the signal from the lock mass of the calibration compound shows a deflection at the retention time of the analyte. This may indicate a temporary suppression of the instrument sensitivity due to a matrix-borne interference.

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C – Coeluting Isomer. The isomer is known to coelute with another member of its homologue group, or the peak shape is shouldered, indicating the likelihood of a coeluting isomer.

X – Other. See explanation in narrative.

Laboratory studies supporting risk assessment and Total Maximum Daily Load (TMDL) evaluations, frequently use qualified data reported as low as the Method Detection Limit (MDL), or the Estimated Detection Limit (EDL). Several of EPA's isotope dilution methods employ the EDL.^{1,2,3} The EDL is based on a direct measurement of the signal-to-noise (S/N) ratio acquired during sample analysis. This S/N measurement is used to calculate the concentration in the sample corresponding to the minimum intensity of the smallest quantifiable peak. The EDL reflects the amount of the particular analyte which would be required to cause a positive result for the particular analysis. Because the S/N obtained covaries with recovery, instrument sensitivity and sample-specific cleanup efficacy, the EDL is a more valid measure of the sensitivity of the entire analytical process for the specific sample than is an MDL run periodically on a reference matrix.

The EDL is typically calculated according to the following equation:

$$\text{Estimated Detection Limit} = \frac{N \times 2.5 \times Q_{is}}{H_{is} \times RRF \times W \times S}$$

Where:

- N = peak to peak noise of quantitation ion signal in the region of the ion chromatogram where the compound of interest is expected to elute
- H_{is} = peak height of quantitation ion for appropriate internal standard
- Q_{is} = ng of internal standard added to sample
- RRF = mean relative response factor of compound obtained during initial calibration
- W = amount of sample extracted (grams or liters)
- S = percent solids (optional, if results are requested to be reported on dry weight basis)

(The area of the internal standard is sometimes used instead of height, along with an area-to-height conversion factor.)

This method of estimating the detection limit differs from the MDL in that it does not carry the requirement that the sample be statistically distinguished as being from a contaminated population. As results approach the EDL, the risk of false positives and the analytical uncertainty increase significantly. However, a low false positive well below the ML or MDL is often closer to the true value than an assumption that the target analyte is present at the detection or reporting limits. For relatively clean samples, MDL studies may give an elevated estimate of the detection limit. Additionally, on contaminated samples, the MDL may give a falsely low estimate of the detection limit.

$$\text{Analyte Concentration} = \frac{A_s \times Q_{is}}{A_{is} \times RRF \times W \times S}$$

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Where:

- As = Sum of areas of the target peaks
- Qis = ng of internal standard added to sample
- Ais = Sum of areas of the internal standard peaks
- RRF = mean relative response factor of compound obtained during initial calibration
- W = amount of sample extracted (grams or liters)
- S = percent solids (optional, if results are requested to be reported on dry weight basis)

In sample data, peaks must have an intensity of ≥ 2.5 times the height of the background noise in order to be considered. Careful examination of the two equations above reveals that for the concentration of the smallest peak detectable (per the EDL equation) to exactly equal the smallest peaks that are calculated, requires that the average height to area ratio obtained during the calibration must equal the area to height ratio for every peak obtained near 2.5 times the noise. When the area to height ratio on a peak in a sample is less than the average obtained during calibration, the calculated result will correspond to a peak that would have been less than 2.5 times the noise on the calibration. This is the result of normal variability. Because the source methods for the EDL (SW-846 8290 and 8280A) do not provide for censoring of results by any other magnitude standard than being 2.5 times the noise, the laboratory does not censor at the calculated EDL. Hence, detections may be reported below the estimated detection limits.

Footnotes:

1. Code of Federal Regulations, Part 136, Chapter 1, Appendix 1, October 1994: Method 1613 Tetra- Through Octa-Chlorinated Dioxins and Furans by Isotope Dilution High Resolution Gas Chromatography/High Resolution Mass Spectrometry.
2. U.S. EPA. Test Methods for Evaluating Solid Waste, Volume II, SW-846, Update III, December 1996. Method 8280A: The Analysis of Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by High Resolution Gas Chromatography/Low Resolution Mass Spectrometry.
3. U.S. EPA. Test Methods for Evaluating Solid Waste, SW-846. Third Edition. March 1995 Method 8290: Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by High Resolution Gas Chromatography/High Resolution Mass Spectrometry.

Definitions/Glossary

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

GC/MS Semi VOA

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

DIOXIN

Qualifier	Qualifier Description
J	Estimated value; value may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
V	Indicates the analyte was detected in both the sample and method blank.
C	See case narrative.

Metals

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected at or above the method detection limit in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.

Glossary

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

TestAmerica Tampa

Detection Summary

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (0-2)

Lab Sample ID: 660-70475-1

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	1.22	J I	5.03	0.250	0.01	0.012	pg/g	1	☼	8290A	Total
OCDD	5.67	I	10.1	0.220	0.001	0.0057	pg/g	1	☼	8290A	Total
2,3,7,8-TCDF	0.558	J I	1.01	0.397	0.1	0.056	pg/g	1	☼	8290A	Total
1,2,3,4,7,8-HxCDF	0.150	V I	5.03	0.0874	0.1	0.015	pg/g	1	☼	8290A	Total
Total HxCDD	0.578	J I	5.03	0.222			pg/g	1	☼	8290A	Total
Total HpCDD	1.57	I J	5.03	0.250			pg/g	1	☼	8290A	Total
Total TCDF	1.24	J I	1.01	0.397			pg/g	1	☼	8290A	Total
Total PeCDF	0.366	J I	5.03	0.176			pg/g	1	☼	8290A	Total
Total HxCDF	0.150	V I	5.03	0.0904			pg/g	1	☼	8290A	Total
Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type		
Acetone	35	I	44	24	ug/Kg	1	☼	8260B	Total/NA		
Acenaphthylene	1.4	I	6.4	0.98	ug/Kg	1	☼	8270D LL	Total/NA		
Anthracene	1.4	I	6.4	0.98	ug/Kg	1	☼	8270D LL	Total/NA		
Benzo[a]pyrene	1.7	I	6.4	0.98	ug/Kg	1	☼	8270D LL	Total/NA		
Benzo[b]fluoranthene	1.5	I	6.4	0.98	ug/Kg	1	☼	8270D LL	Total/NA		
Chrysene	1.1	I	6.4	0.98	ug/Kg	1	☼	8270D LL	Total/NA		
Fluoranthene	1.6	I	6.4	0.98	ug/Kg	1	☼	8270D LL	Total/NA		
1-Methylnaphthalene	1.4	I	6.4	0.98	ug/Kg	1	☼	8270D LL	Total/NA		
2-Methylnaphthalene	1.6	I	6.4	0.98	ug/Kg	1	☼	8270D LL	Total/NA		
Pyrene	1.2	I	6.4	0.98	ug/Kg	1	☼	8270D LL	Total/NA		
Bolstar	4.0	I	12	3.9	ug/Kg	1	☼	8141B	Total/NA		
Total Petroleum Hydrocarbons (C8-C40)	2.2	I	10	1.7	mg/Kg	1	☼	FL-PRO	Total/NA		
Arsenic	0.25	I	0.26	0.087	mg/Kg	1	☼	6020A	Total/NA		
Barium	2.0		0.43	0.052	mg/Kg	1	☼	6020A	Total/NA		
Chromium	1.8		0.87	0.095	mg/Kg	1	☼	6020A	Total/NA		
Lead	0.40		0.17	0.043	mg/Kg	1	☼	6020A	Total/NA		
Selenium	0.23	I	0.43	0.087	mg/Kg	1	☼	6020A	Total/NA		

Client Sample ID: LB11 (2-4)

Lab Sample ID: 660-70475-2

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	0.434	J I	4.88	0.249	0.01	0.0043	pg/g	1	☼	8290A	Total
OCDD	2.49	J I	9.75	0.242	0.001	0.0025	pg/g	1	☼	8290A	Total
Total HxCDD	0.772	J I	4.88	0.226			pg/g	1	☼	8290A	Total
Total HpCDD	0.434	J I	4.88	0.249			pg/g	1	☼	8290A	Total
Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type		
Acenaphthylene	1.1	I	7.0	1.1	ug/Kg	1	☼	8270D LL	Total/NA		
Benzo[a]pyrene	1.7	I	7.0	1.1	ug/Kg	1	☼	8270D LL	Total/NA		
Benzo[b]fluoranthene	2.0	I	7.0	1.1	ug/Kg	1	☼	8270D LL	Total/NA		
Chrysene	1.5	I	7.0	1.1	ug/Kg	1	☼	8270D LL	Total/NA		
Fluoranthene	2.1	I	7.0	1.1	ug/Kg	1	☼	8270D LL	Total/NA		
1-Methylnaphthalene	1.1	I	7.0	1.1	ug/Kg	1	☼	8270D LL	Total/NA		
Pyrene	1.3	I	7.0	1.1	ug/Kg	1	☼	8270D LL	Total/NA		
Total Petroleum Hydrocarbons (C8-C40)	3.7	I	11	1.8	mg/Kg	1	☼	FL-PRO	Total/NA		
Arsenic	0.20	I	0.28	0.092	mg/Kg	1	☼	6020A	Total/NA		
Barium	4.7		0.46	0.055	mg/Kg	1	☼	6020A	Total/NA		
Chromium	2.7		0.92	0.10	mg/Kg	1	☼	6020A	Total/NA		
Lead	0.20		0.18	0.046	mg/Kg	1	☼	6020A	Total/NA		

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa

Detection Summary

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (2-4) (Continued)

Lab Sample ID: 660-70475-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.16	I	0.46	0.092	mg/Kg	1	☒	6020A	Total/NA

Client Sample ID: CS1 (0-4)

Lab Sample ID: 660-70475-3

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	1.73	J	0.990	0.762	1	1.7	pg/g	1	☒	8290A	Total
1,2,3,7,8-PeCDD	5.32		4.95	0.389	0.5	2.7	pg/g	1	☒	8290A	Total
1,2,3,4,7,8-HxCDD	2.86	I	4.95	0.354	0.1	0.29	pg/g	1	☒	8290A	Total
1,2,3,6,7,8-HxCDD	14.0		4.95	0.391	0.1	1.4	pg/g	1	☒	8290A	Total
1,2,3,7,8,9-HxCDD	11.3	J	4.95	0.346	0.1	1.1	pg/g	1	☒	8290A	Total
1,2,3,4,6,7,8-HpCDD	139		4.95	0.361	0.01	1.4	pg/g	1	☒	8290A	Total
OCDD	483		9.90	0.213	0.001	0.48	pg/g	1	☒	8290A	Total
2,3,7,8-TCDF	7.32	J C	0.990	0.692	0.1	0.73	pg/g	1	☒	8290A	Total
1,2,3,7,8-PeCDF	2.47	I	4.95	0.292	0.05	0.12	pg/g	1	☒	8290A	Total
2,3,4,7,8-PeCDF	4.33	I	4.95	0.257	0.5	2.2	pg/g	1	☒	8290A	Total
Total TCDD	52.0	J	0.990	0.762			pg/g	1	☒	8290A	Total
1,2,3,4,7,8-HxCDF	3.86	J V I	4.95	0.187	0.1	0.39	pg/g	1	☒	8290A	Total
1,2,3,6,7,8-HxCDF	2.46	I	4.95	0.196	0.1	0.25	pg/g	1	☒	8290A	Total
2,3,4,6,7,8-HxCDF	1.55	I	4.95	0.204	0.1	0.16	pg/g	1	☒	8290A	Total
1,2,3,4,6,7,8-HpCDF	13.2		4.95	0.257	0.01	0.13	pg/g	1	☒	8290A	Total
1,2,3,4,7,8,9-HpCDF	1.14	J I	4.95	0.318	0.01	0.011	pg/g	1	☒	8290A	Total
OCDF	22.8		9.90	0.360	0.001	0.023	pg/g	1	☒	8290A	Total
Total PeCDD	135	J	4.95	0.389			pg/g	1	☒	8290A	Total
Total HxCDD	106	J	4.95	0.362			pg/g	1	☒	8290A	Total
Total HpCDD	240	J	4.95	0.361			pg/g	1	☒	8290A	Total
Total TCDF	193	J	0.990	0.692			pg/g	1	☒	8290A	Total
Total PeCDF	79.5	J V	4.95	0.273			pg/g	1	☒	8290A	Total
Total HxCDF	35.5	J V	4.95	0.208			pg/g	1	☒	8290A	Total
Total HpCDF	35.1	J	4.95	0.285			pg/g	1	☒	8290A	Total

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	1.4	I	7.5	1.1	ug/Kg	1	☒	8270D LL	Total/NA
Anthracene	2.0	I	7.5	1.1	ug/Kg	1	☒	8270D LL	Total/NA
Benzo[a]anthracene	13		7.5	1.1	ug/Kg	1	☒	8270D LL	Total/NA
Benzo[a]pyrene	14		7.5	1.1	ug/Kg	1	☒	8270D LL	Total/NA
Benzo[b]fluoranthene	21		7.5	1.1	ug/Kg	1	☒	8270D LL	Total/NA
Benzo[g,h,i]perylene	6.7	I	7.5	2.3	ug/Kg	1	☒	8270D LL	Total/NA
Benzo[k]fluoranthene	7.9		7.5	1.1	ug/Kg	1	☒	8270D LL	Total/NA
Chrysene	14		7.5	1.1	ug/Kg	1	☒	8270D LL	Total/NA
Fluoranthene	15		7.5	1.1	ug/Kg	1	☒	8270D LL	Total/NA
Indeno[1,2,3-cd]pyrene	6.1	I	7.5	2.3	ug/Kg	1	☒	8270D LL	Total/NA
1-Methylnaphthalene	1.3	I	7.5	1.1	ug/Kg	1	☒	8270D LL	Total/NA
2-Methylnaphthalene	1.1	I	7.5	1.1	ug/Kg	1	☒	8270D LL	Total/NA
Phenanthrene	4.2	I	7.5	1.1	ug/Kg	1	☒	8270D LL	Total/NA
Pyrene	12		7.5	1.1	ug/Kg	1	☒	8270D LL	Total/NA
alpha-Chlordane	1.7		1.0	0.11	ug/Kg	1	☒	8081B/8082A	Total/NA
4,4'-DDD	2.3		1.0	0.11	ug/Kg	1	☒	8081B/8082A	Total/NA
4,4'-DDE	73		4.1	0.43	ug/Kg	4	☒	8081B/8082A	Total/NA
delta-BHC	0.15	I	1.0	0.11	ug/Kg	1	☒	8081B/8082A	Total/NA
gamma-Chlordane	1.6		1.0	0.11	ug/Kg	1	☒	8081B/8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa

Detection Summary

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: CS1 (0-4) (Continued)

Lab Sample ID: 660-70475-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Petroleum Hydrocarbons (C8-C40)	110		12	2.0	mg/Kg	1	☼	FL-PRO	Total/NA
Arsenic	0.84		0.30	0.099	mg/Kg	1	☼	6020A	Total/NA
Barium	77		0.49	0.059	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.40		0.049	0.015	mg/Kg	1	☼	6020A	Total/NA
Chromium	10		0.99	0.11	mg/Kg	1	☼	6020A	Total/NA
Lead	63		0.20	0.049	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.22	I	0.49	0.099	mg/Kg	1	☼	6020A	Total/NA
Silver	0.037	I	0.099	0.0099	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: LB12 (0-2)

Lab Sample ID: 660-70475-4

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDD	1.75	I	4.97	0.365	0.5	0.88	pg/g	1	☼	8290A	Total
1,2,3,4,7,8-HxCDD	2.91	J I	4.97	0.272	0.1	0.29	pg/g	1	☼	8290A	Total
1,2,3,6,7,8-HxCDD	7.63	J	4.97	0.271	0.1	0.76	pg/g	1	☼	8290A	Total
1,2,3,7,8,9-HxCDD	6.19	C	4.97	0.253	0.1	0.62	pg/g	1	☼	8290A	Total
1,2,3,4,6,7,8-HpCDD	74.9		4.97	0.413	0.01	0.75	pg/g	1	☼	8290A	Total
OCDD	554		9.95	0.550	0.001	0.55	pg/g	1	☼	8290A	Total
2,3,7,8-TCDF	4.51		0.995	0.121	0.1	0.45	pg/g	1	☼	8290A	Total
1,2,3,7,8-PeCDF	3.15	J I	4.97	0.254	0.05	0.16	pg/g	1	☼	8290A	Total
2,3,4,7,8-PeCDF	5.73		4.97	0.243	0.5	2.9	pg/g	1	☼	8290A	Total
Total TCDD	24.0	J	0.995	0.663			pg/g	1	☼	8290A	Total
1,2,3,4,7,8-HxCDF	6.55	J V	4.97	0.199	0.1	0.66	pg/g	1	☼	8290A	Total
1,2,3,6,7,8-HxCDF	4.26	J I	4.97	0.190	0.1	0.43	pg/g	1	☼	8290A	Total
2,3,4,6,7,8-HxCDF	4.42	J I	4.97	0.209	0.1	0.44	pg/g	1	☼	8290A	Total
1,2,3,4,6,7,8-HpCDF	14.7		4.97	0.330	0.01	0.15	pg/g	1	☼	8290A	Total
1,2,3,4,7,8,9-HpCDF	1.14	J I	4.97	0.403	0.01	0.011	pg/g	1	☼	8290A	Total
OCDF	18.2	J	9.95	0.457	0.001	0.018	pg/g	1	☼	8290A	Total
Total PeCDD	52.2	J	4.97	0.365			pg/g	1	☼	8290A	Total
Total HxCDD	83.3	J	4.97	0.265			pg/g	1	☼	8290A	Total
Total HpCDD	136		4.97	0.413			pg/g	1	☼	8290A	Total
Total TCDF	243	J	0.995	0.666			pg/g	1	☼	8290A	Total
Total PeCDF	78.4	J V	4.97	0.249			pg/g	1	☼	8290A	Total
Total HxCDF	48.8	J V	4.97	0.212			pg/g	1	☼	8290A	Total
Total HpCDF	38.6	J	4.97	0.363			pg/g	1	☼	8290A	Total

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	1.3	I	6.9	1.0	ug/Kg	1	☼	8270D LL	Total/NA
Benzo[a]pyrene	4.5	I	6.9	1.0	ug/Kg	1	☼	8270D LL	Total/NA
Benzo[b]fluoranthene	5.5	I	6.9	1.0	ug/Kg	1	☼	8270D LL	Total/NA
Benzo[k]fluoranthene	3.3	I	6.9	1.0	ug/Kg	1	☼	8270D LL	Total/NA
Chrysene	4.0	I	6.9	1.0	ug/Kg	1	☼	8270D LL	Total/NA
Fluoranthene	5.7	I	6.9	1.0	ug/Kg	1	☼	8270D LL	Total/NA
Phenanthrene	1.4	I	6.9	1.0	ug/Kg	1	☼	8270D LL	Total/NA
Pyrene	5.0	I	6.9	1.0	ug/Kg	1	☼	8270D LL	Total/NA
4,4'-DDE	1.9		1.9	0.20	ug/Kg	1	☼	8081B/8082A	Total/NA
Dieldrin	110		7.5	0.75	ug/Kg	4	☼	8081B/8082A	Total/NA
Total Petroleum Hydrocarbons (C8-C40)	3.6	I	11	1.8	mg/Kg	1	☼	FL-PRO	Total/NA
Arsenic	0.82		0.27	0.091	mg/Kg	1	☼	6020A	Total/NA
Barium	14		0.46	0.055	mg/Kg	1	☼	6020A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa

Detection Summary

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB12 (0-2) (Continued)

Lab Sample ID: 660-70475-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.25		0.046	0.014	mg/Kg	1	☒	6020A	Total/NA
Chromium	4.7		0.91	0.10	mg/Kg	1	☒	6020A	Total/NA
Lead	16		0.18	0.046	mg/Kg	1	☒	6020A	Total/NA
Selenium	1.2		0.46	0.091	mg/Kg	1	☒	6020A	Total/NA
Silver	0.11		0.091	0.0091	mg/Kg	1	☒	6020A	Total/NA
Mercury	0.012	I	0.021	0.0084	mg/Kg	1	☒	7471B	Total/NA

Client Sample ID: LB12 (2-4)

Lab Sample ID: 660-70475-5

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDD	5.58		5.03	0.327	0.5	2.8	pg/g	1	☒	8290A	Total
1,2,3,4,7,8-HxCDD	4.05	J I	5.03	0.306	0.1	0.41	pg/g	1	☒	8290A	Total
1,2,3,6,7,8-HxCDD	18.7		5.03	0.322	0.1	1.9	pg/g	1	☒	8290A	Total
1,2,3,7,8,9-HxCDD	13.0	C	5.03	0.292	0.1	1.3	pg/g	1	☒	8290A	Total
1,2,3,4,6,7,8-HpCDD	383		5.03	0.549	0.01	3.8	pg/g	1	☒	8290A	Total
OCDD	2540		10.1	0.376	0.001	2.5	pg/g	1	☒	8290A	Total
2,3,7,8-TCDF	6.20	J C	1.01	0.728	0.1	0.62	pg/g	1	☒	8290A	Total
1,2,3,7,8-PeCDF	4.17	I	5.03	0.250	0.05	0.21	pg/g	1	☒	8290A	Total
2,3,4,7,8-PeCDF	8.62		5.03	0.217	0.5	4.3	pg/g	1	☒	8290A	Total
Total TCDD	67.4	J	1.01	0.641			pg/g	1	☒	8290A	Total
1,2,3,4,7,8-HxCDF	10.8	C V	5.03	0.193	0.1	1.1	pg/g	1	☒	8290A	Total
1,2,3,6,7,8-HxCDF	7.02	J	5.03	0.185	0.1	0.70	pg/g	1	☒	8290A	Total
2,3,4,6,7,8-HxCDF	5.24	J	5.03	0.193	0.1	0.52	pg/g	1	☒	8290A	Total
1,2,3,7,8,9-HxCDF	0.431	J I	5.03	0.273	0.1	0.043	pg/g	1	☒	8290A	Total
1,2,3,4,6,7,8-HpCDF	50.3		5.03	0.363	0.01	0.50	pg/g	1	☒	8290A	Total
1,2,3,4,7,8,9-HpCDF	7.27		5.03	0.484	0.01	0.073	pg/g	1	☒	8290A	Total
OCDF	90.2		10.1	0.251	0.001	0.090	pg/g	1	☒	8290A	Total
Total PeCDD	103	J	5.03	0.327			pg/g	1	☒	8290A	Total
Total HxCDD	166	J	5.03	0.306			pg/g	1	☒	8290A	Total
Total HpCDD	630		5.03	0.549			pg/g	1	☒	8290A	Total
Total TCDF	290	J	1.01	0.728			pg/g	1	☒	8290A	Total
Total PeCDF	102	J V	5.03	0.232			pg/g	1	☒	8290A	Total
Total HxCDF	109	J V	5.03	0.206			pg/g	1	☒	8290A	Total
Total HpCDF	197	J	5.03	0.416			pg/g	1	☒	8290A	Total

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	3.2	I	6.6	1.0	ug/Kg	1	☒	8270D LL	Total/NA
Benzo[a]anthracene	21		6.6	1.0	ug/Kg	1	☒	8270D LL	Total/NA
Benzo[a]pyrene	25		6.6	1.0	ug/Kg	1	☒	8270D LL	Total/NA
Benzo[b]fluoranthene	33		6.6	1.0	ug/Kg	1	☒	8270D LL	Total/NA
Benzo[g,h,i]perylene	9.2		6.6	2.0	ug/Kg	1	☒	8270D LL	Total/NA
Benzo[k]fluoranthene	16		6.6	1.0	ug/Kg	1	☒	8270D LL	Total/NA
Chrysene	22		6.6	1.0	ug/Kg	1	☒	8270D LL	Total/NA
Dibenz(a,h)anthracene	2.4	I	6.6	2.0	ug/Kg	1	☒	8270D LL	Total/NA
Fluoranthene	27		6.6	1.0	ug/Kg	1	☒	8270D LL	Total/NA
Indeno[1,2,3-cd]pyrene	8.9		6.6	2.0	ug/Kg	1	☒	8270D LL	Total/NA
Phenanthrene	9.5		6.6	1.0	ug/Kg	1	☒	8270D LL	Total/NA
Pyrene	21		6.6	1.0	ug/Kg	1	☒	8270D LL	Total/NA
Total Petroleum Hydrocarbons (C8-C40)	4.0	I	10	1.7	mg/Kg	1	☒	FL-PRO	Total/NA
Arsenic	1.3		0.27	0.089	mg/Kg	1	☒	6020A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa

Detection Summary

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB12 (2-4) (Continued)

Lab Sample ID: 660-70475-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	63		0.45	0.053	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.60		0.045	0.013	mg/Kg	1	☼	6020A	Total/NA
Chromium	6.2		0.89	0.098	mg/Kg	1	☼	6020A	Total/NA
Lead	42		0.18	0.045	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.29	I	0.45	0.089	mg/Kg	1	☼	6020A	Total/NA
Silver	0.33		0.089	0.0089	mg/Kg	1	☼	6020A	Total/NA
Mercury	0.047		0.018	0.0071	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: LB10 (0-2)

Lab Sample ID: 660-70475-6

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	0.456	I	4.96	0.283	0.01	0.0046	pg/g	1	☼	8290A	Total
OCDD	1.56	J I	9.91	0.284	0.001	0.0016	pg/g	1	☼	8290A	Total
Total TCDD	0.374	J I	0.991	0.555			pg/g	1	☼	8290A	Total
OCDF	0.485	J I	9.91	0.292	0.001	0.00049	pg/g	1	☼	8290A	Total
Total HpCDD	0.456	I	4.96	0.283			pg/g	1	☼	8290A	Total
Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type		
4,4'-DDE	0.80	I	1.8	0.19	ug/Kg	1	☼	8081B/8082A	Total/NA		
Endrin ketone	0.82	I	1.8	0.21	ug/Kg	1	☼	8081B/8082A	Total/NA		
PCB-1260	78		35	10	ug/Kg	1	☼	8081B/8082A	Total/NA		
Total PCBs	78		35	5.3	ug/Kg	1	☼	8081B/8082A	Total/NA		
Total Petroleum Hydrocarbons (C8-C40)	9.7	I	11	1.8	mg/Kg	1	☼	FL-PRO	Total/NA		
Barium	0.82		0.48	0.057	mg/Kg	1	☼	6020A	Total/NA		
Chromium	0.54	I V	0.96	0.11	mg/Kg	1	☼	6020A	Total/NA		
Lead	2.5		0.19	0.048	mg/Kg	1	☼	6020A	Total/NA		

Client Sample ID: LB10 (2-4)

Lab Sample ID: 660-70475-7

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	Dil Fac	D	Method	Prep Type
OCDF	0.412	J I	9.80	0.424	0.001	0.00041	pg/g	1	☼	8290A	Total
Total PeCDD	0.827	J I	4.90	0.269			pg/g	1	☼	8290A	Total
Total HxCDD	0.558	J I	4.90	0.206			pg/g	1	☼	8290A	Total
Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type		
2-Methylnaphthalene	1.2	I	6.9	1.0	ug/Kg	1	☼	8270D LL	Total/NA		
Total Petroleum Hydrocarbons (C8-C40)	4.0	I	11	1.8	mg/Kg	1	☼	FL-PRO	Total/NA		
Arsenic	0.29		0.28	0.095	mg/Kg	1	☼	6020A	Total/NA		
Barium	3.2		0.47	0.057	mg/Kg	1	☼	6020A	Total/NA		
Chromium	4.6		0.95	0.10	mg/Kg	1	☼	6020A	Total/NA		
Lead	0.35		0.19	0.047	mg/Kg	1	☼	6020A	Total/NA		
Selenium	0.42	I	0.47	0.095	mg/Kg	1	☼	6020A	Total/NA		
Mercury	0.020		0.020	0.0079	mg/Kg	1	☼	7471B	Total/NA		

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (0-2)

Lab Sample ID: 660-70475-1

Date Collected: 11/16/15 11:40

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 95.5

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.01	0.510	1		pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
1,2,3,7,8-PeCDD	ND		5.03	0.226	0.5		pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
1,2,3,4,7,8-HxCDD	ND		5.03	0.222	0.1		pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
1,2,3,6,7,8-HxCDD	ND		5.03	0.233	0.1		pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
1,2,3,7,8,9-HxCDD	ND		5.03	0.211	0.1		pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
1,2,3,4,6,7,8-HpCDD	1.22	J I	5.03	0.250	0.01	0.012	pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
OCDD	5.67	I	10.1	0.220	0.001	0.0057	pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
2,3,7,8-TCDF	0.558	J I	1.01	0.397	0.1	0.056	pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
1,2,3,7,8-PeCDF	ND		5.03	0.188	0.05		pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
2,3,4,7,8-PeCDF	ND		5.03	0.167	0.5		pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
Total TCDD	ND		1.01	0.510			pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
1,2,3,4,7,8-HxCDF	0.150	V I	5.03	0.0874	0.1	0.015	pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
1,2,3,6,7,8-HxCDF	ND		5.03	0.0814	0.1		pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
2,3,4,6,7,8-HxCDF	ND		5.03	0.0876	0.1		pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
1,2,3,7,8,9-HxCDF	ND		5.03	0.110	0.1		pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
1,2,3,4,6,7,8-HpCDF	ND		5.03	0.213	0.01		pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
1,2,3,4,7,8,9-HpCDF	ND		5.03	0.306	0.01		pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
OCDF	ND		10.1	0.326	0.001		pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
Total PeCDD	ND		5.03	0.226			pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
Total HxCDD	0.578	J I	5.03	0.222			pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
Total HpCDD	1.57	I J	5.03	0.250			pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
Total TCDF	1.24	J I	1.01	0.397			pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
Total PeCDF	0.366	J I	5.03	0.176			pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
Total HxCDF	0.150	V I	5.03	0.0904			pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
Total HpCDF	ND		5.03	0.252			pg/g	☼	11/19/15 12:32	11/30/15 04:48	1
Total TEQ (EPA 1989)						0.089					

Internal Standard	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	67		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-1,2,3,7,8-PeCDD	66		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-1,2,3,4,7,8-HxCDD	67		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-1,2,3,6,7,8-HxCDD	72		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-1,2,3,4,6,7,8-HpCDD	72		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-OCDD	67		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-2,3,7,8-TCDF	59		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-1,2,3,7,8-PeCDF	53		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-2,3,4,7,8-PeCDF	56		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-1,2,3,4,7,8-HxCDF	58		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-1,2,3,6,7,8-HxCDF	64		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-2,3,4,6,7,8-HxCDF	65		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-1,2,3,7,8,9-HxCDF	60		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-1,2,3,4,6,7,8-HpCDF	66		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-1,2,3,4,7,8,9-HpCDF	61		40 - 135	11/19/15 12:32	11/30/15 04:48	1
13C-OCDF	60		40 - 135	11/19/15 12:32	11/30/15 04:48	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (0-2)

Lab Sample ID: 660-70475-1

Date Collected: 11/16/15 11:40

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 99.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	35	I	44	24	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Benzene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Bromobenzene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Bromoform	1.8	U	4.4	1.8	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Bromomethane	3.1	U	8.7	3.1	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
2-Butanone (MEK)	5.7	U	22	5.7	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Carbon disulfide	4.4	U	8.7	4.4	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Carbon tetrachloride	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Chlorobenzene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Chlorobromomethane	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Chlorodibromomethane	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Chloroethane	1.9	U	8.7	1.9	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Chloroform	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Chloromethane	2.2	U	8.7	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
2-Chlorotoluene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
4-Chlorotoluene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
cis-1,2-Dichloroethene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
cis-1,3-Dichloropropene	1.7	U	4.4	1.7	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,2-Dibromo-3-Chloropropane	3.1	U	8.7	3.1	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Dibromomethane	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,2-Dichlorobenzene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,3-Dichlorobenzene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,4-Dichlorobenzene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Dichlorobromomethane	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Dichlorodifluoromethane	2.1	U	8.7	2.1	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,1-Dichloroethane	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,2-Dichloroethane	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,1-Dichloroethene	1.9	U	4.4	1.9	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,2-Dichloropropane	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,3-Dichloropropane	1.7	U	4.4	1.7	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
2,2-Dichloropropane	1.7	U	4.4	1.7	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,1-Dichloropropene	1.7	U	4.4	1.7	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Ethylbenzene	1.7	U	4.4	1.7	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Ethylene Dibromide	1.2	U	4.4	1.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Hexachlorobutadiene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
2-Hexanone	20	U	22	20	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Isopropylbenzene	3.3	U	4.4	3.3	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
4-Isopropyltoluene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Methylene Chloride	3.5	U	4.4	3.5	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
4-Methyl-2-pentanone (MIBK)	9.6	U	22	9.6	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Methyl tert-butyl ether	4.4	U	8.7	4.4	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
m-Xylene & p-Xylene	2.6	U	8.7	2.6	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
n-Butylbenzene	1.8	U	4.4	1.8	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
N-Propylbenzene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
o-Xylene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
sec-Butylbenzene	2.1	U	4.4	2.1	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Styrene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
tert-Butylbenzene	1.7	U	4.4	1.7	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,1,1,2-Tetrachloroethane	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (0-2)

Lab Sample ID: 660-70475-1

Date Collected: 11/16/15 11:40

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 99.4

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	3.0	U	4.4	3.0	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Tetrachloroethene	2.6	U	4.4	2.6	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Toluene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
trans-1,2-Dichloroethene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
trans-1,3-Dichloropropene	1.8	U	4.4	1.8	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,2,3-Trichlorobenzene	2.1	U	4.4	2.1	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,2,4-Trichlorobenzene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,1,1-Trichloroethane	1.8	U	4.4	1.8	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,1,2-Trichloroethane	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Trichloroethene	1.9	U	4.4	1.9	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Trichlorofluoromethane	2.4	U	8.7	2.4	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,2,3-Trichloropropane	2.6	U	4.4	2.6	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,2,4-Trimethylbenzene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
1,3,5-Trimethylbenzene	2.2	U	4.4	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Vinyl chloride	2.2	U	8.7	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1
Xylenes, Total	2.2	U	13	2.2	ug/Kg	☼	11/18/15 10:27	11/20/15 10:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		69 - 130	11/18/15 10:27	11/20/15 10:17	1
Dibromofluoromethane	97		63 - 139	11/18/15 10:27	11/20/15 10:17	1
Toluene-d8 (Surr)	95		67 - 138	11/18/15 10:27	11/20/15 10:17	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.98	U	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Acenaphthylene	1.4	I	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Anthracene	1.4	I	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Benzo[a]anthracene	0.98	U	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Benzo[a]pyrene	1.7	I	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Benzo[b]fluoranthene	1.5	I	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Benzo[g,h,i]perylene	2.0	U	6.4	2.0	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Benzo[k]fluoranthene	0.98	U	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Chrysene	1.1	I	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Dibenz(a,h)anthracene	2.0	U	6.4	2.0	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Fluoranthene	1.6	I	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Fluorene	0.98	U	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Indeno[1,2,3-cd]pyrene	2.0	U	6.4	2.0	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
1-Methylnaphthalene	1.4	I	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
2-Methylnaphthalene	1.6	I	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Naphthalene	0.98	U	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Phenanthrene	0.98	U	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1
Pyrene	1.2	I	6.4	0.98	ug/Kg	☼	11/19/15 11:17	11/23/15 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	59		27 - 127	11/19/15 11:17	11/23/15 15:21	1
Nitrobenzene-d5 (Surr)	44		15 - 136	11/19/15 11:17	11/23/15 15:21	1
Terphenyl-d14 (Surr)	70		24 - 146	11/19/15 11:17	11/23/15 15:21	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (0-2)

Lab Sample ID: 660-70475-1

Date Collected: 11/16/15 11:40

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 99.4

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.15	U	1.7	0.15	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
alpha-BHC	0.14	U	1.7	0.14	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
alpha-Chlordane	0.18	U	1.7	0.18	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
beta-BHC	0.32	U	1.7	0.32	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
Chlordane (technical)	2.8	U	17	2.8	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
4,4'-DDD	0.18	U	1.7	0.18	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
4,4'-DDE	0.18	U	1.7	0.18	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
4,4'-DDT	0.22	U	1.7	0.22	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
delta-BHC	0.19	U	1.7	0.19	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
Dieldrin	0.17	U	1.7	0.17	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
Endosulfan I	0.17	U	1.7	0.17	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
Endosulfan II	0.15	U	1.7	0.15	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
Endosulfan sulfate	0.21	U	1.7	0.21	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
Endrin	0.22	U	1.7	0.22	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
Endrin aldehyde	0.22	U	1.7	0.22	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
Endrin ketone	0.20	U	1.7	0.20	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
gamma-BHC (Lindane)	0.14	U	1.7	0.14	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
gamma-Chlordane	0.18	U	1.7	0.18	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
Heptachlor	0.19	U	1.7	0.19	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
Heptachlor epoxide	0.16	U	1.7	0.16	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
Methoxychlor	0.27	U	1.7	0.27	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
PCB-1016	11	U	32	11	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
PCB-1221	15	U	32	15	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
PCB-1232	5.1	U	32	5.1	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
PCB-1242	4.9	U	32	4.9	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
PCB-1248	8.0	U	32	8.0	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
PCB-1254	9.8	U	32	9.8	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
PCB-1260	9.4	U	32	9.4	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
Total PCBs	4.9	U	32	4.9	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1
Toxaphene	5.4	U	170	5.4	ug/Kg	☼	11/18/15 11:47	11/18/15 16:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	106		54 - 133	11/18/15 11:47	11/18/15 16:19	1
Tetrachloro-m-xylene	94		46 - 130	11/18/15 11:47	11/18/15 16:19	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	11	U	62	11	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Bolstar	4.0	I	12	3.9	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Chlorpyrifos	6.0	U	19	6.0	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Coumaphos	2.6	U	12	2.6	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Demeton, Total	7.0	U	36	7.0	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Diazinon	6.7	U	20	6.7	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Dichlorvos	6.9	U	21	6.9	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Dimethoate	6.6	U	20	6.6	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Disulfoton	7.2	U	45	7.2	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
EPN	3.4	U	12	3.4	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Ethyl Parathion	4.9	U	17	4.9	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Fensulfothion	7.6	U	23	7.6	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Guthion	3.2	U	12	3.2	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (0-2)

Lab Sample ID: 660-70475-1

Date Collected: 11/16/15 11:40

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 99.4

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Malathion	4.3	U	14	4.3	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Merphos	4.8	U	28	4.8	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Methyl parathion	5.9	U	19	5.9	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Mevinphos	4.3	U	14	4.3	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Mocap	4.6	U	14	4.6	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Naled	21	U	65	21	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
o,o',o"-Triethylphosphorothioate	7.3	U	36	7.3	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Phorate	5.3	U	19	5.3	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Ronnel	14	U	43	14	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Sulfotepp	5.8	U	19	5.8	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Tokuthion	3.6	U	19	3.6	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1
Trichloronate	5.8	U	19	5.8	ug/Kg	☼	11/19/15 17:45	11/24/15 18:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormefos	81		42 - 132	11/19/15 17:45	11/24/15 18:34	1
Triphenylphosphate	113		47 - 161	11/19/15 17:45	11/24/15 18:34	1

Method: FL-PRO - Florida - Petroleum Range Organics (GC)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (C8-C40)	2.2	I	10	1.7	mg/Kg	☼	11/19/15 10:17	11/20/15 18:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-C39	111		60 - 118	11/19/15 10:17	11/20/15 18:13	1
o-Terphenyl	105		62 - 109	11/19/15 10:17	11/20/15 18:13	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.25	I	0.26	0.087	mg/Kg	☼	11/18/15 09:00	11/18/15 18:34	1
Barium	2.0		0.43	0.052	mg/Kg	☼	11/18/15 09:00	11/18/15 18:34	1
Cadmium	0.013	U	0.043	0.013	mg/Kg	☼	11/18/15 09:00	11/18/15 18:34	1
Chromium	1.8		0.87	0.095	mg/Kg	☼	11/18/15 09:00	11/18/15 18:34	1
Lead	0.40		0.17	0.043	mg/Kg	☼	11/18/15 09:00	11/18/15 18:34	1
Selenium	0.23	I	0.43	0.087	mg/Kg	☼	11/18/15 09:00	11/18/15 18:34	1
Silver	0.0087	U	0.087	0.0087	mg/Kg	☼	11/18/15 09:00	11/18/15 18:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0079	U	0.020	0.0079	mg/Kg	☼	11/18/15 14:56	11/19/15 10:30	1

Client Sample ID: LB11 (2-4)

Lab Sample ID: 660-70475-2

Date Collected: 11/16/15 12:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 88

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.975	0.606	1		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
1,2,3,7,8-PeCDD	ND		4.88	0.248	0.5		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
1,2,3,4,7,8-HxCDD	ND		4.88	0.228	0.1		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
1,2,3,6,7,8-HxCDD	ND		4.88	0.237	0.1		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
1,2,3,7,8,9-HxCDD	ND		4.88	0.216	0.1		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (2-4)

Lab Sample ID: 660-70475-2

Date Collected: 11/16/15 12:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 88

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A) (Continued)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	0.434	J I	4.88	0.249	0.01	0.0043	pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
OCDD	2.49	J I	9.75	0.242	0.001	0.0025	pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
2,3,7,8-TCDF	ND		0.975	0.399	0.1		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
1,2,3,7,8-PeCDF	ND		4.88	0.173	0.05		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
2,3,4,7,8-PeCDF	ND		4.88	0.159	0.5		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
Total TCDD	ND		0.975	0.606			pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
1,2,3,4,7,8-HxCDF	ND		4.88	0.101	0.1		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
1,2,3,6,7,8-HxCDF	ND		4.88	0.106	0.1		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
2,3,4,6,7,8-HxCDF	ND		4.88	0.108	0.1		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
1,2,3,7,8,9-HxCDF	ND		4.88	0.142	0.1		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
1,2,3,4,6,7,8-HpCDF	ND		4.88	0.176	0.01		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
1,2,3,4,7,8,9-HpCDF	ND		4.88	0.220	0.01		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
OCDF	ND		9.75	0.260	0.001		pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
Total PeCDD	ND		4.88	0.248			pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
Total HxCDD	0.772	J I	4.88	0.226			pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
Total HpCDD	0.434	J I	4.88	0.249			pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
Total TCDF	ND		0.975	0.399			pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
Total PeCDF	ND		4.88	0.165			pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
Total HxCDF	ND		4.88	0.112			pg/g	☼	11/19/15 12:32	11/30/15 05:48	1
Total HpCDF	ND		4.88	0.196			pg/g	☼	11/19/15 12:32	11/30/15 05:48	1

Total TEQ (EPA 1989) 0.0068

Internal Standard	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	66		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-1,2,3,7,8-PeCDD	74		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-1,2,3,4,7,8-HxCDD	76		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-1,2,3,6,7,8-HxCDD	74		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-1,2,3,4,6,7,8-HpCDD	77		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-OCDD	75		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-2,3,7,8-TCDF	59		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-1,2,3,7,8-PeCDF	61		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-2,3,4,7,8-PeCDF	64		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-1,2,3,4,7,8-HxCDF	64		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-1,2,3,6,7,8-HxCDF	65		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-2,3,4,6,7,8-HxCDF	67		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-1,2,3,7,8,9-HxCDF	64		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-1,2,3,4,6,7,8-HpCDF	68		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-1,2,3,4,7,8,9-HpCDF	68		40 - 135	11/19/15 12:32	11/30/15 05:48	1
13C-OCDF	70		40 - 135	11/19/15 12:32	11/30/15 05:48	1

Client Sample ID: LB11 (2-4)

Lab Sample ID: 660-70475-2

Date Collected: 11/16/15 12:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 93.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	41	U	77	41	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Benzene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Bromobenzene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (2-4)

Lab Sample ID: 660-70475-2

Date Collected: 11/16/15 12:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 93.0

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	3.2	U	7.7	3.2	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Bromomethane	5.5	U	15	5.5	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
2-Butanone (MEK)	9.9	U	38	9.9	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Carbon disulfide	7.7	U	15	7.7	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Carbon tetrachloride	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Chlorobenzene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Chlorobromomethane	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Chlorodibromomethane	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Chloroethane	3.4	U	15	3.4	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Chloroform	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Chloromethane	3.8	U	15	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
2-Chlorotoluene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
4-Chlorotoluene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
cis-1,2-Dichloroethene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
cis-1,3-Dichloropropene	3.1	U	7.7	3.1	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,2-Dibromo-3-Chloropropane	5.5	U	15	5.5	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Dibromomethane	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,2-Dichlorobenzene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,3-Dichlorobenzene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,4-Dichlorobenzene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Dichlorobromomethane	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Dichlorodifluoromethane	3.7	U	15	3.7	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,1-Dichloroethane	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,2-Dichloroethane	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,1-Dichloroethene	3.4	U	7.7	3.4	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,2-Dichloropropane	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,3-Dichloropropane	3.1	U	7.7	3.1	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
2,2-Dichloropropane	3.1	U	7.7	3.1	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,1-Dichloropropene	3.1	U	7.7	3.1	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Ethylbenzene	3.1	U	7.7	3.1	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Ethylene Dibromide	2.1	U	7.7	2.1	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Hexachlorobutadiene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
2-Hexanone	35	U	38	35	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Isopropylbenzene	5.8	U	7.7	5.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
4-Isopropyltoluene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Methylene Chloride	6.1	U	7.7	6.1	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
4-Methyl-2-pentanone (MIBK)	17	U	38	17	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Methyl tert-butyl ether	7.7	U	15	7.7	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
m-Xylene & p-Xylene	4.6	U	15	4.6	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
n-Butylbenzene	3.2	U	7.7	3.2	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
N-Propylbenzene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
o-Xylene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
sec-Butylbenzene	3.7	U	7.7	3.7	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Styrene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
tert-Butylbenzene	3.1	U	7.7	3.1	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,1,1,2-Tetrachloroethane	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,1,1,2,2-Tetrachloroethane	5.2	U	7.7	5.2	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Tetrachloroethene	4.6	U	7.7	4.6	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Toluene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (2-4)

Lab Sample ID: 660-70475-2

Date Collected: 11/16/15 12:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 93.0

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
trans-1,3-Dichloropropene	3.2	U	7.7	3.2	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,2,3-Trichlorobenzene	3.7	U	7.7	3.7	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,2,4-Trichlorobenzene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,1,1-Trichloroethane	3.2	U	7.7	3.2	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,1,2-Trichloroethane	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Trichloroethene	3.4	U	7.7	3.4	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Trichlorofluoromethane	4.3	U	15	4.3	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,2,3-Trichloropropane	4.6	U	7.7	4.6	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,2,4-Trimethylbenzene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
1,3,5-Trimethylbenzene	3.8	U	7.7	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Vinyl chloride	3.8	U	15	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Xylenes, Total	3.8	U	23	3.8	ug/Kg	☼	11/18/15 10:28	11/20/15 10:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		69 - 130				11/18/15 10:28	11/20/15 10:35	1
Dibromofluoromethane	99		63 - 139				11/18/15 10:28	11/20/15 10:35	1
Toluene-d8 (Surr)	99		67 - 138				11/18/15 10:28	11/20/15 10:35	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Acenaphthylene	1.1	I	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Anthracene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Benzo[a]anthracene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Benzo[a]pyrene	1.7	I	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Benzo[b]fluoranthene	2.0	I	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Benzo[g,h,i]perylene	2.1	U	7.0	2.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Benzo[k]fluoranthene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Chrysene	1.5	I	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Dibenz(a,h)anthracene	2.1	U	7.0	2.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Fluoranthene	2.1	I	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Fluorene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Indeno[1,2,3-cd]pyrene	2.1	U	7.0	2.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
1-Methylnaphthalene	1.1	I	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
2-Methylnaphthalene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Naphthalene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Phenanthrene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Pyrene	1.3	I	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 15:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	56		27 - 127				11/19/15 11:17	11/23/15 15:56	1
Nitrobenzene-d5 (Surr)	43		15 - 136				11/19/15 11:17	11/23/15 15:56	1
Terphenyl-d14 (Surr)	63		24 - 146				11/19/15 11:17	11/23/15 15:56	1

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.16	U	1.8	0.16	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
alpha-BHC	0.15	U	1.8	0.15	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
alpha-Chlordane	0.19	U	1.8	0.19	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (2-4)

Lab Sample ID: 660-70475-2

Date Collected: 11/16/15 12:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 93.0

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
beta-BHC	0.35	U	1.8	0.35	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
Chlordane (technical)	3.0	U	18	3.0	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
4,4'-DDD	0.19	U	1.8	0.19	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
4,4'-DDE	0.19	U	1.8	0.19	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
4,4'-DDT	0.23	U	1.8	0.23	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
delta-BHC	0.20	U	1.8	0.20	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
Dieldrin	0.18	U	1.8	0.18	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
Endosulfan I	0.18	U	1.8	0.18	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
Endosulfan II	0.16	U	1.8	0.16	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
Endosulfan sulfate	0.22	U	1.8	0.22	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
Endrin	0.23	U	1.8	0.23	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
Endrin aldehyde	0.23	U	1.8	0.23	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
Endrin ketone	0.21	U	1.8	0.21	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
gamma-BHC (Lindane)	0.15	U	1.8	0.15	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
gamma-Chlordane	0.19	U	1.8	0.19	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
Heptachlor	0.20	U	1.8	0.20	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
Heptachlor epoxide	0.17	U	1.8	0.17	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
Methoxychlor	0.29	U	1.8	0.29	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
PCB-1016	12	U	35	12	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
PCB-1221	16	U	35	16	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
PCB-1232	5.4	U	35	5.4	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
PCB-1242	5.2	U	35	5.2	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
PCB-1248	8.6	U	35	8.6	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
PCB-1254	10	U	35	10	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
PCB-1260	10	U	35	10	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
Total PCBs	5.2	U	35	5.2	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1
Toxaphene	5.8	U	180	5.8	ug/Kg	☼	11/18/15 11:47	11/18/15 16:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	86		54 - 133	11/18/15 11:47	11/18/15 16:34	1
Tetrachloro-m-xylene	73		46 - 130	11/18/15 11:47	11/18/15 16:34	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	13	U	71	13	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Bolstar	4.5	U	14	4.5	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Chlorpyrifos	6.9	U	21	6.9	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Coumaphos	3.0	U	14	3.0	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Demeton, Total	8.0	U	41	8.0	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Diazinon	7.7	U	23	7.7	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Dichlorvos	7.9	U	24	7.9	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Dimethoate	7.5	U	23	7.5	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Disulfoton	8.2	U	51	8.2	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
EPN	3.9	U	14	3.9	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Ethyl Parathion	5.6	U	19	5.6	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Fensulfothion	8.6	U	27	8.6	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Guthion	3.7	U	14	3.7	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Malathion	4.9	U	16	4.9	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Merphos	5.5	U	32	5.5	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Methyl parathion	6.8	U	21	6.8	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (2-4)

Lab Sample ID: 660-70475-2

Date Collected: 11/16/15 12:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 93.0

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mevinphos	4.9	U	16	4.9	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Mocap	5.2	U	16	5.2	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Naled	24	U	74	24	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
o,o',o"-Triethylphosphorothioate	8.3	U	41	8.3	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Phorate	6.0	U	21	6.0	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Ronnel	16	U	49	16	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Sulfotepp	6.6	U	21	6.6	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Tokuthion	4.1	U	21	4.1	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Trichloronate	6.6	U	21	6.6	ug/Kg	☼	11/19/15 17:45	11/24/15 19:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Chlormefos	56		42 - 132				11/19/15 17:45	11/24/15 19:03	1
Triphenylphosphate	91		47 - 161				11/19/15 17:45	11/24/15 19:03	1

Method: FL-PRO - Florida - Petroleum Range Organics (GC)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (C8-C40)	3.7	I	11	1.8	mg/Kg	☼	11/19/15 10:17	11/20/15 18:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-C39	101		60 - 118				11/19/15 10:17	11/20/15 18:24	1
o-Terphenyl	88		62 - 109				11/19/15 10:17	11/20/15 18:24	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.20	I	0.28	0.092	mg/Kg	☼	11/18/15 09:00	11/18/15 19:34	1
Barium	4.7		0.46	0.055	mg/Kg	☼	11/18/15 09:00	11/18/15 19:34	1
Cadmium	0.014	U	0.046	0.014	mg/Kg	☼	11/18/15 09:00	11/18/15 19:34	1
Chromium	2.7		0.92	0.10	mg/Kg	☼	11/18/15 09:00	11/18/15 19:34	1
Lead	0.20		0.18	0.046	mg/Kg	☼	11/18/15 09:00	11/18/15 19:34	1
Selenium	0.16	I	0.46	0.092	mg/Kg	☼	11/18/15 09:00	11/18/15 19:34	1
Silver	0.0092	U	0.092	0.0092	mg/Kg	☼	11/18/15 09:00	11/18/15 19:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0080	U	0.020	0.0080	mg/Kg	☼	11/18/15 14:56	11/19/15 10:40	1

Client Sample ID: CS1 (0-4)

Lab Sample ID: 660-70475-3

Date Collected: 11/16/15 12:15

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 77

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	1.73	J	0.990	0.762	1	1.7	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
1,2,3,7,8-PeCDD	5.32		4.95	0.389	0.5	2.7	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
1,2,3,4,7,8-HxCDD	2.86	I	4.95	0.354	0.1	0.29	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
1,2,3,6,7,8-HxCDD	14.0		4.95	0.391	0.1	1.4	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
1,2,3,7,8,9-HxCDD	11.3	J	4.95	0.346	0.1	1.1	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
1,2,3,4,6,7,8-HpCDD	139		4.95	0.361	0.01	1.4	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
OCDD	483		9.90	0.213	0.001	0.48	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
2,3,7,8-TCDF	7.32	J C	0.990	0.692	0.1	0.73	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: CS1 (0-4)

Lab Sample ID: 660-70475-3

Date Collected: 11/16/15 12:15

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 77

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A) (Continued)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8-PeCDF	2.47	I	4.95	0.292	0.05	0.12	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
2,3,4,7,8-PeCDF	4.33	I	4.95	0.257	0.5	2.2	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
Total TCDD	52.0	J	0.990	0.762			pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
1,2,3,4,7,8-HxCDF	3.86	J V I	4.95	0.187	0.1	0.39	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
1,2,3,6,7,8-HxCDF	2.46	I	4.95	0.196	0.1	0.25	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
2,3,4,6,7,8-HxCDF	1.55	I	4.95	0.204	0.1	0.16	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
1,2,3,7,8,9-HxCDF	ND		4.95	0.258	0.1		pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
1,2,3,4,6,7,8-HpCDF	13.2		4.95	0.257	0.01	0.13	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
1,2,3,4,7,8,9-HpCDF	1.14	J I	4.95	0.318	0.01	0.011	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
OCDF	22.8		9.90	0.360	0.001	0.023	pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
Total PeCDD	135	J	4.95	0.389			pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
Total HxCDD	106	J	4.95	0.362			pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
Total HpCDD	240	J	4.95	0.361			pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
Total TCDF	193	J	0.990	0.692			pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
Total PeCDF	79.5	J V	4.95	0.273			pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
Total HxCDF	35.5	J V	4.95	0.208			pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
Total HpCDF	35.1	J	4.95	0.285			pg/g	☼	11/19/15 12:32	11/30/15 06:49	1
Total TEQ (EPA 1989)						13					

Internal Standard	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	69		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-1,2,3,7,8-PeCDD	72		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-1,2,3,4,7,8-HxCDD	78		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-1,2,3,6,7,8-HxCDD	77		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-1,2,3,4,6,7,8-HpCDD	81		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-OCDD	77		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-2,3,7,8-TCDF	60		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-1,2,3,7,8-PeCDF	62		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-2,3,4,7,8-PeCDF	64		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-1,2,3,4,7,8-HxCDF	65		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-1,2,3,6,7,8-HxCDF	66		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-2,3,4,6,7,8-HxCDF	71		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-1,2,3,7,8,9-HxCDF	64		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-1,2,3,4,6,7,8-HpCDF	69		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-1,2,3,4,7,8,9-HpCDF	69		40 - 135	11/19/15 12:32	11/30/15 06:49	1
13C-OCDF	67		40 - 135	11/19/15 12:32	11/30/15 06:49	1

Client Sample ID: CS1 (0-4)

Lab Sample ID: 660-70475-3

Date Collected: 11/16/15 12:15

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 85.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	38	U	71	38	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Benzene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Bromobenzene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Bromoform	3.0	U	7.1	3.0	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Bromomethane	5.1	U	14	5.1	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
2-Butanone (MEK)	9.3	U	36	9.3	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: CS1 (0-4)

Lab Sample ID: 660-70475-3

Date Collected: 11/16/15 12:15

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 85.0

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	7.1	U	14	7.1	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Carbon tetrachloride	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Chlorobenzene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Chlorobromomethane	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Chlorodibromomethane	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Chloroethane	3.1	U	14	3.1	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Chloroform	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Chloromethane	3.6	U	14	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
2-Chlorotoluene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
4-Chlorotoluene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
cis-1,2-Dichloroethene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
cis-1,3-Dichloropropene	2.8	U	7.1	2.8	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,2-Dibromo-3-Chloropropane	5.1	U	14	5.1	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Dibromomethane	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,2-Dichlorobenzene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,3-Dichlorobenzene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,4-Dichlorobenzene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Dichlorobromomethane	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Dichlorodifluoromethane	3.4	U	14	3.4	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,1-Dichloroethane	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,2-Dichloroethane	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,1-Dichloroethene	3.1	U	7.1	3.1	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,2-Dichloropropane	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,3-Dichloropropane	2.8	U	7.1	2.8	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
2,2-Dichloropropane	2.8	U	7.1	2.8	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,1-Dichloropropene	2.8	U	7.1	2.8	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Ethylbenzene	2.8	U	7.1	2.8	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Ethylene Dibromide	2.0	U	7.1	2.0	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Hexachlorobutadiene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
2-Hexanone	33	U	36	33	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Isopropylbenzene	5.4	U	7.1	5.4	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
4-Isopropyltoluene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Methylene Chloride	5.7	U	7.1	5.7	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
4-Methyl-2-pentanone (MIBK)	16	U	36	16	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Methyl tert-butyl ether	7.1	U	14	7.1	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
m-Xylene & p-Xylene	4.3	U	14	4.3	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
n-Butylbenzene	3.0	U	7.1	3.0	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
N-Propylbenzene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
o-Xylene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
sec-Butylbenzene	3.4	U	7.1	3.4	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Styrene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
tert-Butylbenzene	2.8	U	7.1	2.8	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,1,1,2-Tetrachloroethane	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,1,1,2,2-Tetrachloroethane	4.8	U	7.1	4.8	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Tetrachloroethene	4.3	U	7.1	4.3	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Toluene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
trans-1,2-Dichloroethene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
trans-1,3-Dichloropropene	3.0	U	7.1	3.0	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,2,3-Trichlorobenzene	3.4	U	7.1	3.4	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: CS1 (0-4)

Lab Sample ID: 660-70475-3

Date Collected: 11/16/15 12:15

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 85.0

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,1,1-Trichloroethane	3.0	U	7.1	3.0	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,1,2-Trichloroethane	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Trichloroethene	3.1	U	7.1	3.1	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Trichlorofluoromethane	4.0	U	14	4.0	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,2,3-Trichloropropane	4.3	U	7.1	4.3	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,2,4-Trimethylbenzene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
1,3,5-Trimethylbenzene	3.6	U	7.1	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Vinyl chloride	3.6	U	14	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Xylenes, Total	3.6	U	21	3.6	ug/Kg	☼	11/27/15 14:27	11/27/15 15:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		67 - 138				11/27/15 14:27	11/27/15 15:04	1
4-Bromofluorobenzene	125		69 - 130				11/27/15 14:27	11/27/15 15:04	1
Dibromofluoromethane	103		63 - 139				11/27/15 14:27	11/27/15 15:04	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	1.1	U	7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Acenaphthylene	1.4	I	7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Anthracene	2.0	I	7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Benzo[a]anthracene	13		7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Benzo[a]pyrene	14		7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Benzo[b]fluoranthene	21		7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Benzo[g,h,i]perylene	6.7	I	7.5	2.3	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Benzo[k]fluoranthene	7.9		7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Chrysene	14		7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Dibenz(a,h)anthracene	2.3	U	7.5	2.3	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Fluoranthene	15		7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Fluorene	1.1	U	7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Indeno[1,2,3-cd]pyrene	6.1	I	7.5	2.3	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
1-Methylnaphthalene	1.3	I	7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
2-Methylnaphthalene	1.1	I	7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Naphthalene	1.1	U	7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Phenanthrene	4.2	I	7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Pyrene	12		7.5	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 16:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	63		27 - 127				11/19/15 11:17	11/23/15 16:31	1
Nitrobenzene-d5 (Surr)	49		15 - 136				11/19/15 11:17	11/23/15 16:31	1
Terphenyl-d14 (Surr)	72		24 - 146				11/19/15 11:17	11/23/15 16:31	1

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.090	U	1.0	0.090	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
alpha-BHC	0.084	U	1.0	0.084	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
alpha-Chlordane	1.7		1.0	0.11	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
beta-BHC	0.20	U	1.0	0.20	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
Chlordane (technical)	1.7	U	10	1.7	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
4,4'-DDD	2.3		1.0	0.11	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: CS1 (0-4)

Lab Sample ID: 660-70475-3

Date Collected: 11/16/15 12:15

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 85.0

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	73		4.1	0.43	ug/Kg	☼	11/18/15 11:47	11/18/15 18:05	4
4,4'-DDT	0.13	U	1.0	0.13	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
delta-BHC	0.15	I	1.0	0.11	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
Dieldrin	0.10	U	1.0	0.10	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
Endosulfan I	0.10	U	1.0	0.10	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
Endosulfan II	0.090	U	1.0	0.090	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
Endosulfan sulfate	0.13	U	1.0	0.13	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
Endrin	0.13	U	1.0	0.13	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
Endrin aldehyde	0.13	U	1.0	0.13	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
Endrin ketone	0.12	U	1.0	0.12	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
gamma-BHC (Lindane)	0.084	U	1.0	0.084	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
gamma-Chlordane	1.6		1.0	0.11	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
Heptachlor	0.11	U	1.0	0.11	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
Heptachlor epoxide	0.096	U	1.0	0.096	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
Methoxychlor	0.17	U	1.0	0.17	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
PCB-1016	6.6	U	20	6.6	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
PCB-1221	9.0	U	20	9.0	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
PCB-1232	3.1	U	20	3.1	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
PCB-1242	3.0	U	20	3.0	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
PCB-1248	4.9	U	20	4.9	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
PCB-1254	6.0	U	20	6.0	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
PCB-1260	5.7	U	20	5.7	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
Total PCBs	3.0	U	20	3.0	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1
Toxaphene	3.3	U	100	3.3	ug/Kg	☼	11/18/15 11:47	11/18/15 16:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	80		54 - 133	11/18/15 11:47	11/18/15 16:48	1
Tetrachloro-m-xylene	79		46 - 130	11/18/15 11:47	11/18/15 16:48	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	14	U	76	14	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Bolstar	4.8	U	15	4.8	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Chlorpyrifos	7.4	U	23	7.4	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Coumaphos	3.2	U	15	3.2	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Demeton, Total	8.6	U	44	8.6	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Diazinon	8.3	U	25	8.3	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Dichlorvos	8.4	U	26	8.4	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Dimethoate	8.1	U	25	8.1	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Disulfoton	8.8	U	55	8.8	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
EPN	4.2	U	15	4.2	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Ethyl Parathion	6.0	U	20	6.0	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Fensulfothion	9.3	U	28	9.3	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Guthion	4.0	U	15	4.0	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Malathion	5.3	U	17	5.3	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Merphos	5.8	J3 U	34	5.8	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Methyl parathion	7.2	U	23	7.2	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Mevinphos	5.3	U	17	5.3	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Mocap	5.6	U	17	5.6	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Naled	26	U	80	26	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: CS1 (0-4)

Lab Sample ID: 660-70475-3

Date Collected: 11/16/15 12:15

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 85.0

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o,o',o"-Triethylphosphorothioate	8.9	U	44	8.9	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Phorate	6.5	U	23	6.5	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Ronnel	17	U	52	17	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Sulfotepp	7.1	U	23	7.1	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Tokuthion	4.4	U	23	4.4	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Trichloronate	7.1	U	23	7.1	ug/Kg	☼	11/19/15 17:45	11/24/15 19:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Chlormefos	62		42 - 132				11/19/15 17:45	11/24/15 19:33	1
Triphenylphosphate	75		47 - 161				11/19/15 17:45	11/24/15 19:33	1

Method: FL-PRO - Florida - Petroleum Range Organics (GC)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (C8-C40)	110		12	2.0	mg/Kg	☼	11/19/15 10:17	11/20/15 18:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-C39	117		60 - 118				11/19/15 10:17	11/20/15 18:34	1
o-Terphenyl	101		62 - 109				11/19/15 10:17	11/20/15 18:34	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.84		0.30	0.099	mg/Kg	☼	11/18/15 09:00	11/18/15 19:09	1
Barium	77		0.49	0.059	mg/Kg	☼	11/18/15 09:00	11/18/15 19:09	1
Cadmium	0.40		0.049	0.015	mg/Kg	☼	11/18/15 09:00	11/18/15 19:09	1
Chromium	10		0.99	0.11	mg/Kg	☼	11/18/15 09:00	11/18/15 19:09	1
Lead	63		0.20	0.049	mg/Kg	☼	11/18/15 09:00	11/18/15 19:09	1
Selenium	0.22	I	0.49	0.099	mg/Kg	☼	11/18/15 09:00	11/18/15 19:09	1
Silver	0.037	I	0.099	0.0099	mg/Kg	☼	11/18/15 09:00	11/18/15 19:09	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0094	U	0.024	0.0094	mg/Kg	☼	11/18/15 14:56	11/19/15 10:43	1

Client Sample ID: LB12 (0-2)

Lab Sample ID: 660-70475-4

Date Collected: 11/16/15 10:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 93.1

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.995	0.663	1		pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
1,2,3,7,8-PeCDD	1.75	I	4.97	0.365	0.5	0.88	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
1,2,3,4,7,8-HxCDD	2.91	J I	4.97	0.272	0.1	0.29	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
1,2,3,6,7,8-HxCDD	7.63	J	4.97	0.271	0.1	0.76	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
1,2,3,7,8,9-HxCDD	6.19	C	4.97	0.253	0.1	0.62	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
1,2,3,4,6,7,8-HpCDD	74.9		4.97	0.413	0.01	0.75	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
OCDD	554		9.95	0.550	0.001	0.55	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
2,3,7,8-TCDF	4.51		0.995	0.121	0.1	0.45	pg/g	☼	11/19/15 12:32	12/02/15 14:56	1
1,2,3,7,8-PeCDF	3.15	J I	4.97	0.254	0.05	0.16	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
2,3,4,7,8-PeCDF	5.73		4.97	0.243	0.5	2.9	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
Total TCDD	24.0	J	0.995	0.663			pg/g	☼	11/19/15 12:32	11/30/15 07:48	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB12 (0-2)

Date Collected: 11/16/15 10:00

Date Received: 11/17/15 08:50

Lab Sample ID: 660-70475-4

Matrix: Solid

Percent Solids: 93.1

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A) (Continued)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDF	6.55	J V	4.97	0.199	0.1	0.66	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
1,2,3,6,7,8-HxCDF	4.26	J I	4.97	0.190	0.1	0.43	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
2,3,4,6,7,8-HxCDF	4.42	J I	4.97	0.209	0.1	0.44	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
1,2,3,7,8,9-HxCDF	ND		4.97	0.264	0.1		pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
1,2,3,4,6,7,8-HpCDF	14.7		4.97	0.330	0.01	0.15	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
1,2,3,4,7,8,9-HpCDF	1.14	J I	4.97	0.403	0.01	0.011	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
OCDF	18.2	J	9.95	0.457	0.001	0.018	pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
Total PeCDD	52.2	J	4.97	0.365			pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
Total HxCDD	83.3	J	4.97	0.265			pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
Total HpCDD	136		4.97	0.413			pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
Total TCDF	243	J	0.995	0.666			pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
Total PeCDF	78.4	J V	4.97	0.249			pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
Total HxCDF	48.8	J V	4.97	0.212			pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
Total HpCDF	38.6	J	4.97	0.363			pg/g	☼	11/19/15 12:32	11/30/15 07:48	1
Total TEQ (EPA 1989)						9.0					

Internal Standard	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	64		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-1,2,3,7,8-PeCDD	65		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-1,2,3,4,7,8-HxCDD	67		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-1,2,3,6,7,8-HxCDD	68		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-1,2,3,4,6,7,8-HpCDD	69		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-OCDD	64		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-2,3,7,8-TCDF	55		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-2,3,7,8-TCDF	67		40 - 135	11/19/15 12:32	12/02/15 14:56	1
13C-1,2,3,7,8-PeCDF	57		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-2,3,4,7,8-PeCDF	59		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-1,2,3,4,7,8-HxCDF	57		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-1,2,3,6,7,8-HxCDF	58		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-2,3,4,6,7,8-HxCDF	58		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-1,2,3,7,8,9-HxCDF	58		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-1,2,3,4,6,7,8-HpCDF	55		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-1,2,3,4,7,8,9-HpCDF	58		40 - 135	11/19/15 12:32	11/30/15 07:48	1
13C-OCDF	58		40 - 135	11/19/15 12:32	11/30/15 07:48	1

Client Sample ID: LB12 (0-2)

Date Collected: 11/16/15 10:00

Date Received: 11/17/15 08:50

Lab Sample ID: 660-70475-4

Matrix: Solid

Percent Solids: 93.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	34	U	63	34	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Benzene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Bromobenzene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Bromoform	2.7	U	6.3	2.7	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Bromomethane	4.6	U	13	4.6	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
2-Butanone (MEK)	8.3	U	32	8.3	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Carbon disulfide	6.3	U	13	6.3	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Carbon tetrachloride	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB12 (0-2)

Lab Sample ID: 660-70475-4

Date Collected: 11/16/15 10:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 93.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Chlorobromomethane	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Chlorodibromomethane	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Chloroethane	2.8	U	13	2.8	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Chloroform	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Chloromethane	3.2	U	13	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
2-Chlorotoluene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
4-Chlorotoluene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
cis-1,2-Dichloroethene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
cis-1,3-Dichloropropene	2.5	U	6.3	2.5	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,2-Dibromo-3-Chloropropane	4.6	U	13	4.6	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Dibromomethane	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,2-Dichlorobenzene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,3-Dichlorobenzene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,4-Dichlorobenzene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Dichlorobromomethane	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Dichlorodifluoromethane	3.0	U	13	3.0	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,1-Dichloroethane	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,2-Dichloroethane	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,1-Dichloroethene	2.8	U	6.3	2.8	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,2-Dichloropropane	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,3-Dichloropropane	2.5	U	6.3	2.5	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
2,2-Dichloropropane	2.5	U	6.3	2.5	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,1-Dichloropropene	2.5	U	6.3	2.5	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Ethylbenzene	2.5	U	6.3	2.5	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Ethylene Dibromide	1.8	U	6.3	1.8	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Hexachlorobutadiene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
2-Hexanone	29	U	32	29	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Isopropylbenzene	4.8	U	6.3	4.8	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
4-Isopropyltoluene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Methylene Chloride	5.1	U	6.3	5.1	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
4-Methyl-2-pentanone (MIBK)	14	U	32	14	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Methyl tert-butyl ether	6.3	U	13	6.3	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
m-Xylene & p-Xylene	3.8	U	13	3.8	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
n-Butylbenzene	2.7	U	6.3	2.7	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
N-Propylbenzene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
o-Xylene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
sec-Butylbenzene	3.0	U	6.3	3.0	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Styrene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
tert-Butylbenzene	2.5	U	6.3	2.5	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,1,1,2-Tetrachloroethane	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,1,2,2-Tetrachloroethane	4.3	U	6.3	4.3	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Tetrachloroethene	3.8	U	6.3	3.8	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Toluene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
trans-1,2-Dichloroethene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
trans-1,3-Dichloropropene	2.7	U	6.3	2.7	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,2,3-Trichlorobenzene	3.0	U	6.3	3.0	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,2,4-Trichlorobenzene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,1,1-Trichloroethane	2.7	U	6.3	2.7	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB12 (0-2)

Lab Sample ID: 660-70475-4

Date Collected: 11/16/15 10:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 93.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Trichloroethene	2.8	U	6.3	2.8	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Trichlorofluoromethane	3.6	U	13	3.6	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,2,3-Trichloropropane	3.8	U	6.3	3.8	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,2,4-Trimethylbenzene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
1,3,5-Trimethylbenzene	3.2	U	6.3	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Vinyl chloride	3.2	U	13	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1
Xylenes, Total	3.2	U	19	3.2	ug/Kg	☼	11/27/15 14:28	11/27/15 15:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		67 - 138	11/27/15 14:28	11/27/15 15:23	1
4-Bromofluorobenzene	100		69 - 130	11/27/15 14:28	11/27/15 15:23	1
Dibromofluoromethane	95		63 - 139	11/27/15 14:28	11/27/15 15:23	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Acenaphthylene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Anthracene	1.3	I	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Benzo[a]anthracene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Benzo[a]pyrene	4.5	I	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Benzo[b]fluoranthene	5.5	I	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Benzo[g,h,i]perylene	2.1	U	6.9	2.1	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Benzo[k]fluoranthene	3.3	I	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Chrysene	4.0	I	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Dibenz(a,h)anthracene	2.1	U	6.9	2.1	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Fluoranthene	5.7	I	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Fluorene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Indeno[1,2,3-cd]pyrene	2.1	U	6.9	2.1	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
1-Methylnaphthalene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
2-Methylnaphthalene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Naphthalene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Phenanthrene	1.4	I	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1
Pyrene	5.0	I	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	72		27 - 127	11/19/15 11:17	11/23/15 17:06	1
Nitrobenzene-d5 (Surr)	52		15 - 136	11/19/15 11:17	11/23/15 17:06	1
Terphenyl-d14 (Surr)	83		24 - 146	11/19/15 11:17	11/23/15 17:06	1

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.17	U	1.9	0.17	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
alpha-BHC	0.15	U	1.9	0.15	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
alpha-Chlordane	0.20	U	1.9	0.20	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
beta-BHC	0.36	U	1.9	0.36	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
Chlordane (technical)	3.2	U	19	3.2	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
4,4'-DDD	0.20	U	1.9	0.20	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
4,4'-DDE	1.9		1.9	0.20	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
4,4'-DDT	0.24	U	1.9	0.24	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB12 (0-2)

Lab Sample ID: 660-70475-4

Date Collected: 11/16/15 10:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 93.5

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
delta-BHC	0.21	U	1.9	0.21	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
Dieldrin	110		7.5	0.75	ug/Kg	☼	11/18/15 11:47	11/18/15 18:19	4
Endosulfan I	0.19	U	1.9	0.19	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
Endosulfan II	0.17	U	1.9	0.17	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
Endosulfan sulfate	0.23	U	1.9	0.23	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
Endrin	0.24	U	1.9	0.24	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
Endrin aldehyde	0.24	U	1.9	0.24	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
Endrin ketone	0.22	U	1.9	0.22	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
gamma-BHC (Lindane)	0.15	U	1.9	0.15	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
gamma-Chlordane	0.20	U	1.9	0.20	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
Heptachlor	0.21	U	1.9	0.21	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
Heptachlor epoxide	0.18	U	1.9	0.18	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
Methoxychlor	0.31	U	1.9	0.31	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
PCB-1016	12	U	36	12	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
PCB-1221	17	U	36	17	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
PCB-1232	5.7	U	36	5.7	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
PCB-1242	5.5	U	36	5.5	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
PCB-1248	9.0	U	36	9.0	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
PCB-1254	11	U	36	11	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
PCB-1260	11	U	36	11	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
Total PCBs	5.5	U	36	5.5	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1
Toxaphene	6.1	U	190	6.1	ug/Kg	☼	11/18/15 11:47	11/18/15 17:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	84		54 - 133	11/18/15 11:47	11/18/15 17:02	1
Tetrachloro-m-xylene	83		46 - 130	11/18/15 11:47	11/18/15 17:02	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	12	U	66	12	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Bolstar	4.2	U	13	4.2	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Chlorpyrifos	6.4	U	20	6.4	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Coumaphos	2.8	U	13	2.8	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Demeton, Total	7.4	U	38	7.4	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Diazinon	7.2	U	22	7.2	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Dichlorvos	7.3	U	23	7.3	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Dimethoate	7.0	U	22	7.0	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Disulfoton	7.6	U	47	7.6	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
EPN	3.6	U	13	3.6	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Ethyl Parathion	5.2	U	18	5.2	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Fensulfothion	8.0	U	25	8.0	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Guthion	3.4	U	13	3.4	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Malathion	4.6	U	15	4.6	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Merphos	5.1	U	30	5.1	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Methyl parathion	6.3	U	20	6.3	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Mevinphos	4.5	U	15	4.5	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Mocap	4.8	U	15	4.8	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Naled	22	U	69	22	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
o,o',o"-Triethylphosphorothioate	7.7	U	38	7.7	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Phorate	5.6	U	20	5.6	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB12 (0-2)

Lab Sample ID: 660-70475-4

Date Collected: 11/16/15 10:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 93.5

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ronnel	15	U	45	15	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Sulfotepp	6.2	U	20	6.2	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Tokuthion	3.8	U	20	3.8	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Trichloronate	6.1	U	20	6.1	ug/Kg	☼	11/19/15 17:45	11/24/15 21:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Chlormefos	63		42 - 132				11/19/15 17:45	11/24/15 21:00	1
Triphenylphosphate	86		47 - 161				11/19/15 17:45	11/24/15 21:00	1

Method: FL-PRO - Florida - Petroleum Range Organics (GC)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (C8-C40)	3.6	I	11	1.8	mg/Kg	☼	11/19/15 10:17	11/20/15 18:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-C39	108		60 - 118				11/19/15 10:17	11/20/15 18:44	1
o-Terphenyl	103		62 - 109				11/19/15 10:17	11/20/15 18:44	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.82		0.27	0.091	mg/Kg	☼	11/18/15 09:00	11/18/15 19:29	1
Barium	14		0.46	0.055	mg/Kg	☼	11/18/15 09:00	11/18/15 19:29	1
Cadmium	0.25		0.046	0.014	mg/Kg	☼	11/18/15 09:00	11/18/15 19:29	1
Chromium	4.7		0.91	0.10	mg/Kg	☼	11/18/15 09:00	11/18/15 19:29	1
Lead	16		0.18	0.046	mg/Kg	☼	11/18/15 09:00	11/18/15 19:29	1
Selenium	1.2		0.46	0.091	mg/Kg	☼	11/18/15 09:00	11/18/15 19:29	1
Silver	0.11		0.091	0.0091	mg/Kg	☼	11/18/15 09:00	11/18/15 19:29	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	I	0.021	0.0084	mg/Kg	☼	11/18/15 14:56	11/19/15 10:46	1

Client Sample ID: LB12 (2-4)

Lab Sample ID: 660-70475-5

Date Collected: 11/16/15 10:20

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 92.1

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.01	0.641	1		pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
1,2,3,7,8-PeCDD	5.58		5.03	0.327	0.5	2.8	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
1,2,3,4,7,8-HxCDD	4.05	J I	5.03	0.306	0.1	0.41	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
1,2,3,6,7,8-HxCDD	18.7		5.03	0.322	0.1	1.9	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
1,2,3,7,8,9-HxCDD	13.0	C	5.03	0.292	0.1	1.3	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
1,2,3,4,6,7,8-HpCDD	383		5.03	0.549	0.01	3.8	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
OCDD	2540		10.1	0.376	0.001	2.5	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
2,3,7,8-TCDF	6.20	J C	1.01	0.728	0.1	0.62	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
1,2,3,7,8-PeCDF	4.17	I	5.03	0.250	0.05	0.21	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
2,3,4,7,8-PeCDF	8.62		5.03	0.217	0.5	4.3	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
Total TCDD	67.4	J	1.01	0.641			pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
1,2,3,4,7,8-HxCDF	10.8	C V	5.03	0.193	0.1	1.1	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
1,2,3,6,7,8-HxCDF	7.02	J	5.03	0.185	0.1	0.70	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB12 (2-4)

Lab Sample ID: 660-70475-5

Date Collected: 11/16/15 10:20

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 92.1

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A) (Continued)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6,7,8-HxCDF	5.24	J	5.03	0.193	0.1	0.52	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
1,2,3,7,8,9-HxCDF	0.431	J I	5.03	0.273	0.1	0.043	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
1,2,3,4,6,7,8-HpCDF	50.3		5.03	0.363	0.01	0.50	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
1,2,3,4,7,8,9-HpCDF	7.27		5.03	0.484	0.01	0.073	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
OCDF	90.2		10.1	0.251	0.001	0.090	pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
Total PeCDD	103	J	5.03	0.327			pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
Total HxCDD	166	J	5.03	0.306			pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
Total HpCDD	630		5.03	0.549			pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
Total TCDF	290	J	1.01	0.728			pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
Total PeCDF	102	J V	5.03	0.232			pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
Total HxCDF	109	J V	5.03	0.206			pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
Total HpCDF	197	J	5.03	0.416			pg/g	☼	11/19/15 12:32	11/30/15 08:49	1
Total TEQ (EPA 1989)						21					

Internal Standard	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	65		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-1,2,3,7,8-PeCDD	67		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-1,2,3,4,7,8-HxCDD	73		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-1,2,3,6,7,8-HxCDD	72		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-1,2,3,4,6,7,8-HpCDD	74		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-OCDD	73		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-2,3,7,8-TCDF	56		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-1,2,3,7,8-PeCDF	57		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-2,3,4,7,8-PeCDF	59		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-1,2,3,4,7,8-HxCDF	62		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-1,2,3,6,7,8-HxCDF	62		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-2,3,4,6,7,8-HxCDF	64		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-1,2,3,7,8,9-HxCDF	59		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-1,2,3,4,6,7,8-HpCDF	64		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-1,2,3,4,7,8,9-HpCDF	60		40 - 135	11/19/15 12:32	11/30/15 08:49	1
13C-OCDF	66		40 - 135	11/19/15 12:32	11/30/15 08:49	1

Client Sample ID: LB12 (2-4)

Lab Sample ID: 660-70475-5

Date Collected: 11/16/15 10:20

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 98.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	23	U	43	23	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Benzene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Bromobenzene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Bromoform	1.8	U	4.3	1.8	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Bromomethane	3.1	U	8.7	3.1	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
2-Butanone (MEK)	5.6	U	22	5.6	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Carbon disulfide	4.3	U	8.7	4.3	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Carbon tetrachloride	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Chlorobenzene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Chlorobromomethane	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Chlorodibromomethane	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB12 (2-4)

Lab Sample ID: 660-70475-5

Date Collected: 11/16/15 10:20

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 98.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	1.9	U	8.7	1.9	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Chloroform	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Chloromethane	2.2	U	8.7	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
2-Chlorotoluene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
4-Chlorotoluene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
cis-1,2-Dichloroethene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
cis-1,3-Dichloropropene	1.7	U	4.3	1.7	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,2-Dibromo-3-Chloropropane	3.1	U	8.7	3.1	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Dibromomethane	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,2-Dichlorobenzene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,3-Dichlorobenzene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,4-Dichlorobenzene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Dichlorobromomethane	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Dichlorodifluoromethane	2.1	U	8.7	2.1	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,1-Dichloroethane	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,2-Dichloroethane	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,1-Dichloroethene	1.9	U	4.3	1.9	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,2-Dichloropropane	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,3-Dichloropropane	1.7	U	4.3	1.7	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
2,2-Dichloropropane	1.7	U	4.3	1.7	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,1-Dichloropropene	1.7	U	4.3	1.7	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Ethylbenzene	1.7	U	4.3	1.7	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Ethylene Dibromide	1.2	U	4.3	1.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Hexachlorobutadiene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
2-Hexanone	20	U	22	20	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Isopropylbenzene	3.3	U	4.3	3.3	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
4-Isopropyltoluene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Methylene Chloride	3.5	U	4.3	3.5	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
4-Methyl-2-pentanone (MIBK)	9.5	U	22	9.5	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Methyl tert-butyl ether	4.3	U	8.7	4.3	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
m-Xylene & p-Xylene	2.6	U	8.7	2.6	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
n-Butylbenzene	1.8	U	4.3	1.8	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
N-Propylbenzene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
o-Xylene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
sec-Butylbenzene	2.1	U	4.3	2.1	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Styrene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
tert-Butylbenzene	1.7	U	4.3	1.7	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,1,1,2-Tetrachloroethane	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,1,2,2-Tetrachloroethane	3.0	U	4.3	3.0	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Tetrachloroethene	2.6	U	4.3	2.6	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Toluene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
trans-1,2-Dichloroethene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
trans-1,3-Dichloropropene	1.8	U	4.3	1.8	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,2,3-Trichlorobenzene	2.1	U	4.3	2.1	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,2,4-Trichlorobenzene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,1,1-Trichloroethane	1.8	U	4.3	1.8	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,1,2-Trichloroethane	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Trichloroethene	1.9	U	4.3	1.9	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Trichlorofluoromethane	2.4	U	8.7	2.4	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB12 (2-4)

Lab Sample ID: 660-70475-5

Date Collected: 11/16/15 10:20

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 98.5

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	2.6	U	4.3	2.6	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,2,4-Trimethylbenzene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
1,3,5-Trimethylbenzene	2.2	U	4.3	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Vinyl chloride	2.2	U	8.7	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Xylenes, Total	2.2	U	13	2.2	ug/Kg	☼	11/18/15 10:30	11/20/15 12:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	111		69 - 130				11/18/15 10:30	11/20/15 12:53	1
Dibromofluoromethane	98		63 - 139				11/18/15 10:30	11/20/15 12:53	1
Toluene-d8 (Surr)	92		67 - 138				11/18/15 10:30	11/20/15 12:53	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	1.0	U	6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Acenaphthylene	1.0	U	6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Anthracene	3.2	I	6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Benzo[a]anthracene	21		6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Benzo[a]pyrene	25		6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Benzo[b]fluoranthene	33		6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Benzo[g,h,i]perylene	9.2		6.6	2.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Benzo[k]fluoranthene	16		6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Chrysene	22		6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Dibenz(a,h)anthracene	2.4	I	6.6	2.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Fluoranthene	27		6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Fluorene	1.0	U	6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Indeno[1,2,3-cd]pyrene	8.9		6.6	2.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
1-Methylnaphthalene	1.0	U	6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
2-Methylnaphthalene	1.0	U	6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Naphthalene	1.0	U	6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Phenanthrene	9.5		6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Pyrene	21		6.6	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 17:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	56		27 - 127				11/19/15 11:17	11/23/15 17:41	1
Nitrobenzene-d5 (Surr)	43		15 - 136				11/19/15 11:17	11/23/15 17:41	1
Terphenyl-d14 (Surr)	62		24 - 146				11/19/15 11:17	11/23/15 17:41	1

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.62	U	7.0	0.62	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
alpha-BHC	0.58	U	7.0	0.58	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
alpha-Chlordane	0.74	U	7.0	0.74	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
beta-BHC	1.4	U	7.0	1.4	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
Chlordane (technical)	12	U	70	12	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
4,4'-DDD	0.74	U	7.0	0.74	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
4,4'-DDE	0.74	U	7.0	0.74	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
4,4'-DDT	0.91	U	7.0	0.91	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
delta-BHC	0.78	U	7.0	0.78	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
Dieldrin	0.70	U	7.0	0.70	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
Endosulfan I	0.70	U	7.0	0.70	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB12 (2-4)

Lab Sample ID: 660-70475-5

Date Collected: 11/16/15 10:20

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 98.5

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan II	0.62	U	7.0	0.62	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
Endosulfan sulfate	0.87	U	7.0	0.87	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
Endrin	0.91	U	7.0	0.91	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
Endrin aldehyde	0.91	U	7.0	0.91	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
Endrin ketone	0.82	U	7.0	0.82	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
gamma-BHC (Lindane)	0.58	U	7.0	0.58	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
gamma-Chlordane	0.74	U	7.0	0.74	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
Heptachlor	0.78	U	7.0	0.78	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
Heptachlor epoxide	0.66	U	7.0	0.66	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
Methoxychlor	1.2	U	7.0	1.2	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
PCB-1016	45	U	140	45	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
PCB-1221	62	U	140	62	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
PCB-1232	21	U	140	21	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
PCB-1242	21	U	140	21	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
PCB-1248	34	U	140	34	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
PCB-1254	41	U	140	41	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
PCB-1260	40	U	140	40	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
Total PCBs	21	U	140	21	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4
Toxaphene	23	U	700	23	ug/Kg	☼	11/18/15 11:47	11/18/15 17:45	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	83		54 - 133	11/18/15 11:47	11/18/15 17:45	4
Tetrachloro-m-xylene	79		46 - 130	11/18/15 11:47	11/18/15 17:45	4

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	12	U	66	12	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Bolstar	4.2	U	13	4.2	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Chlorpyrifos	6.4	U	20	6.4	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Coumaphos	2.8	U	13	2.8	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Demeton, Total	7.4	U	38	7.4	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Diazinon	7.2	U	22	7.2	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Dichlorvos	7.3	U	23	7.3	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Dimethoate	7.0	U	22	7.0	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Disulfoton	7.6	U	47	7.6	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
EPN	3.6	U	13	3.6	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Ethyl Parathion	5.2	U	18	5.2	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Fensulfothion	8.0	U	25	8.0	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Guthion	3.4	U	13	3.4	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Malathion	4.6	U	15	4.6	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Merphos	5.1	U	30	5.1	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Methyl parathion	6.3	U	20	6.3	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Mevinphos	4.6	U	15	4.6	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Mocap	4.9	U	15	4.9	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Naled	22	U	69	22	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
o,o',o"-Triethylphosphorothioate	7.7	U	38	7.7	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Phorate	5.6	U	20	5.6	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Ronnel	15	U	45	15	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Sulfotepp	6.2	U	20	6.2	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Tokuthion	3.9	U	20	3.9	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB12 (2-4)

Lab Sample ID: 660-70475-5

Date Collected: 11/16/15 10:20

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 98.5

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloronate	6.2	U	20	6.2	ug/Kg	☼	11/19/15 17:45	11/24/15 21:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Chlormefos	69		42 - 132				11/19/15 17:45	11/24/15 21:30	1
Triphenylphosphate	93		47 - 161				11/19/15 17:45	11/24/15 21:30	1

Method: FL-PRO - Florida - Petroleum Range Organics (GC)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (C8-C40)	4.0	I	10	1.7	mg/Kg	☼	11/19/15 10:17	11/20/15 17:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-C39	115		60 - 118				11/19/15 10:17	11/20/15 17:21	1
o-Terphenyl	96		62 - 109				11/19/15 10:17	11/20/15 17:21	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.3		0.27	0.089	mg/Kg	☼	11/18/15 09:00	11/18/15 19:24	1
Barium	63		0.45	0.053	mg/Kg	☼	11/18/15 09:00	11/18/15 19:24	1
Cadmium	0.60		0.045	0.013	mg/Kg	☼	11/18/15 09:00	11/18/15 19:24	1
Chromium	6.2		0.89	0.098	mg/Kg	☼	11/18/15 09:00	11/18/15 19:24	1
Lead	42		0.18	0.045	mg/Kg	☼	11/18/15 09:00	11/18/15 19:24	1
Selenium	0.29	I	0.45	0.089	mg/Kg	☼	11/18/15 09:00	11/18/15 19:24	1
Silver	0.33		0.089	0.0089	mg/Kg	☼	11/18/15 09:00	11/18/15 19:24	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.047		0.018	0.0071	mg/Kg	☼	11/18/15 14:56	11/19/15 10:49	1

Client Sample ID: LB10 (0-2)

Lab Sample ID: 660-70475-6

Date Collected: 11/16/15 14:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 91.7

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.991	0.555	1		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
1,2,3,7,8-PeCDD	ND		4.96	0.215	0.5		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
1,2,3,4,7,8-HxCDD	ND		4.96	0.205	0.1		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
1,2,3,6,7,8-HxCDD	ND		4.96	0.211	0.1		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
1,2,3,7,8,9-HxCDD	ND		4.96	0.193	0.1		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
1,2,3,4,6,7,8-HpCDD	0.456	I	4.96	0.283	0.01	0.0046	pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
OCDD	1.56	J I	9.91	0.284	0.001	0.0016	pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
2,3,7,8-TCDF	ND		0.991	0.398	0.1		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
1,2,3,7,8-PeCDF	ND		4.96	0.162	0.05		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
2,3,4,7,8-PeCDF	ND		4.96	0.160	0.5		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
Total TCDD	0.374	J I	0.991	0.555			pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
1,2,3,4,7,8-HxCDF	ND		4.96	0.138	0.1		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
1,2,3,6,7,8-HxCDF	ND		4.96	0.125	0.1		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
2,3,4,6,7,8-HxCDF	ND		4.96	0.145	0.1		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
1,2,3,7,8,9-HxCDF	ND		4.96	0.181	0.1		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
1,2,3,4,6,7,8-HpCDF	ND		4.96	0.216	0.01		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB10 (0-2)

Lab Sample ID: 660-70475-6

Date Collected: 11/16/15 14:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 91.7

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A) (Continued)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		4.96	0.306	0.01		pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
OCDF	0.485	J I	9.91	0.292	0.001	0.00049	pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
Total PeCDD	ND		4.96	0.215			pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
Total HxCDD	ND		4.96	0.203			pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
Total HpCDD	0.456	I	4.96	0.283			pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
Total TCDF	ND		0.991	0.398			pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
Total PeCDF	ND		4.96	0.161			pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
Total HxCDF	ND		4.96	0.145			pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
Total HpCDF	ND		4.96	0.254			pg/g	☼	11/19/15 12:32	11/30/15 14:06	1
Total TEQ (EPA 1989)						0.0066					

Internal Standard	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	68		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-1,2,3,7,8-PeCDD	68		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-1,2,3,4,7,8-HxCDD	76		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-1,2,3,6,7,8-HxCDD	81		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-1,2,3,4,6,7,8-HpCDD	71		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-OCDD	62		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-2,3,7,8-TCDF	60		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-1,2,3,7,8-PeCDF	58		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-2,3,4,7,8-PeCDF	60		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-1,2,3,4,7,8-HxCDF	64		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-1,2,3,6,7,8-HxCDF	69		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-2,3,4,6,7,8-HxCDF	68		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-1,2,3,7,8,9-HxCDF	63		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-1,2,3,4,6,7,8-HpCDF	66		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-1,2,3,4,7,8,9-HpCDF	59		40 - 135	11/19/15 12:32	11/30/15 14:06	1
13C-OCDF	58		40 - 135	11/19/15 12:32	11/30/15 14:06	1

Client Sample ID: LB10 (0-2)

Lab Sample ID: 660-70475-6

Date Collected: 11/16/15 14:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 92.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	26	U	47	26	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Benzene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Bromobenzene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Bromoform	2.0	U	4.7	2.0	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Bromomethane	3.4	U	9.5	3.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
2-Butanone (MEK)	6.2	U	24	6.2	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Carbon disulfide	4.7	U	9.5	4.7	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Carbon tetrachloride	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Chlorobenzene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Chlorobromomethane	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Chlorodibromomethane	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Chloroethane	2.1	U	9.5	2.1	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Chloroform	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Chloromethane	2.4	U	9.5	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB10 (0-2)

Lab Sample ID: 660-70475-6

Date Collected: 11/16/15 14:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 92.6

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
4-Chlorotoluene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
cis-1,2-Dichloroethene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
cis-1,3-Dichloropropene	1.9	U	4.7	1.9	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,2-Dibromo-3-Chloropropane	3.4	U	9.5	3.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Dibromomethane	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,2-Dichlorobenzene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,3-Dichlorobenzene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,4-Dichlorobenzene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Dichlorobromomethane	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Dichlorodifluoromethane	2.3	U	9.5	2.3	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,1-Dichloroethane	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,2-Dichloroethane	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,1-Dichloroethene	2.1	U	4.7	2.1	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,2-Dichloropropane	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,3-Dichloropropane	1.9	U	4.7	1.9	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
2,2-Dichloropropane	1.9	U	4.7	1.9	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,1-Dichloropropene	1.9	U	4.7	1.9	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Ethylbenzene	1.9	U	4.7	1.9	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Ethylene Dibromide	1.3	U	4.7	1.3	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Hexachlorobutadiene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
2-Hexanone	22	U	24	22	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Isopropylbenzene	3.6	U	4.7	3.6	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
4-Isopropyltoluene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Methylene Chloride	3.8	U	4.7	3.8	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
4-Methyl-2-pentanone (MIBK)	10	U	24	10	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Methyl tert-butyl ether	4.7	U	9.5	4.7	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
m-Xylene & p-Xylene	2.8	U	9.5	2.8	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
n-Butylbenzene	2.0	U	4.7	2.0	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
N-Propylbenzene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
o-Xylene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
sec-Butylbenzene	2.3	U	4.7	2.3	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Styrene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
tert-Butylbenzene	1.9	U	4.7	1.9	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,1,1,2-Tetrachloroethane	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,1,2,2-Tetrachloroethane	3.2	U	4.7	3.2	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Tetrachloroethene	2.8	U	4.7	2.8	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Toluene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
trans-1,2-Dichloroethene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
trans-1,3-Dichloropropene	2.0	U	4.7	2.0	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,2,3-Trichlorobenzene	2.3	U	4.7	2.3	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,2,4-Trichlorobenzene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,1,1-Trichloroethane	2.0	U	4.7	2.0	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,1,2-Trichloroethane	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Trichloroethene	2.1	U	4.7	2.1	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Trichlorofluoromethane	2.7	U	9.5	2.7	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,2,3-Trichloropropane	2.8	U	4.7	2.8	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,2,4-Trimethylbenzene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
1,3,5-Trimethylbenzene	2.4	U	4.7	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB10 (0-2)

Lab Sample ID: 660-70475-6

Date Collected: 11/16/15 14:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 92.6

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	2.4	U	9.5	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Xylenes, Total	2.4	U	14	2.4	ug/Kg	☼	11/18/15 10:31	11/20/15 13:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		69 - 130				11/18/15 10:31	11/20/15 13:12	1
Dibromofluoromethane	99		63 - 139				11/18/15 10:31	11/20/15 13:12	1
Toluene-d8 (Surr)	96		67 - 138				11/18/15 10:31	11/20/15 13:12	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Acenaphthylene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Anthracene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Benzo[a]anthracene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Benzo[a]pyrene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Benzo[b]fluoranthene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Benzo[g,h,i]perylene	2.1	U	7.0	2.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Benzo[k]fluoranthene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Chrysene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Dibenz(a,h)anthracene	2.1	U	7.0	2.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Fluoranthene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Fluorene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Indeno[1,2,3-cd]pyrene	2.1	U	7.0	2.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
1-Methylnaphthalene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
2-Methylnaphthalene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Naphthalene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Phenanthrene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Pyrene	1.1	U	7.0	1.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	70		27 - 127				11/19/15 11:17	11/23/15 18:16	1
Nitrobenzene-d5 (Surr)	49		15 - 136				11/19/15 11:17	11/23/15 18:16	1
Terphenyl-d14 (Surr)	74		24 - 146				11/19/15 11:17	11/23/15 18:16	1

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.16	U	1.8	0.16	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
alpha-BHC	0.15	U	1.8	0.15	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
alpha-Chlordane	0.19	U	1.8	0.19	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
beta-BHC	0.35	U	1.8	0.35	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
Chlordane (technical)	3.0	U	18	3.0	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
4,4'-DDD	0.19	U	1.8	0.19	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
4,4'-DDE	0.80	I	1.8	0.19	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
4,4'-DDT	0.23	U	1.8	0.23	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
delta-BHC	0.20	U	1.8	0.20	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
Dieldrin	0.18	U	1.8	0.18	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
Endosulfan I	0.18	U	1.8	0.18	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
Endosulfan II	0.16	U	1.8	0.16	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
Endosulfan sulfate	0.22	U	1.8	0.22	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
Endrin	0.23	U	1.8	0.23	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB10 (0-2)

Lab Sample ID: 660-70475-6

Date Collected: 11/16/15 14:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 92.6

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin aldehyde	0.23	U	1.8	0.23	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
Endrin ketone	0.82	I	1.8	0.21	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
gamma-BHC (Lindane)	0.15	U	1.8	0.15	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
gamma-Chlordane	0.19	U	1.8	0.19	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
Heptachlor	0.20	U	1.8	0.20	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
Heptachlor epoxide	0.17	U	1.8	0.17	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
Methoxychlor	0.29	U	1.8	0.29	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
PCB-1016	12	U	35	12	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
PCB-1221	16	U	35	16	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
PCB-1232	5.5	U	35	5.5	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
PCB-1242	5.3	U	35	5.3	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
PCB-1248	8.6	U	35	8.6	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
PCB-1254	11	U	35	11	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
PCB-1260	78		35	10	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
Total PCBs	78		35	5.3	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1
Toxaphene	5.8	U	180	5.8	ug/Kg	☼	11/18/15 11:47	11/18/15 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	81		54 - 133	11/18/15 11:47	11/18/15 17:16	1
Tetrachloro-m-xylene	79		46 - 130	11/18/15 11:47	11/18/15 17:16	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	12	U	66	12	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Bolstar	4.2	U	13	4.2	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Chlorpyrifos	6.3	U	20	6.3	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Coumaphos	2.7	U	13	2.7	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Demeton, Total	7.4	U	38	7.4	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Diazinon	7.1	U	22	7.1	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Dichlorvos	7.3	U	23	7.3	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Dimethoate	7.0	U	22	7.0	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Disulfoton	7.6	U	47	7.6	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
EPN	3.6	U	13	3.6	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Ethyl Parathion	5.2	U	18	5.2	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Fensulfothion	8.0	U	25	8.0	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Guthion	3.4	U	13	3.4	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Malathion	4.6	U	15	4.6	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Merphos	5.0	U	29	5.0	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Methyl parathion	6.3	U	20	6.3	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Mevinphos	4.5	U	15	4.5	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Mocap	4.8	U	15	4.8	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Naled	22	U	69	22	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
o,o',o"-Triethylphosphorothioate	7.7	U	38	7.7	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Phorate	5.6	U	20	5.6	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Ronnel	15	U	45	15	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Sulfotepp	6.1	U	20	6.1	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Tokuthion	3.8	U	20	3.8	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1
Trichloronate	6.1	U	20	6.1	ug/Kg	☼	11/19/15 17:45	11/24/15 21:59	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB10 (0-2)

Date Collected: 11/16/15 14:00

Date Received: 11/17/15 08:50

Lab Sample ID: 660-70475-6

Matrix: Solid

Percent Solids: 92.6

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Chlormefos	65		42 - 132	11/19/15 17:45	11/24/15 21:59	1
Triphenylphosphate	92		47 - 161	11/19/15 17:45	11/24/15 21:59	1

Method: FL-PRO - Florida - Petroleum Range Organics (GC)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (C8-C40)	9.7	I	11	1.8	mg/Kg	☼	11/19/15 12:03	11/20/15 19:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-C39	79		60 - 118	11/19/15 12:03	11/20/15 19:05	1
o-Terphenyl	74		62 - 109	11/19/15 12:03	11/20/15 19:05	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.096	U	0.29	0.096	mg/Kg	☼	11/18/15 09:00	11/18/15 18:59	1
Barium	0.82		0.48	0.057	mg/Kg	☼	11/18/15 09:00	11/18/15 18:59	1
Cadmium	0.014	U	0.048	0.014	mg/Kg	☼	11/18/15 09:00	11/18/15 18:59	1
Chromium	0.54	I V	0.96	0.11	mg/Kg	☼	11/18/15 09:00	11/18/15 18:59	1
Lead	2.5		0.19	0.048	mg/Kg	☼	11/18/15 09:00	11/18/15 18:59	1
Selenium	0.096	U	0.48	0.096	mg/Kg	☼	11/18/15 09:00	11/18/15 18:59	1
Silver	0.0096	U	0.096	0.0096	mg/Kg	☼	11/18/15 09:00	11/18/15 18:59	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0079	U	0.020	0.0079	mg/Kg	☼	11/18/15 14:56	11/19/15 10:52	1

Client Sample ID: LB10 (2-4)

Date Collected: 11/16/15 14:20

Date Received: 11/17/15 08:50

Lab Sample ID: 660-70475-7

Matrix: Solid

Percent Solids: 78

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.980	0.666	1		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
1,2,3,7,8-PeCDD	ND		4.90	0.269	0.5		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
1,2,3,4,7,8-HxCDD	ND		4.90	0.203	0.1		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
1,2,3,6,7,8-HxCDD	ND		4.90	0.221	0.1		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
1,2,3,7,8,9-HxCDD	ND		4.90	0.197	0.1		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
1,2,3,4,6,7,8-HpCDD	ND		4.90	0.320	0.01		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
OCDD	ND		9.80	0.283	0.001		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
2,3,7,8-TCDF	ND		0.980	0.471	0.1		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
1,2,3,7,8-PeCDF	ND		4.90	0.227	0.05		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
2,3,4,7,8-PeCDF	ND		4.90	0.208	0.5		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
Total TCDD	ND		0.980	0.666			pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
1,2,3,4,7,8-HxCDF	ND		4.90	0.159	0.1		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
1,2,3,6,7,8-HxCDF	ND		4.90	0.154	0.1		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
2,3,4,6,7,8-HxCDF	ND		4.90	0.172	0.1		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
1,2,3,7,8,9-HxCDF	ND		4.90	0.206	0.1		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
1,2,3,4,6,7,8-HpCDF	ND		4.90	0.283	0.01		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
1,2,3,4,7,8,9-HpCDF	ND		4.90	0.378	0.01		pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
OCDF	0.412	J I	9.80	0.424	0.001	0.00041	pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
Total PeCDD	0.827	J I	4.90	0.269			pg/g	☼	11/19/15 12:32	11/30/15 15:05	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB10 (2-4)

Date Collected: 11/16/15 14:20

Date Received: 11/17/15 08:50

Lab Sample ID: 660-70475-7

**Matrix: Solid
 Percent Solids: 78**

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A) (Continued)

Analyte	Result	Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	0.558	J I	4.90	0.206			pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
Total HpCDD	ND		4.90	0.320			pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
Total TCDF	ND		0.980	0.471			pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
Total PeCDF	ND		4.90	0.216			pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
Total HxCDF	ND		4.90	0.170			pg/g	☼	11/19/15 12:32	11/30/15 15:05	1
Total HpCDF	ND		4.90	0.325			pg/g	☼	11/19/15 12:32	11/30/15 15:05	1

Total TEQ (EPA 1989) 0.00041

Internal Standard	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	73		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-1,2,3,7,8-PeCDD	73		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-1,2,3,4,7,8-HxCDD	77		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-1,2,3,6,7,8-HxCDD	81		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-1,2,3,4,6,7,8-HpCDD	76		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-OCDD	69		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-2,3,7,8-TCDF	62		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-1,2,3,7,8-PeCDF	62		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-2,3,4,7,8-PeCDF	64		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-1,2,3,4,7,8-HxCDF	64		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-1,2,3,6,7,8-HxCDF	70		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-2,3,4,6,7,8-HxCDF	69		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-1,2,3,7,8,9-HxCDF	64		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-1,2,3,4,6,7,8-HpCDF	64		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-1,2,3,4,7,8,9-HpCDF	63		40 - 135	11/19/15 12:32	11/30/15 15:05	1
13C-OCDF	61		40 - 135	11/19/15 12:32	11/30/15 15:05	1

Client Sample ID: LB10 (2-4)

Date Collected: 11/16/15 14:20

Date Received: 11/17/15 08:50

Lab Sample ID: 660-70475-7

**Matrix: Solid
 Percent Solids: 95.1**

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	35	U	65	35	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Benzene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Bromobenzene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Bromoform	2.7	U	6.5	2.7	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Bromomethane	4.7	U	13	4.7	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
2-Butanone (MEK)	8.4	U	32	8.4	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Carbon disulfide	6.5	U	13	6.5	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Carbon tetrachloride	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Chlorobenzene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Chlorobromomethane	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Chlorodibromomethane	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Chloroethane	2.9	U	13	2.9	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Chloroform	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Chloromethane	3.2	U	13	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
2-Chlorotoluene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
4-Chlorotoluene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
cis-1,2-Dichloroethene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB10 (2-4)

Lab Sample ID: 660-70475-7

Date Collected: 11/16/15 14:20

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 95.1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	2.6	U	6.5	2.6	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,2-Dibromo-3-Chloropropane	4.7	U	13	4.7	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Dibromomethane	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,2-Dichlorobenzene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,3-Dichlorobenzene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,4-Dichlorobenzene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Dichlorobromomethane	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Dichlorodifluoromethane	3.1	U	13	3.1	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,1-Dichloroethane	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,2-Dichloroethane	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,1-Dichloroethene	2.9	U	6.5	2.9	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,2-Dichloropropane	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,3-Dichloropropane	2.6	U	6.5	2.6	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
2,2-Dichloropropane	2.6	U	6.5	2.6	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,1-Dichloropropene	2.6	U	6.5	2.6	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Ethylbenzene	2.6	U	6.5	2.6	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Ethylene Dibromide	1.8	U	6.5	1.8	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Hexachlorobutadiene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
2-Hexanone	30	U	32	30	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Isopropylbenzene	4.9	U	6.5	4.9	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
4-Isopropyltoluene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Methylene Chloride	5.2	U	6.5	5.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
4-Methyl-2-pentanone (MIBK)	14	U	32	14	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Methyl tert-butyl ether	6.5	U	13	6.5	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
m-Xylene & p-Xylene	3.9	U	13	3.9	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
n-Butylbenzene	2.7	U	6.5	2.7	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
N-Propylbenzene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
o-Xylene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
sec-Butylbenzene	3.1	U	6.5	3.1	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Styrene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
tert-Butylbenzene	2.6	U	6.5	2.6	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,1,1,2-Tetrachloroethane	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,1,2,2-Tetrachloroethane	4.4	U	6.5	4.4	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Tetrachloroethene	3.9	U	6.5	3.9	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Toluene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
trans-1,2-Dichloroethene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
trans-1,3-Dichloropropene	2.7	U	6.5	2.7	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,2,3-Trichlorobenzene	3.1	U	6.5	3.1	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,2,4-Trichlorobenzene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,1,1-Trichloroethane	2.7	U	6.5	2.7	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,1,2-Trichloroethane	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Trichloroethene	2.9	U	6.5	2.9	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Trichlorofluoromethane	3.6	U	13	3.6	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,2,3-Trichloropropane	3.9	U	6.5	3.9	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,2,4-Trimethylbenzene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
1,3,5-Trimethylbenzene	3.2	U	6.5	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Vinyl chloride	3.2	U	13	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1
Xylenes, Total	3.2	U	19	3.2	ug/Kg	☼	11/27/15 14:29	11/27/15 15:41	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB10 (2-4)

Lab Sample ID: 660-70475-7

Date Collected: 11/16/15 14:20

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 95.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		67 - 138	11/27/15 14:29	11/27/15 15:41	1
4-Bromofluorobenzene	97		69 - 130	11/27/15 14:29	11/27/15 15:41	1
Dibromofluoromethane	99		63 - 139	11/27/15 14:29	11/27/15 15:41	1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Acenaphthylene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Anthracene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Benzo[a]anthracene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Benzo[a]pyrene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Benzo[b]fluoranthene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Benzo[g,h,i]perylene	2.1	U	6.9	2.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Benzo[k]fluoranthene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Chrysene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Dibenz(a,h)anthracene	2.1	U	6.9	2.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Fluoranthene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Fluorene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Indeno[1,2,3-cd]pyrene	2.1	U	6.9	2.1	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
1-Methylnaphthalene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
2-Methylnaphthalene	1.2	I	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Naphthalene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Phenanthrene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1
Pyrene	1.0	U	6.9	1.0	ug/Kg	☼	11/19/15 11:17	11/23/15 18:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	66		27 - 127	11/19/15 11:17	11/23/15 18:51	1
Nitrobenzene-d5 (Surr)	50		15 - 136	11/19/15 11:17	11/23/15 18:51	1
Terphenyl-d14 (Surr)	74		24 - 146	11/19/15 11:17	11/23/15 18:51	1

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.15	U	1.7	0.15	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
alpha-BHC	0.14	U	1.7	0.14	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
alpha-Chlordane	0.18	U	1.7	0.18	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
beta-BHC	0.34	U	1.7	0.34	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
Chlordane (technical)	3.0	U	17	3.0	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
4,4'-DDD	0.18	U	1.7	0.18	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
4,4'-DDE	0.18	U	1.7	0.18	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
4,4'-DDT	0.23	U	1.7	0.23	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
delta-BHC	0.19	U	1.7	0.19	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
Dieldrin	0.17	U	1.7	0.17	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
Endosulfan I	0.17	U	1.7	0.17	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
Endosulfan II	0.15	U	1.7	0.15	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
Endosulfan sulfate	0.22	U	1.7	0.22	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
Endrin	0.23	U	1.7	0.23	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
Endrin aldehyde	0.23	U	1.7	0.23	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
Endrin ketone	0.20	U	1.7	0.20	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
gamma-BHC (Lindane)	0.14	U	1.7	0.14	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
gamma-Chlordane	0.18	U	1.7	0.18	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
Heptachlor	0.19	U	1.7	0.19	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB10 (2-4)

Lab Sample ID: 660-70475-7

Date Collected: 11/16/15 14:20

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 95.1

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	0.16	U	1.7	0.16	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
Methoxychlor	0.29	U	1.7	0.29	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
PCB-1016	11	U	34	11	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
PCB-1221	15	U	34	15	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
PCB-1232	5.3	U	34	5.3	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
PCB-1242	5.1	U	34	5.1	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
PCB-1248	8.4	U	34	8.4	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
PCB-1254	10	U	34	10	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
PCB-1260	9.8	U	34	9.8	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
Total PCBs	5.1	U	34	5.1	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
Toxaphene	5.6	U	170	5.6	ug/Kg	☼	11/18/15 11:47	11/18/15 17:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	81		54 - 133				11/18/15 11:47	11/18/15 17:30	1
Tetrachloro-m-xylene	73		46 - 130				11/18/15 11:47	11/18/15 17:30	1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	12	U	67	12	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Bolstar	4.2	U	13	4.2	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Chlorpyrifos	6.5	U	20	6.5	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Coumaphos	2.8	U	13	2.8	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Demeton, Total	7.5	U	39	7.5	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Diazinon	7.3	U	22	7.3	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Dichlorvos	7.4	U	23	7.4	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Dimethoate	7.1	U	22	7.1	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Disulfoton	7.7	U	48	7.7	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
EPN	3.7	U	13	3.7	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Ethyl Parathion	5.3	U	18	5.3	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Fensulfothion	8.1	U	25	8.1	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Guthion	3.5	U	13	3.5	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Malathion	4.6	U	15	4.6	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Merphos	5.1	U	30	5.1	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Methyl parathion	6.4	U	20	6.4	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Mevinphos	4.6	U	15	4.6	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Mocap	4.9	U	15	4.9	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Naled	23	U	70	23	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
o,o',o"-Triethylphosphorothioate	7.8	U	39	7.8	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Phorate	5.7	U	20	5.7	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Ronnel	15	U	46	15	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Sulfotepp	6.3	U	20	6.3	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Tokuthion	3.9	U	20	3.9	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Trichloronate	6.2	U	20	6.2	ug/Kg	☼	11/19/15 17:45	11/24/15 22:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Chlormefos	60		42 - 132				11/19/15 17:45	11/24/15 22:28	1
Triphenylphosphate	88		47 - 161				11/19/15 17:45	11/24/15 22:28	1

TestAmerica Tampa

Client Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB10 (2-4)

Lab Sample ID: 660-70475-7

Date Collected: 11/16/15 14:20

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 95.1

Method: FL-PRO - Florida - Petroleum Range Organics (GC)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (C8-C40)	4.0	I	11	1.8	mg/Kg	☼	11/19/15 10:17	11/20/15 17:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>n-C39</i>	95		60 - 118				11/19/15 10:17	11/20/15 17:31	1
<i>o-Terphenyl</i>	93		62 - 109				11/19/15 10:17	11/20/15 17:31	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.29		0.28	0.095	mg/Kg	☼	11/18/15 09:00	11/18/15 19:04	1
Barium	3.2		0.47	0.057	mg/Kg	☼	11/18/15 09:00	11/18/15 19:04	1
Cadmium	0.014	U	0.047	0.014	mg/Kg	☼	11/18/15 09:00	11/18/15 19:04	1
Chromium	4.6		0.95	0.10	mg/Kg	☼	11/18/15 09:00	11/18/15 19:04	1
Lead	0.35		0.19	0.047	mg/Kg	☼	11/18/15 09:00	11/18/15 19:04	1
Selenium	0.42	I	0.47	0.095	mg/Kg	☼	11/18/15 09:00	11/18/15 19:04	1
Silver	0.0095	U	0.095	0.0095	mg/Kg	☼	11/18/15 09:00	11/18/15 19:04	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.020		0.020	0.0079	mg/Kg	☼	11/18/15 14:56	11/19/15 10:55	1

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: 660-70475-2 MS

Matrix: Solid

Analysis Batch: 163525

Client Sample ID: LB11 (2-4)

Prep Type: Total/NA

Prep Batch: 163456

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Acetone	41	U	1330	1530		ug/Kg	☼	115	67 - 133
Benzene	3.8	U	133	154		ug/Kg	☼	116	61 - 131
Bromobenzene	3.8	U	133	152		ug/Kg	☼	115	58 - 130
Bromoform	3.2	U	133	145		ug/Kg	☼	109	62 - 130
Bromomethane	5.5	U	133	120		ug/Kg	☼	91	48 - 136
2-Butanone (MEK)	9.9	U	1330	1500		ug/Kg	☼	113	70 - 130
Carbon disulfide	7.7	U	133	128		ug/Kg	☼	97	34 - 143
Carbon tetrachloride	3.8	U	133	148		ug/Kg	☼	111	57 - 130
Chlorobenzene	3.8	U	133	149		ug/Kg	☼	112	62 - 130
Chlorobromomethane	3.8	U	133	144		ug/Kg	☼	108	50 - 130
Chlorodibromomethane	3.8	U	133	155		ug/Kg	☼	117	57 - 130
Chloroethane	3.4	U	133	130		ug/Kg	☼	98	49 - 140
Chloroform	3.8	U	133	143		ug/Kg	☼	108	62 - 130
Chloromethane	3.8	U	133	118		ug/Kg	☼	88	35 - 139
2-Chlorotoluene	3.8	U	133	152		ug/Kg	☼	114	60 - 130
4-Chlorotoluene	3.8	U	133	149		ug/Kg	☼	112	63 - 130
cis-1,2-Dichloroethene	3.8	U	133	149		ug/Kg	☼	112	62 - 130
cis-1,3-Dichloropropene	3.1	U	133	132		ug/Kg	☼	99	60 - 130
1,2-Dibromo-3-Chloropropane	5.5	U	133	141		ug/Kg	☼	106	54 - 130
Dibromomethane	3.8	U	133	148		ug/Kg	☼	111	68 - 130
1,2-Dichlorobenzene	3.8	U	133	153		ug/Kg	☼	115	60 - 130
1,3-Dichlorobenzene	3.8	U	133	151		ug/Kg	☼	114	55 - 130
1,4-Dichlorobenzene	3.8	U	133	153		ug/Kg	☼	115	64 - 130
Dichlorobromomethane	3.8	U	133	147		ug/Kg	☼	111	66 - 130
Dichlorodifluoromethane	3.7	U	133	84.3		ug/Kg	☼	63	10 - 140
1,1-Dichloroethane	3.8	U	133	153		ug/Kg	☼	115	47 - 130
1,2-Dichloroethane	3.8	U	133	142		ug/Kg	☼	107	63 - 130
1,1-Dichloroethene	3.4	U	133	146		ug/Kg	☼	110	54 - 144
1,2-Dichloropropane	3.8	U	133	153		ug/Kg	☼	115	55 - 130
1,3-Dichloropropane	3.1	U	133	153		ug/Kg	☼	115	63 - 130
2,2-Dichloropropane	3.1	U	133	123		ug/Kg	☼	93	55 - 130
1,1-Dichloropropene	3.1	U	133	132		ug/Kg	☼	99	55 - 130
Ethylbenzene	3.1	U	133	150		ug/Kg	☼	113	68 - 130
Ethylene Dibromide	2.1	U	133	151		ug/Kg	☼	114	64 - 130
Hexachlorobutadiene	3.8	U	133	157		ug/Kg	☼	118	57 - 130
2-Hexanone	35	U	1330	1400		ug/Kg	☼	105	69 - 136
Isopropylbenzene	5.8	U	133	159		ug/Kg	☼	120	60 - 130
4-Isopropyltoluene	3.8	U	133	152		ug/Kg	☼	114	64 - 130
Methylene Chloride	6.1	U	133	151		ug/Kg	☼	114	50 - 135
4-Methyl-2-pentanone (MIBK)	17	U	1330	1470		ug/Kg	☼	110	69 - 134
Methyl tert-butyl ether	7.7	U	133	152		ug/Kg	☼	115	55 - 134
n-Butylbenzene	3.2	U	133	154		ug/Kg	☼	116	63 - 130
N-Propylbenzene	3.8	U	133	154		ug/Kg	☼	116	63 - 130
o-Xylene	3.8	U	133	152		ug/Kg	☼	115	64 - 130
sec-Butylbenzene	3.7	U	133	155		ug/Kg	☼	117	63 - 130
Styrene	3.8	U	133	152		ug/Kg	☼	114	58 - 131
tert-Butylbenzene	3.1	U	133	154		ug/Kg	☼	116	62 - 130
1,1,1,2-Tetrachloroethane	3.8	U	133	150		ug/Kg	☼	113	56 - 130

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 660-70475-1 DU
Matrix: Solid
Analysis Batch: 163525

Client Sample ID: LB11 (0-2)
Prep Type: Total/NA
Prep Batch: 163456

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
1,4-Dichlorobenzene	2.2	U	2.1	U	ug/Kg	☼	NC	40
Dichlorobromomethane	2.2	U	2.1	U	ug/Kg	☼	NC	40
Dichlorodifluoromethane	2.1	U	2.0	U	ug/Kg	☼	NC	40
1,1-Dichloroethane	2.2	U	2.1	U	ug/Kg	☼	NC	40
1,2-Dichloroethane	2.2	U	2.1	U	ug/Kg	☼	NC	40
1,1-Dichloroethene	1.9	U	1.8	U	ug/Kg	☼	NC	40
1,2-Dichloropropane	2.2	U	2.1	U	ug/Kg	☼	NC	40
1,3-Dichloropropane	1.7	U	1.7	U	ug/Kg	☼	NC	40
2,2-Dichloropropane	1.7	U	1.7	U	ug/Kg	☼	NC	40
1,1-Dichloropropene	1.7	U	1.7	U	ug/Kg	☼	NC	40
Ethylbenzene	1.7	U	1.7	U	ug/Kg	☼	NC	40
Ethylene Dibromide	1.2	U	1.2	U	ug/Kg	☼	NC	40
Hexachlorobutadiene	2.2	U	2.1	U	ug/Kg	☼	NC	40
2-Hexanone	20	U	19	U	ug/Kg	☼	NC	40
Isopropylbenzene	3.3	U	3.2	U	ug/Kg	☼	NC	40
4-Isopropyltoluene	2.2	U	2.1	U	ug/Kg	☼	NC	40
Methylene Chloride	3.5	U	3.3	U	ug/Kg	☼	NC	40
4-Methyl-2-pentanone (MIBK)	9.6	U	9.2	U	ug/Kg	☼	NC	40
Methyl tert-butyl ether	4.4	U	4.2	U	ug/Kg	☼	NC	40
m-Xylene & p-Xylene	2.6	U	2.5	U	ug/Kg	☼	NC	40
n-Butylbenzene	1.8	U	1.7	U	ug/Kg	☼	NC	40
N-Propylbenzene	2.2	U	2.1	U	ug/Kg	☼	NC	40
o-Xylene	2.2	U	2.1	U	ug/Kg	☼	NC	40
sec-Butylbenzene	2.1	U	2.0	U	ug/Kg	☼	NC	40
Styrene	2.2	U	2.1	U	ug/Kg	☼	NC	40
tert-Butylbenzene	1.7	U	1.7	U	ug/Kg	☼	NC	40
1,1,1,2-Tetrachloroethane	2.2	U	2.1	U	ug/Kg	☼	NC	40
1,1,1,2,2-Tetrachloroethane	3.0	U	2.8	U	ug/Kg	☼	NC	40
Tetrachloroethene	2.6	U	2.5	U	ug/Kg	☼	NC	40
Toluene	2.2	U	2.1	U	ug/Kg	☼	NC	40
trans-1,2-Dichloroethene	2.2	U	2.1	U	ug/Kg	☼	NC	40
trans-1,3-Dichloropropene	1.8	U	1.7	U	ug/Kg	☼	NC	40
1,2,3-Trichlorobenzene	2.1	U	2.0	U	ug/Kg	☼	NC	40
1,2,4-Trichlorobenzene	2.2	U	2.1	U	ug/Kg	☼	NC	40
1,1,1-Trichloroethane	1.8	U	1.7	U	ug/Kg	☼	NC	40
1,1,2-Trichloroethane	2.2	U	2.1	U	ug/Kg	☼	NC	40
Trichloroethene	1.9	U	1.8	U	ug/Kg	☼	NC	40
Trichlorofluoromethane	2.4	U	2.3	U	ug/Kg	☼	NC	40
1,2,3-Trichloropropane	2.6	U	2.5	U	ug/Kg	☼	NC	40
1,2,4-Trimethylbenzene	2.2	U	2.1	U	ug/Kg	☼	NC	40
1,3,5-Trimethylbenzene	2.2	U	2.1	U	ug/Kg	☼	NC	40
Vinyl chloride	2.2	U	2.1	U	ug/Kg	☼	NC	40
Xylenes, Total	2.2	U	2.1	U	ug/Kg	☼	NC	40

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	97		69 - 130
Dibromofluoromethane	98		63 - 139
Toluene-d8 (Surr)	96		67 - 138

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Lab Sample ID: MB 660-163525/7
Matrix: Solid
Analysis Batch: 163525

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

Analyte	MB	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	27	U	50	27	ug/Kg			11/20/15 09:40	1
Benzene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
Bromobenzene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
Bromoform	2.1	U	5.0	2.1	ug/Kg			11/20/15 09:40	1
Bromomethane	3.6	U	10	3.6	ug/Kg			11/20/15 09:40	1
2-Butanone (MEK)	6.5	U	25	6.5	ug/Kg			11/20/15 09:40	1
Carbon disulfide	5.0	U	10	5.0	ug/Kg			11/20/15 09:40	1
Carbon tetrachloride	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
Chlorobenzene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
Chlorobromomethane	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
Chlorodibromomethane	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
Chloroethane	2.2	U	10	2.2	ug/Kg			11/20/15 09:40	1
Chloroform	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
Chloromethane	2.5	U	10	2.5	ug/Kg			11/20/15 09:40	1
2-Chlorotoluene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
4-Chlorotoluene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
cis-1,2-Dichloroethene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
cis-1,3-Dichloropropene	2.0	U	5.0	2.0	ug/Kg			11/20/15 09:40	1
1,2-Dibromo-3-Chloropropane	3.6	U	10	3.6	ug/Kg			11/20/15 09:40	1
Dibromomethane	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
1,2-Dichlorobenzene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
1,3-Dichlorobenzene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
1,4-Dichlorobenzene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
Dichlorobromomethane	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
Dichlorodifluoromethane	2.4	U	10	2.4	ug/Kg			11/20/15 09:40	1
1,1-Dichloroethane	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
1,2-Dichloroethane	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
1,1-Dichloroethene	2.2	U	5.0	2.2	ug/Kg			11/20/15 09:40	1
1,2-Dichloropropane	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
1,3-Dichloropropane	2.0	U	5.0	2.0	ug/Kg			11/20/15 09:40	1
2,2-Dichloropropane	2.0	U	5.0	2.0	ug/Kg			11/20/15 09:40	1
1,1-Dichloropropene	2.0	U	5.0	2.0	ug/Kg			11/20/15 09:40	1
Ethylbenzene	2.0	U	5.0	2.0	ug/Kg			11/20/15 09:40	1
Ethylene Dibromide	1.4	U	5.0	1.4	ug/Kg			11/20/15 09:40	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
2-Hexanone	23	U	25	23	ug/Kg			11/20/15 09:40	1
Isopropylbenzene	3.8	U	5.0	3.8	ug/Kg			11/20/15 09:40	1
4-Isopropyltoluene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
Methylene Chloride	4.0	U	5.0	4.0	ug/Kg			11/20/15 09:40	1
4-Methyl-2-pentanone (MIBK)	11	U	25	11	ug/Kg			11/20/15 09:40	1
Methyl tert-butyl ether	5.0	U	10	5.0	ug/Kg			11/20/15 09:40	1
m-Xylene & p-Xylene	3.0	U	10	3.0	ug/Kg			11/20/15 09:40	1
n-Butylbenzene	2.1	U	5.0	2.1	ug/Kg			11/20/15 09:40	1
N-Propylbenzene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
o-Xylene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
sec-Butylbenzene	2.4	U	5.0	2.4	ug/Kg			11/20/15 09:40	1
Styrene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
tert-Butylbenzene	2.0	U	5.0	2.0	ug/Kg			11/20/15 09:40	1
1,1,1,2-Tetrachloroethane	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
1,1,2,2-Tetrachloroethane	3.4	U	5.0	3.4	ug/Kg			11/20/15 09:40	1

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 660-163525/7
Matrix: Solid
Analysis Batch: 163525

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	3.0	U	5.0	3.0	ug/Kg			11/20/15 09:40	1
Toluene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
trans-1,2-Dichloroethene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
trans-1,3-Dichloropropene	2.1	U	5.0	2.1	ug/Kg			11/20/15 09:40	1
1,2,3-Trichlorobenzene	2.4	U	5.0	2.4	ug/Kg			11/20/15 09:40	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
1,1,1-Trichloroethane	2.1	U	5.0	2.1	ug/Kg			11/20/15 09:40	1
1,1,2-Trichloroethane	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
Trichloroethene	2.2	U	5.0	2.2	ug/Kg			11/20/15 09:40	1
Trichlorofluoromethane	2.8	U	10	2.8	ug/Kg			11/20/15 09:40	1
1,2,3-Trichloropropane	3.0	U	5.0	3.0	ug/Kg			11/20/15 09:40	1
1,2,4-Trimethylbenzene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
1,3,5-Trimethylbenzene	2.5	U	5.0	2.5	ug/Kg			11/20/15 09:40	1
Vinyl chloride	2.5	U	10	2.5	ug/Kg			11/20/15 09:40	1
Xylenes, Total	2.5	U	15	2.5	ug/Kg			11/20/15 09:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		69 - 130		11/20/15 09:40	1
Dibromofluoromethane	94		63 - 139		11/20/15 09:40	1
Toluene-d8 (Surr)	95		67 - 138		11/20/15 09:40	1

Lab Sample ID: LCS 660-163525/5
Matrix: Solid
Analysis Batch: 163525

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	500	530		ug/Kg		106	67 - 133
Benzene	50.0	49.8		ug/Kg		100	61 - 131
Bromobenzene	50.0	51.5		ug/Kg		103	58 - 130
Bromoform	50.0	49.0		ug/Kg		98	62 - 130
Bromomethane	50.0	45.4		ug/Kg		91	48 - 136
2-Butanone (MEK)	500	541		ug/Kg		108	70 - 130
Carbon disulfide	50.0	41.0		ug/Kg		82	34 - 143
Carbon tetrachloride	50.0	48.6		ug/Kg		97	57 - 130
Chlorobenzene	50.0	49.6		ug/Kg		99	62 - 130
Chlorobromomethane	50.0	46.7		ug/Kg		93	50 - 130
Chlorodibromomethane	50.0	50.8		ug/Kg		102	57 - 130
Chloroethane	50.0	47.2		ug/Kg		94	49 - 140
Chloroform	50.0	47.3		ug/Kg		95	62 - 130
Chloromethane	50.0	41.9		ug/Kg		84	35 - 139
2-Chlorotoluene	50.0	50.9		ug/Kg		102	60 - 130
4-Chlorotoluene	50.0	50.5		ug/Kg		101	63 - 130
cis-1,2-Dichloroethene	50.0	48.9		ug/Kg		98	62 - 130
cis-1,3-Dichloropropene	50.0	44.0		ug/Kg		88	60 - 130
1,2-Dibromo-3-Chloropropane	50.0	47.1		ug/Kg		94	54 - 130
Dibromomethane	50.0	48.7		ug/Kg		97	68 - 130
1,2-Dichlorobenzene	50.0	51.5		ug/Kg		103	60 - 130
1,3-Dichlorobenzene	50.0	51.3		ug/Kg		103	55 - 130

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 660-163525/5

Matrix: Solid

Analysis Batch: 163525

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	50.0	51.9		ug/Kg		104	64 - 130
Dichlorobromomethane	50.0	49.2		ug/Kg		98	66 - 130
Dichlorodifluoromethane	50.0	36.4		ug/Kg		73	10 - 140
1,1-Dichloroethane	50.0	50.2		ug/Kg		100	47 - 130
1,2-Dichloroethane	50.0	44.1		ug/Kg		88	63 - 130
1,1-Dichloroethene	50.0	46.2		ug/Kg		92	54 - 144
1,2-Dichloropropane	50.0	50.6		ug/Kg		101	55 - 130
1,3-Dichloropropane	50.0	49.8		ug/Kg		100	63 - 130
2,2-Dichloropropane	50.0	41.2		ug/Kg		82	55 - 130
1,1-Dichloropropene	50.0	43.5		ug/Kg		87	55 - 130
Ethylbenzene	50.0	49.4		ug/Kg		99	68 - 130
Ethylene Dibromide	50.0	48.5		ug/Kg		97	64 - 130
Hexachlorobutadiene	50.0	53.9		ug/Kg		108	57 - 130
2-Hexanone	500	550		ug/Kg		110	69 - 136
Isopropylbenzene	50.0	52.8		ug/Kg		106	60 - 130
4-Isopropyltoluene	50.0	50.7		ug/Kg		101	64 - 130
Methylene Chloride	50.0	48.9		ug/Kg		98	50 - 135
4-Methyl-2-pentanone (MIBK)	500	559		ug/Kg		112	69 - 134
Methyl tert-butyl ether	50.0	50.2		ug/Kg		100	55 - 134
n-Butylbenzene	50.0	51.0		ug/Kg		102	63 - 130
N-Propylbenzene	50.0	51.4		ug/Kg		103	63 - 130
o-Xylene	50.0	49.3		ug/Kg		99	64 - 130
sec-Butylbenzene	50.0	51.6		ug/Kg		103	63 - 130
Styrene	50.0	50.1		ug/Kg		100	58 - 131
tert-Butylbenzene	50.0	51.4		ug/Kg		103	62 - 130
1,1,1,2-Tetrachloroethane	50.0	50.5		ug/Kg		101	56 - 130
1,1,1,2,2-Tetrachloroethane	50.0	56.8		ug/Kg		114	64 - 130
Tetrachloroethene	50.0	49.9		ug/Kg		100	56 - 130
Toluene	50.0	49.4		ug/Kg		99	61 - 130
trans-1,2-Dichloroethene	50.0	50.6		ug/Kg		101	46 - 135
trans-1,3-Dichloropropene	50.0	44.4		ug/Kg		89	65 - 130
1,2,3-Trichlorobenzene	50.0	52.5		ug/Kg		105	57 - 130
1,2,4-Trichlorobenzene	50.0	52.1		ug/Kg		104	59 - 130
1,1,1-Trichloroethane	50.0	47.0		ug/Kg		94	57 - 130
1,1,2-Trichloroethane	50.0	50.8		ug/Kg		102	62 - 130
Trichloroethene	50.0	47.6		ug/Kg		95	54 - 131
Trichlorofluoromethane	50.0	42.9		ug/Kg		86	53 - 130
1,2,3-Trichloropropane	50.0	54.8		ug/Kg		110	60 - 130
1,2,4-Trimethylbenzene	50.0	51.2		ug/Kg		102	59 - 130
1,3,5-Trimethylbenzene	50.0	51.6		ug/Kg		103	58 - 130
Vinyl chloride	50.0	42.0		ug/Kg		84	46 - 136

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	103		69 - 130
Dibromofluoromethane	98		63 - 139
Toluene-d8 (Surr)	102		67 - 138

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 660-163716/6

Matrix: Solid

Analysis Batch: 163716

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	27	U	50	27	ug/Kg			11/27/15 10:19	1
Benzene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
Bromobenzene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
Bromoform	2.1	U	5.0	2.1	ug/Kg			11/27/15 10:19	1
Bromomethane	3.6	U	10	3.6	ug/Kg			11/27/15 10:19	1
2-Butanone (MEK)	6.5	U	25	6.5	ug/Kg			11/27/15 10:19	1
Carbon disulfide	5.0	U	10	5.0	ug/Kg			11/27/15 10:19	1
Carbon tetrachloride	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
Chlorobenzene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
Chlorobromomethane	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
Chlorodibromomethane	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
Chloroethane	2.2	U	10	2.2	ug/Kg			11/27/15 10:19	1
Chloroform	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
Chloromethane	2.5	U	10	2.5	ug/Kg			11/27/15 10:19	1
2-Chlorotoluene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
4-Chlorotoluene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
cis-1,2-Dichloroethene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
cis-1,3-Dichloropropene	2.0	U	5.0	2.0	ug/Kg			11/27/15 10:19	1
1,2-Dibromo-3-Chloropropane	3.6	U	10	3.6	ug/Kg			11/27/15 10:19	1
Dibromomethane	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
1,2-Dichlorobenzene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
1,3-Dichlorobenzene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
1,4-Dichlorobenzene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
Dichlorobromomethane	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
Dichlorodifluoromethane	2.4	U	10	2.4	ug/Kg			11/27/15 10:19	1
1,1-Dichloroethane	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
1,2-Dichloroethane	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
1,1-Dichloroethene	2.2	U	5.0	2.2	ug/Kg			11/27/15 10:19	1
1,2-Dichloropropane	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
1,3-Dichloropropane	2.0	U	5.0	2.0	ug/Kg			11/27/15 10:19	1
2,2-Dichloropropane	2.0	U	5.0	2.0	ug/Kg			11/27/15 10:19	1
1,1-Dichloropropene	2.0	U	5.0	2.0	ug/Kg			11/27/15 10:19	1
Ethylbenzene	2.0	U	5.0	2.0	ug/Kg			11/27/15 10:19	1
Ethylene Dibromide	1.4	U	5.0	1.4	ug/Kg			11/27/15 10:19	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
2-Hexanone	23	U	25	23	ug/Kg			11/27/15 10:19	1
Isopropylbenzene	3.8	U	5.0	3.8	ug/Kg			11/27/15 10:19	1
4-Isopropyltoluene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
Methylene Chloride	4.0	U	5.0	4.0	ug/Kg			11/27/15 10:19	1
4-Methyl-2-pentanone (MIBK)	11	U	25	11	ug/Kg			11/27/15 10:19	1
Methyl tert-butyl ether	5.0	U	10	5.0	ug/Kg			11/27/15 10:19	1
m-Xylene & p-Xylene	3.0	U	10	3.0	ug/Kg			11/27/15 10:19	1
n-Butylbenzene	2.1	U	5.0	2.1	ug/Kg			11/27/15 10:19	1
N-Propylbenzene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
o-Xylene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
sec-Butylbenzene	2.4	U	5.0	2.4	ug/Kg			11/27/15 10:19	1
Styrene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
tert-Butylbenzene	2.0	U	5.0	2.0	ug/Kg			11/27/15 10:19	1

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 660-163716/6
Matrix: Solid
Analysis Batch: 163716

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
1,1,1,2,2-Tetrachloroethane	3.4	U	5.0	3.4	ug/Kg			11/27/15 10:19	1
Tetrachloroethene	3.0	U	5.0	3.0	ug/Kg			11/27/15 10:19	1
Toluene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
trans-1,2-Dichloroethene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
trans-1,3-Dichloropropene	2.1	U	5.0	2.1	ug/Kg			11/27/15 10:19	1
1,2,3-Trichlorobenzene	2.4	U	5.0	2.4	ug/Kg			11/27/15 10:19	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
1,1,1-Trichloroethane	2.1	U	5.0	2.1	ug/Kg			11/27/15 10:19	1
1,1,2-Trichloroethane	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
Trichloroethene	2.2	U	5.0	2.2	ug/Kg			11/27/15 10:19	1
Trichlorofluoromethane	2.8	U	10	2.8	ug/Kg			11/27/15 10:19	1
1,2,3-Trichloropropane	3.0	U	5.0	3.0	ug/Kg			11/27/15 10:19	1
1,2,4-Trimethylbenzene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
1,3,5-Trimethylbenzene	2.5	U	5.0	2.5	ug/Kg			11/27/15 10:19	1
Vinyl chloride	2.5	U	10	2.5	ug/Kg			11/27/15 10:19	1
Xylenes, Total	2.5	U	15	2.5	ug/Kg			11/27/15 10:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		69 - 130		11/27/15 10:19	1
Dibromofluoromethane	93		63 - 139		11/27/15 10:19	1
Toluene-d8 (Surr)	96		67 - 138		11/27/15 10:19	1

Lab Sample ID: LCS 660-163716/4
Matrix: Solid
Analysis Batch: 163716

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	500	457		ug/Kg		91	67 - 133
Benzene	50.0	49.6		ug/Kg		99	61 - 131
Bromobenzene	50.0	51.6		ug/Kg		103	58 - 130
Bromoform	50.0	58.5		ug/Kg		117	62 - 130
Bromomethane	50.0	43.1		ug/Kg		86	48 - 136
2-Butanone (MEK)	500	458		ug/Kg		92	70 - 130
Carbon disulfide	50.0	48.2		ug/Kg		96	34 - 143
Carbon tetrachloride	50.0	53.3		ug/Kg		107	57 - 130
Chlorobenzene	50.0	51.1		ug/Kg		102	62 - 130
Chlorobromomethane	50.0	49.1		ug/Kg		98	50 - 130
Chlorodibromomethane	50.0	55.1		ug/Kg		110	57 - 130
Chloroethane	50.0	46.3		ug/Kg		93	49 - 140
Chloroform	50.0	50.0		ug/Kg		100	62 - 130
Chloromethane	50.0	44.3		ug/Kg		89	35 - 139
2-Chlorotoluene	50.0	52.5		ug/Kg		105	60 - 130
4-Chlorotoluene	50.0	52.3		ug/Kg		105	63 - 130
cis-1,2-Dichloroethene	50.0	50.7		ug/Kg		101	62 - 130
cis-1,3-Dichloropropene	50.0	53.6		ug/Kg		107	60 - 130
1,2-Dibromo-3-Chloropropane	50.0	55.3		ug/Kg		111	54 - 130
Dibromomethane	50.0	49.6		ug/Kg		99	68 - 130

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 660-163716/4

Matrix: Solid

Analysis Batch: 163716

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichlorobenzene	50.0	51.7		ug/Kg		103	60 - 130
1,3-Dichlorobenzene	50.0	51.9		ug/Kg		104	55 - 130
1,4-Dichlorobenzene	50.0	51.9		ug/Kg		104	64 - 130
Dichlorobromomethane	50.0	53.8		ug/Kg		108	66 - 130
Dichlorodifluoromethane	50.0	40.3		ug/Kg		81	10 - 140
1,1-Dichloroethane	50.0	51.4		ug/Kg		103	47 - 130
1,2-Dichloroethane	50.0	51.0		ug/Kg		102	63 - 130
1,1-Dichloroethene	50.0	49.0		ug/Kg		98	54 - 144
1,2-Dichloropropane	50.0	52.9		ug/Kg		106	55 - 130
1,3-Dichloropropane	50.0	50.0		ug/Kg		100	63 - 130
2,2-Dichloropropane	50.0	52.6		ug/Kg		105	55 - 130
1,1-Dichloropropene	50.0	49.3		ug/Kg		99	55 - 130
Ethylbenzene	50.0	51.2		ug/Kg		102	68 - 130
Ethylene Dibromide	50.0	50.6		ug/Kg		101	64 - 130
Hexachlorobutadiene	50.0	53.5		ug/Kg		107	57 - 130
2-Hexanone	500	468		ug/Kg		94	69 - 136
Isopropylbenzene	50.0	52.8		ug/Kg		106	60 - 130
4-Isopropyltoluene	50.0	51.3		ug/Kg		103	64 - 130
Methylene Chloride	50.0	49.0		ug/Kg		98	50 - 135
4-Methyl-2-pentanone (MIBK)	500	463		ug/Kg		93	69 - 134
Methyl tert-butyl ether	50.0	49.9		ug/Kg		100	55 - 134
n-Butylbenzene	50.0	52.1		ug/Kg		104	63 - 130
N-Propylbenzene	50.0	52.6		ug/Kg		105	63 - 130
o-Xylene	50.0	50.7		ug/Kg		101	64 - 130
sec-Butylbenzene	50.0	52.9		ug/Kg		106	63 - 130
Styrene	50.0	51.5		ug/Kg		103	58 - 131
tert-Butylbenzene	50.0	52.4		ug/Kg		105	62 - 130
1,1,1,2-Tetrachloroethane	50.0	53.9		ug/Kg		108	56 - 130
1,1,1,2,2-Tetrachloroethane	50.0	51.9		ug/Kg		104	64 - 130
Tetrachloroethene	50.0	51.9		ug/Kg		104	56 - 130
Toluene	50.0	50.3		ug/Kg		101	61 - 130
trans-1,2-Dichloroethene	50.0	51.1		ug/Kg		102	46 - 135
trans-1,3-Dichloropropene	50.0	56.7		ug/Kg		113	65 - 130
1,2,3-Trichlorobenzene	50.0	51.9		ug/Kg		104	57 - 130
1,2,4-Trichlorobenzene	50.0	52.7		ug/Kg		105	59 - 130
1,1,1-Trichloroethane	50.0	52.2		ug/Kg		104	57 - 130
1,1,2-Trichloroethane	50.0	51.7		ug/Kg		103	62 - 130
Trichloroethene	50.0	52.0		ug/Kg		104	54 - 131
Trichlorofluoromethane	50.0	48.3		ug/Kg		97	53 - 130
1,2,3-Trichloropropane	50.0	49.7		ug/Kg		99	60 - 130
1,2,4-Trimethylbenzene	50.0	51.9		ug/Kg		104	59 - 130
1,3,5-Trimethylbenzene	50.0	51.8		ug/Kg		104	58 - 130
Vinyl chloride	50.0	44.0		ug/Kg		88	46 - 136

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	100		69 - 130
Dibromofluoromethane	99		63 - 139
Toluene-d8 (Surr)	102		67 - 138

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Lab Sample ID: 660-70536-D-7-C MS
Matrix: Solid
Analysis Batch: 163716

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 163740
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Acetone	48	U	903	859		ug/Kg	☼	95	67 - 133
Benzene	4.4	U	90.3	85.4		ug/Kg	☼	95	61 - 131
Bromobenzene	4.4	U	90.3	94.6		ug/Kg	☼	105	58 - 130
Bromoform	3.7	U	90.3	108		ug/Kg	☼	119	62 - 130
Bromomethane	6.3	U	90.3	79.7		ug/Kg	☼	88	48 - 136
2-Butanone (MEK)	11	U	903	869		ug/Kg	☼	96	70 - 130
Carbon disulfide	8.8	U	90.3	80.4		ug/Kg	☼	89	34 - 143
Carbon tetrachloride	4.4	U	90.3	87.2		ug/Kg	☼	97	57 - 130
Chlorobenzene	4.4	U	90.3	91.4		ug/Kg	☼	101	62 - 130
Chlorobromomethane	4.4	U	90.3	87.1		ug/Kg	☼	96	50 - 130
Chlorodibromomethane	4.4	U	90.3	100		ug/Kg	☼	111	57 - 130
Chloroethane	3.9	U	90.3	93.6		ug/Kg	☼	104	49 - 140
Chloroform	4.4	U	90.3	83.2		ug/Kg	☼	92	62 - 130
Chloromethane	4.4	U	90.3	78.4		ug/Kg	☼	87	35 - 139
2-Chlorotoluene	4.4	U	90.3	92.7		ug/Kg	☼	103	60 - 130
4-Chlorotoluene	4.4	U	90.3	93.1		ug/Kg	☼	103	63 - 130
cis-1,2-Dichloroethene	4.4	U	90.3	85.6		ug/Kg	☼	95	62 - 130
cis-1,3-Dichloropropene	3.5	U	90.3	95.4		ug/Kg	☼	106	60 - 130
1,2-Dibromo-3-Chloropropane	6.3	U	90.3	111		ug/Kg	☼	123	54 - 130
Dibromomethane	4.4	U	90.3	92.5		ug/Kg	☼	102	68 - 130
1,2-Dichlorobenzene	4.4	U	90.3	95.0		ug/Kg	☼	105	60 - 130
1,3-Dichlorobenzene	4.4	U	90.3	92.5		ug/Kg	☼	102	55 - 130
1,4-Dichlorobenzene	4.4	U	90.3	93.3		ug/Kg	☼	103	64 - 130
Dichlorobromomethane	4.4	U	90.3	95.3		ug/Kg	☼	106	66 - 130
Dichlorodifluoromethane	4.2	U	90.3	70.6		ug/Kg	☼	78	10 - 140
1,1-Dichloroethane	4.4	U	90.3	86.3		ug/Kg	☼	96	47 - 130
1,2-Dichloroethane	4.4	U	90.3	86.9		ug/Kg	☼	96	63 - 130
1,1-Dichloroethene	3.9	U	90.3	84.4		ug/Kg	☼	93	54 - 144
1,2-Dichloropropane	4.4	U	90.3	94.2		ug/Kg	☼	104	55 - 130
1,3-Dichloropropane	3.5	U	90.3	94.1		ug/Kg	☼	104	63 - 130
2,2-Dichloropropane	3.5	U	90.3	84.4		ug/Kg	☼	93	55 - 130
1,1-Dichloropropene	3.5	U	90.3	82.1		ug/Kg	☼	91	55 - 130
Ethylbenzene	3.5	U	90.3	91.1		ug/Kg	☼	101	68 - 130
Ethylene Dibromide	2.5	U	90.3	97.4		ug/Kg	☼	108	64 - 130
Hexachlorobutadiene	4.4	U	90.3	78.2		ug/Kg	☼	87	57 - 130
2-Hexanone	40	U	903	905		ug/Kg	☼	100	69 - 136
Isopropylbenzene	6.7	U	90.3	93.4		ug/Kg	☼	103	60 - 130
4-Isopropyltoluene	4.4	U	90.3	88.4		ug/Kg	☼	98	64 - 130
Methylene Chloride	7.0	U	90.3	86.9		ug/Kg	☼	96	50 - 135
4-Methyl-2-pentanone (MIBK)	19	U	903	898		ug/Kg	☼	99	69 - 134
Methyl tert-butyl ether	8.8	U	90.3	87.7		ug/Kg	☼	97	55 - 134
n-Butylbenzene	3.7	U	90.3	90.1		ug/Kg	☼	100	63 - 130
N-Propylbenzene	4.4	U	90.3	92.7		ug/Kg	☼	103	63 - 130
o-Xylene	4.4	U	90.3	89.1		ug/Kg	☼	99	64 - 130
sec-Butylbenzene	4.2	U	90.3	90.5		ug/Kg	☼	100	63 - 130
Styrene	4.4	U	90.3	91.8		ug/Kg	☼	102	58 - 131
tert-Butylbenzene	3.5	U	90.3	92.9		ug/Kg	☼	103	62 - 130
1,1,1,2-Tetrachloroethane	4.4	U	90.3	94.6		ug/Kg	☼	105	56 - 130
1,1,2,2-Tetrachloroethane	6.0	U	90.3	101		ug/Kg	☼	112	64 - 130
Tetrachloroethene	5.3	U	90.3	96.4		ug/Kg	☼	107	56 - 130

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 660-70536-D-7-C MS
Matrix: Solid
Analysis Batch: 163716

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 163740
%Rec.

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Toluene	4.4	U	90.3	90.6		ug/Kg	☼	100	61 - 130
trans-1,2-Dichloroethene	4.4	U	90.3	85.6		ug/Kg	☼	95	46 - 135
trans-1,3-Dichloropropene	3.7	U	90.3	99.8		ug/Kg	☼	110	65 - 130
1,2,3-Trichlorobenzene	4.2	U	90.3	89.3		ug/Kg	☼	99	57 - 130
1,2,4-Trichlorobenzene	4.4	U	90.3	91.6		ug/Kg	☼	101	59 - 130
1,1,1-Trichloroethane	3.7	U	90.3	86.1		ug/Kg	☼	95	57 - 130
1,1,2-Trichloroethane	4.4	U	90.3	95.4		ug/Kg	☼	106	62 - 130
Trichloroethene	3.9	U	90.3	92.8		ug/Kg	☼	103	54 - 131
Trichlorofluoromethane	4.9	U	90.3	86.1		ug/Kg	☼	95	53 - 130
1,2,3-Trichloropropane	5.3	U	90.3	100		ug/Kg	☼	111	60 - 130
1,2,4-Trimethylbenzene	4.4	U	90.3	92.9		ug/Kg	☼	103	59 - 130
1,3,5-Trimethylbenzene	4.4	U	90.3	93.2		ug/Kg	☼	103	58 - 130
Vinyl chloride	4.4	U	90.3	81.8		ug/Kg	☼	91	46 - 136
	MS	MS							
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene	102		69 - 130						
Dibromofluoromethane	102		63 - 139						
Toluene-d8 (Surr)	100		67 - 138						

Lab Sample ID: 660-70536-D-7-B DU
Matrix: Solid
Analysis Batch: 163716

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 163740
RPD

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Acetone	48	U	48	U	ug/Kg	☼	NC	40
Benzene	4.4	U	4.5	U	ug/Kg	☼	NC	40
Bromobenzene	4.4	U	4.5	U	ug/Kg	☼	NC	40
Bromoform	3.7	U	3.7	U	ug/Kg	☼	NC	40
Bromomethane	6.3	U	6.4	U	ug/Kg	☼	NC	40
2-Butanone (MEK)	11	U	12	U	ug/Kg	☼	NC	40
Carbon disulfide	8.8	U	8.9	U	ug/Kg	☼	NC	40
Carbon tetrachloride	4.4	U	4.5	U	ug/Kg	☼	NC	40
Chlorobenzene	4.4	U	4.5	U	ug/Kg	☼	NC	40
Chlorobromomethane	4.4	U	4.5	U	ug/Kg	☼	NC	40
Chlorodibromomethane	4.4	U	4.5	U	ug/Kg	☼	NC	40
Chloroethane	3.9	U	3.9	U	ug/Kg	☼	NC	40
Chloroform	4.4	U	4.5	U	ug/Kg	☼	NC	40
Chloromethane	4.4	U	4.5	U	ug/Kg	☼	NC	40
2-Chlorotoluene	4.4	U	4.5	U	ug/Kg	☼	NC	40
4-Chlorotoluene	4.4	U	4.5	U	ug/Kg	☼	NC	40
cis-1,2-Dichloroethene	4.4	U	4.5	U	ug/Kg	☼	NC	40
cis-1,3-Dichloropropene	3.5	U	3.6	U	ug/Kg	☼	NC	40
1,2-Dibromo-3-Chloropropane	6.3	U	6.4	U	ug/Kg	☼	NC	40
Dibromomethane	4.4	U	4.5	U	ug/Kg	☼	NC	40
1,2-Dichlorobenzene	4.4	U	4.5	U	ug/Kg	☼	NC	40
1,3-Dichlorobenzene	4.4	U	4.5	U	ug/Kg	☼	NC	40
1,4-Dichlorobenzene	4.4	U	4.5	U	ug/Kg	☼	NC	40
Dichlorobromomethane	4.4	U	4.5	U	ug/Kg	☼	NC	40

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 660-70536-D-7-B DU
Matrix: Solid
Analysis Batch: 163716

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 163740

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Dichlorodifluoromethane	4.2	U	4.3	U	ug/Kg	☼	NC	40
1,1-Dichloroethane	4.4	U	4.5	U	ug/Kg	☼	NC	40
1,2-Dichloroethane	4.4	U	4.5	U	ug/Kg	☼	NC	40
1,1-Dichloroethene	3.9	U	3.9	U	ug/Kg	☼	NC	40
1,2-Dichloropropane	4.4	U	4.5	U	ug/Kg	☼	NC	40
1,3-Dichloropropane	3.5	U	3.6	U	ug/Kg	☼	NC	40
2,2-Dichloropropane	3.5	U	3.6	U	ug/Kg	☼	NC	40
1,1-Dichloropropene	3.5	U	3.6	U	ug/Kg	☼	NC	40
Ethylbenzene	3.5	U	3.6	U	ug/Kg	☼	NC	40
Ethylene Dibromide	2.5	U	2.5	U	ug/Kg	☼	NC	40
Hexachlorobutadiene	4.4	U	4.5	U	ug/Kg	☼	NC	40
2-Hexanone	40	U	41	U	ug/Kg	☼	NC	40
Isopropylbenzene	6.7	U	6.8	U	ug/Kg	☼	NC	40
4-Isopropyltoluene	4.4	U	4.5	U	ug/Kg	☼	NC	40
Methylene Chloride	7.0	U	7.1	U	ug/Kg	☼	NC	40
4-Methyl-2-pentanone (MIBK)	19	U	20	U	ug/Kg	☼	NC	40
Methyl tert-butyl ether	8.8	U	8.9	U	ug/Kg	☼	NC	40
m-Xylene & p-Xylene	5.3	U	5.3	U	ug/Kg	☼	NC	40
n-Butylbenzene	3.7	U	3.7	U	ug/Kg	☼	NC	40
N-Propylbenzene	4.4	U	4.5	U	ug/Kg	☼	NC	40
o-Xylene	4.4	U	4.5	U	ug/Kg	☼	NC	40
sec-Butylbenzene	4.2	U	4.3	U	ug/Kg	☼	NC	40
Styrene	4.4	U	4.5	U	ug/Kg	☼	NC	40
tert-Butylbenzene	3.5	U	3.6	U	ug/Kg	☼	NC	40
1,1,1,2-Tetrachloroethane	4.4	U	4.5	U	ug/Kg	☼	NC	40
1,1,1,2,2-Tetrachloroethane	6.0	U	6.1	U	ug/Kg	☼	NC	40
Tetrachloroethene	5.3	U	5.3	U	ug/Kg	☼	NC	40
Toluene	4.4	U	4.5	U	ug/Kg	☼	NC	40
trans-1,2-Dichloroethene	4.4	U	4.5	U	ug/Kg	☼	NC	40
trans-1,3-Dichloropropene	3.7	U	3.7	U	ug/Kg	☼	NC	40
1,2,3-Trichlorobenzene	4.2	U	4.3	U	ug/Kg	☼	NC	40
1,2,4-Trichlorobenzene	4.4	U	4.5	U	ug/Kg	☼	NC	40
1,1,1-Trichloroethane	3.7	U	3.7	U	ug/Kg	☼	NC	40
1,1,2-Trichloroethane	4.4	U	4.5	U	ug/Kg	☼	NC	40
Trichloroethene	3.9	U	3.9	U	ug/Kg	☼	NC	40
Trichlorofluoromethane	4.9	U	5.0	U	ug/Kg	☼	NC	40
1,2,3-Trichloropropane	5.3	U	5.3	U	ug/Kg	☼	NC	40
1,2,4-Trimethylbenzene	4.4	U	4.5	U	ug/Kg	☼	NC	40
1,3,5-Trimethylbenzene	4.4	U	4.5	U	ug/Kg	☼	NC	40
Vinyl chloride	4.4	U	4.5	U	ug/Kg	☼	NC	40
Xylenes, Total	4.4	U	4.5	U	ug/Kg	☼	NC	40

Surrogate	%Recovery	DU Qualifier	Limits
4-Bromofluorobenzene	97		69 - 130
Dibromofluoromethane	98		63 - 139
Toluene-d8 (Surr)	96		67 - 138

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level

Lab Sample ID: MB 400-284126/13-A

Matrix: Solid

Analysis Batch: 284241

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 284126

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Acenaphthylene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Anthracene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Benzo[a]anthracene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Benzo[a]pyrene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Benzo[b]fluoranthene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Benzo[g,h,i]perylene	2.0	U	6.6	2.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Benzo[k]fluoranthene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Chrysene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Dibenz(a,h)anthracene	2.0	U	6.6	2.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Fluoranthene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Fluorene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Indeno[1,2,3-cd]pyrene	2.0	U	6.6	2.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
1-Methylnaphthalene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
2-Methylnaphthalene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Naphthalene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Phenanthrene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1
Pyrene	1.0	U	6.6	1.0	ug/Kg		11/19/15 11:23	11/20/15 20:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	67		27 - 127	11/19/15 11:23	11/20/15 20:57	1
Nitrobenzene-d5 (Surr)	61		15 - 136	11/19/15 11:23	11/20/15 20:57	1
Terphenyl-d14 (Surr)	78		24 - 146	11/19/15 11:23	11/20/15 20:57	1

Lab Sample ID: LCS 400-284126/12-A

Matrix: Solid

Analysis Batch: 284241

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 284126

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	333	241		ug/Kg		72	59 - 130
Acenaphthylene	333	237		ug/Kg		71	60 - 130
Anthracene	333	253		ug/Kg		76	64 - 130
Benzo[a]anthracene	333	272		ug/Kg		82	64 - 130
Benzo[a]pyrene	333	277		ug/Kg		83	56 - 130
Benzo[b]fluoranthene	333	279		ug/Kg		84	62 - 130
Benzo[g,h,i]perylene	333	262		ug/Kg		79	39 - 132
Benzo[k]fluoranthene	333	271		ug/Kg		81	60 - 130
Chrysene	333	264		ug/Kg		79	65 - 130
Dibenz(a,h)anthracene	333	277		ug/Kg		83	43 - 133
Fluoranthene	333	277		ug/Kg		83	61 - 130
Fluorene	333	255		ug/Kg		76	59 - 130
Indeno[1,2,3-cd]pyrene	333	276		ug/Kg		83	43 - 131
1-Methylnaphthalene	333	242		ug/Kg		73	56 - 130
2-Methylnaphthalene	333	241		ug/Kg		72	56 - 130
Naphthalene	333	234		ug/Kg		70	45 - 130
Phenanthrene	333	250		ug/Kg		75	63 - 130
Pyrene	333	255		ug/Kg		76	47 - 135

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8270D LL - Semivolatile Organic Compounds by GC/MS - Low Level (Continued)

Lab Sample ID: LCS 400-284126/12-A
Matrix: Solid
Analysis Batch: 284241

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 284126

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	74		27 - 127
Nitrobenzene-d5 (Surr)	66		15 - 136
Terphenyl-d14 (Surr)	80		24 - 146

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography

Lab Sample ID: MB 680-410930/8-A
Matrix: Solid
Analysis Batch: 410951

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410930

Analyte	MB MB		PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aldrin	0.15	U	1.7	0.15	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
alpha-BHC	0.14	U	1.7	0.14	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
alpha-Chlordane	0.18	U	1.7	0.18	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
beta-BHC	0.34	U	1.7	0.34	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
Chlordane (technical)	2.9	U	17	2.9	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
4,4'-DDD	0.18	U	1.7	0.18	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
4,4'-DDE	0.18	U	1.7	0.18	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
4,4'-DDT	0.22	U	1.7	0.22	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
delta-BHC	0.19	U	1.7	0.19	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
Dieldrin	0.17	U	1.7	0.17	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
Endosulfan I	0.17	U	1.7	0.17	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
Endosulfan II	0.15	U	1.7	0.15	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
Endosulfan sulfate	0.21	U	1.7	0.21	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
Endrin	0.22	U	1.7	0.22	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
Endrin aldehyde	0.22	U	1.7	0.22	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
Endrin ketone	0.20	U	1.7	0.20	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
gamma-BHC (Lindane)	0.14	U	1.7	0.14	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
gamma-Chlordane	0.18	U	1.7	0.18	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
Heptachlor	0.19	U	1.7	0.19	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
Heptachlor epoxide	0.16	U	1.7	0.16	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
Methoxychlor	0.28	U	1.7	0.28	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
PCB-1016	11	U	34	11	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
PCB-1221	15	U	34	15	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
PCB-1232	5.3	U	34	5.3	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
PCB-1242	5.1	U	34	5.1	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
PCB-1248	8.3	U	34	8.3	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
PCB-1254	10	U	34	10	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
PCB-1260	9.8	U	34	9.8	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
Total PCBs	5.1	U	34	5.1	ug/Kg		11/18/15 11:47	11/18/15 15:36	1
Toxaphene	5.6	U	170	5.6	ug/Kg		11/18/15 11:47	11/18/15 15:36	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	105		54 - 133	11/18/15 11:47	11/18/15 15:36	1
Tetrachloro-m-xylene	90		46 - 130	11/18/15 11:47	11/18/15 15:36	1

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Lab Sample ID: LCS 680-410930/12-A
Matrix: Solid
Analysis Batch: 410951

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410930
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	411	378		ug/Kg		92	43 - 130
PCB-1260	411	425		ug/Kg		103	45 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	90		54 - 133
Tetrachloro-m-xylene	83		46 - 130

Lab Sample ID: LCS 680-410930/9-A
Matrix: Solid
Analysis Batch: 410951

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410930
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aldrin	6.65	6.18		ug/Kg		93	44 - 130
alpha-BHC	6.65	5.90		ug/Kg		89	42 - 130
alpha-Chlordane	6.65	6.53		ug/Kg		98	47 - 130
beta-BHC	6.65	6.46		ug/Kg		97	48 - 131
4,4'-DDD	6.65	5.67		ug/Kg		85	46 - 135
4,4'-DDE	6.65	6.38		ug/Kg		96	45 - 130
4,4'-DDT	6.65	6.50		ug/Kg		98	45 - 144
delta-BHC	6.65	6.20		ug/Kg		93	49 - 130
Dieldrin	6.65	6.24		ug/Kg		94	47 - 130
Endosulfan I	6.65	6.19		ug/Kg		93	40 - 130
Endosulfan II	6.65	6.46		ug/Kg		97	45 - 130
Endosulfan sulfate	6.65	6.50		ug/Kg		98	50 - 142
Endrin	6.65	7.02		ug/Kg		105	46 - 155
Endrin aldehyde	6.65	5.83		ug/Kg		88	41 - 135
Endrin ketone	6.65	6.80		ug/Kg		102	43 - 153
gamma-BHC (Lindane)	6.65	5.80		ug/Kg		87	45 - 130
gamma-Chlordane	6.65	6.47		ug/Kg		97	39 - 135
Heptachlor	6.65	6.15		ug/Kg		92	46 - 130
Heptachlor epoxide	6.65	6.31		ug/Kg		95	48 - 130
Methoxychlor	6.65	6.98		ug/Kg		105	43 - 166

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	94		54 - 133
Tetrachloro-m-xylene	86		46 - 130

Lab Sample ID: 660-70475-5 MS
Matrix: Solid
Analysis Batch: 410951

Client Sample ID: LB12 (2-4)
Prep Type: Total/NA
Prep Batch: 410930
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aldrin	0.62	U	6.73	5.44	I	ug/Kg	☼	81	44 - 130
alpha-BHC	0.58	U	6.73	4.76	I	ug/Kg	☼	71	42 - 130
alpha-Chlordane	0.74	U	6.73	6.13	I	ug/Kg	☼	91	47 - 130
beta-BHC	1.4	U	6.73	5.99	I	ug/Kg	☼	89	48 - 131

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Lab Sample ID: 660-70475-5 MS
Matrix: Solid
Analysis Batch: 410951

Client Sample ID: LB12 (2-4)
Prep Type: Total/NA
Prep Batch: 410930

Analyte	Sample	Sample	Spike	MS MS		Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
4,4'-DDD	0.74	U	6.73	5.09	I	ug/Kg	☼	76	46 - 135
4,4'-DDE	0.74	U	6.73	5.66	I	ug/Kg	☼	84	45 - 130
4,4'-DDT	0.91	U	6.73	6.19	I	ug/Kg	☼	92	45 - 144
delta-BHC	0.78	U	6.73	4.87	I	ug/Kg	☼	72	49 - 130
Dieldrin	0.70	U	6.73	5.53	I	ug/Kg	☼	82	47 - 130
Endosulfan I	0.70	U	6.73	5.07	I	ug/Kg	☼	75	40 - 130
Endosulfan II	0.62	U	6.73	5.42	I	ug/Kg	☼	80	45 - 130
Endosulfan sulfate	0.87	U	6.73	5.93	I	ug/Kg	☼	88	50 - 142
Endrin	0.91	U	6.73	6.18	I	ug/Kg	☼	92	46 - 155
Endrin aldehyde	0.91	U	6.73	5.62	I	ug/Kg	☼	83	41 - 135
Endrin ketone	0.82	U	6.73	6.71	I	ug/Kg	☼	100	43 - 153
gamma-BHC (Lindane)	0.58	U	6.73	4.78	I	ug/Kg	☼	71	45 - 130
gamma-Chlordane	0.74	U	6.73	5.55	I	ug/Kg	☼	82	39 - 135
Heptachlor	0.78	U	6.73	5.46	I	ug/Kg	☼	81	46 - 130
Heptachlor epoxide	0.66	U	6.73	5.59	I	ug/Kg	☼	83	48 - 130
Methoxychlor	1.2	U	6.73	6.10	I	ug/Kg	☼	91	43 - 166

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	79		54 - 133
Tetrachloro-m-xylene	76		46 - 130

Lab Sample ID: 660-70475-5 MSD
Matrix: Solid
Analysis Batch: 410951

Client Sample ID: LB12 (2-4)
Prep Type: Total/NA
Prep Batch: 410930

Analyte	Sample	Sample	Spike	MSD MSD		Unit	D	%Rec	Limits	RPD	
	Result	Qualifier		Result	Qualifier					RPD	Limit
Aldrin	0.62	U	6.59	5.24	I	ug/Kg	☼	80	44 - 130	4	50
alpha-BHC	0.58	U	6.59	4.54	I	ug/Kg	☼	69	42 - 130	5	50
alpha-Chlordane	0.74	U	6.59	5.60	I	ug/Kg	☼	85	47 - 130	9	50
beta-BHC	1.4	U	6.59	5.88	I	ug/Kg	☼	89	48 - 131	2	50
4,4'-DDD	0.74	U	6.59	4.88	I	ug/Kg	☼	74	46 - 135	4	50
4,4'-DDE	0.74	U	6.59	5.26	I	ug/Kg	☼	80	45 - 130	7	50
4,4'-DDT	0.91	U	6.59	5.44	I	ug/Kg	☼	83	45 - 144	13	50
delta-BHC	0.78	U	6.59	4.62	I	ug/Kg	☼	70	49 - 130	5	50
Dieldrin	0.70	U	6.59	5.16	I	ug/Kg	☼	78	47 - 130	7	50
Endosulfan I	0.70	U	6.59	4.84	I	ug/Kg	☼	73	40 - 130	5	50
Endosulfan II	0.62	U	6.59	5.08	I	ug/Kg	☼	77	45 - 130	7	50
Endosulfan sulfate	0.87	U	6.59	5.92	I	ug/Kg	☼	90	50 - 142	0	50
Endrin	0.91	U	6.59	5.92	I	ug/Kg	☼	90	46 - 155	4	50
Endrin aldehyde	0.91	U	6.59	5.37	I	ug/Kg	☼	81	41 - 135	5	50
Endrin ketone	0.82	U	6.59	6.82		ug/Kg	☼	103	43 - 153	2	50
gamma-BHC (Lindane)	0.58	U	6.59	4.57	I	ug/Kg	☼	69	45 - 130	4	50
gamma-Chlordane	0.74	U	6.59	5.39	I	ug/Kg	☼	82	39 - 135	3	50
Heptachlor	0.78	U	6.59	5.24	I	ug/Kg	☼	79	46 - 130	4	50
Heptachlor epoxide	0.66	U	6.59	5.38	I	ug/Kg	☼	82	48 - 130	4	50
Methoxychlor	1.2	U	6.59	5.76	I	ug/Kg	☼	87	43 - 166	6	50

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8081B/8082A - Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography (Continued)

Lab Sample ID: 660-70475-5 MSD
Matrix: Solid
Analysis Batch: 410951

Client Sample ID: LB12 (2-4)
Prep Type: Total/NA
Prep Batch: 410930

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	80		54 - 133
Tetrachloro-m-xylene	74		46 - 130

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

Lab Sample ID: MB 280-304923/1-A
Matrix: Solid
Analysis Batch: 305431

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 304923

Analyte	MB MB		PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Atrazine	12	U	67	12	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Bolstar	4.2	U	13	4.2	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Chlorpyrifos	6.5	U	20	6.5	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Coumaphos	2.8	U	13	2.8	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Demeton, Total	7.5	U	39	7.5	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Diazinon	7.3	U	22	7.3	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Dichlorvos	7.4	U	23	7.4	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Dimethoate	7.1	U	22	7.1	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Disulfoton	7.7	U	48	7.7	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
EPN	3.7	U	13	3.7	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Ethyl Parathion	5.3	U	18	5.3	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Fensulfothion	8.2	U	25	8.2	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Guthion	3.5	U	13	3.5	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Malathion	4.6	U	15	4.6	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Merphos	5.1	U	30	5.1	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Methyl parathion	6.4	U	20	6.4	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Mevinphos	4.6	U	15	4.6	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Mocap	4.9	U	15	4.9	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Naled	23	U	70	23	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
o,o',o"-Triethylphosphorothioate	7.9	U	39	7.9	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Phorate	5.7	U	20	5.7	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Ronnel	15	U	46	15	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Sulfotepp	6.3	U	20	6.3	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Tokuthion	3.9	U	20	3.9	ug/Kg		11/19/15 17:45	11/24/15 15:09	1
Trichloronate	6.3	U	20	6.3	ug/Kg		11/19/15 17:45	11/24/15 15:09	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Chlormefos	96		42 - 132	11/19/15 17:45	11/24/15 15:09	1
Triphenylphosphate	90		47 - 161	11/19/15 17:45	11/24/15 15:09	1

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: LCS 280-304923/2-A

Matrix: Solid

Analysis Batch: 305431

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 304923

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Atrazine	133	89.3		ug/Kg		67	49 - 115
Chlorpyrifos	133	101		ug/Kg		76	38 - 130
Coumaphos	133	120		ug/Kg		90	50 - 119
Demeton, Total	133	91.5		ug/Kg		69	36 - 115
Diazinon	133	94.5		ug/Kg		71	53 - 115
Dichlorvos	133	122		ug/Kg		91	43 - 139
Dimethoate	133	100		ug/Kg		75	25 - 138
Disulfoton	133	83.9		ug/Kg		63	29 - 115
EPN	133	112		ug/Kg		84	58 - 131
Ethyl Parathion	133	100		ug/Kg		75	24 - 163
Fensulfothion	133	119		ug/Kg		89	52 - 121
Guthion	133	110		ug/Kg		83	51 - 122
Malathion	133	89.8		ug/Kg		67	50 - 122
Merphos	133	31.2		ug/Kg		23	19 - 115
Methyl parathion	133	99.8		ug/Kg		75	46 - 119
Mevinphos	133	71.6		ug/Kg		54	10 - 226
Mocap	133	92.0		ug/Kg		69	53 - 115
o,o',o"-Triethylphosphorothioate	133	143		ug/Kg		107	22 - 115
o,o',o"-Triethylphosphorothioate	133	101		ug/Kg		76	22 - 115
Ronnel	133	101		ug/Kg		76	43 - 118
Sulfotepp	133	101		ug/Kg		75	55 - 115
Trichloronate	133	93.5		ug/Kg		70	27 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Chlormefos	74		42 - 132
Triphenylphosphate	99		47 - 161

Lab Sample ID: 660-70475-3 MS

Matrix: Solid

Analysis Batch: 305431

Client Sample ID: CS1 (0-4)

Prep Type: Total/NA

Prep Batch: 304923

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Atrazine	14	U	157	106		ug/Kg	☼	67	49 - 115
Chlorpyrifos	7.4	U	157	109		ug/Kg	☼	70	38 - 130
Coumaphos	3.2	U	157	128		ug/Kg	☼	82	50 - 119
Demeton, Total	8.6	U	157	83.3		ug/Kg	☼	53	36 - 115
Diazinon	8.3	U	157	104		ug/Kg	☼	67	53 - 115
Dichlorvos	8.4	U	157	120		ug/Kg	☼	76	43 - 139
Dimethoate	8.1	U	157	111		ug/Kg	☼	71	25 - 138
Disulfoton	8.8	U	157	69.6		ug/Kg	☼	44	29 - 115
EPN	4.2	U	157	118		ug/Kg	☼	75	58 - 131
Ethyl Parathion	6.0	U	157	111		ug/Kg	☼	71	24 - 163
Fensulfothion	9.3	U	157	127		ug/Kg	☼	81	52 - 121
Guthion	4.0	U	157	114		ug/Kg	☼	73	51 - 122
Malathion	5.3	U	157	97.6		ug/Kg	☼	62	50 - 122
Merphos	5.8	U J3	157	28.8	I J3	ug/Kg	☼	18	19 - 115

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

Lab Sample ID: 660-70475-3 MS

Matrix: Solid

Analysis Batch: 305431

Client Sample ID: CS1 (0-4)

Prep Type: Total/NA

Prep Batch: 304923

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Methyl parathion	7.2	U	157	111		ug/Kg	☼	71	46 - 119
Mevinphos	5.3	U	157	84.4		ug/Kg	☼	54	10 - 226
Mocap	5.6	U	157	108		ug/Kg	☼	69	53 - 115
o,o',o"-Triethylphosphorothioate	8.9	U	157	116		ug/Kg	☼	74	22 - 115
Phorate	6.5	U	157	89.4		ug/Kg	☼	57	40 - 115
Ronnel	17	U	157	113		ug/Kg	☼	72	43 - 118
Sulfotepp	7.1	U	157	118		ug/Kg	☼	76	55 - 115
Trichloronate	7.1	U	157	104		ug/Kg	☼	67	27 - 115

Surrogate	MS %Recovery	MS Qualifier	Limits
Chlormefos	74		42 - 132
Triphenylphosphate	89		47 - 161

Lab Sample ID: 660-70475-3 MSD

Matrix: Solid

Analysis Batch: 305431

Client Sample ID: CS1 (0-4)

Prep Type: Total/NA

Prep Batch: 304923

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Atrazine	14	U	150	101		ug/Kg	☼	68	49 - 115	4	50
Chlorpyrifos	7.4	U	150	109		ug/Kg	☼	73	38 - 130	0	37
Coumaphos	3.2	U	150	126		ug/Kg	☼	84	50 - 119	2	27
Demeton, Total	8.6	U	150	90.5		ug/Kg	☼	60	36 - 115	8	47
Diazinon	8.3	U	150	103		ug/Kg	☼	69	53 - 115	2	40
Dichlorvos	8.4	U	150	113		ug/Kg	☼	75	43 - 139	6	77
Dimethoate	8.1	U	150	106		ug/Kg	☼	71	25 - 138	5	98
Disulfoton	8.8	U	150	77.1		ug/Kg	☼	51	29 - 115	10	40
EPN	4.2	U	150	117		ug/Kg	☼	78	58 - 131	1	50
Ethyl Parathion	6.0	U	150	108		ug/Kg	☼	72	24 - 163	3	47
Fensulfothion	9.3	U	150	120		ug/Kg	☼	80	52 - 121	6	49
Guthion	4.0	U	150	112		ug/Kg	☼	74	51 - 122	2	43
Malathion	5.3	U	150	94.5		ug/Kg	☼	63	50 - 122	3	53
Merphos	5.8	U J3	150	29.8	I	ug/Kg	☼	20	19 - 115	4	50
Methyl parathion	7.2	U	150	109		ug/Kg	☼	73	46 - 119	2	53
Mevinphos	5.3	U	150	81.0		ug/Kg	☼	54	10 - 226	4	78
Mocap	5.6	U	150	106		ug/Kg	☼	71	53 - 115	2	54
o,o',o"-Triethylphosphorothioate	8.9	U	150	108		ug/Kg	☼	72	22 - 115	7	50
Phorate	6.5	U	150	88.3		ug/Kg	☼	59	40 - 115	1	40
Ronnel	17	U	150	110		ug/Kg	☼	73	43 - 118	3	41
Sulfotepp	7.1	U	150	115		ug/Kg	☼	77	55 - 115	3	40
Trichloronate	7.1	U	150	102		ug/Kg	☼	68	27 - 115	2	43

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Chlormefos	77		42 - 132
Triphenylphosphate	91		47 - 161

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: FL-PRO - Florida - Petroleum Range Organics (GC)

Lab Sample ID: MB 400-284107/1-A

Matrix: Solid

Analysis Batch: 284332

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 284107

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Petroleum Hydrocarbons (C8-C40)	1.7	U	9.8	1.7	mg/Kg		11/19/15 10:17	11/20/15 14:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-C39	108		60 - 118	11/19/15 10:17	11/20/15 14:44	1
o-Terphenyl	104		62 - 109	11/19/15 10:17	11/20/15 14:44	1

Lab Sample ID: LCS 400-284107/2-A

Matrix: Solid

Analysis Batch: 284332

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 284107

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Petroleum Hydrocarbons (C8-C40)	112	84.4		mg/Kg		76	63 - 153

Surrogate	LCS %Recovery	LCS Qualifier	Limits
n-C39	101		60 - 118
o-Terphenyl	91		62 - 109

Lab Sample ID: 660-70476-B-1-B MS

Matrix: Solid

Analysis Batch: 284332

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 284107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Total Petroleum Hydrocarbons (C8-C40)	23	I	745	512		mg/Kg	☼	66	62 - 204

Surrogate	MS %Recovery	MS Qualifier	Limits
n-C39	90		60 - 118
o-Terphenyl	81		62 - 109

Lab Sample ID: 660-70476-B-1-C MSD

Matrix: Solid

Analysis Batch: 284332

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 284107

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Total Petroleum Hydrocarbons (C8-C40)	23	I	744	547		mg/Kg	☼	70	62 - 204	7	25

Surrogate	MSD %Recovery	MSD Qualifier	Limits
n-C39	94		60 - 118
o-Terphenyl	85		62 - 109

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A)

Lab Sample ID: H5K20000011B

Matrix: Solid

Analysis Batch: 5324011

Client Sample ID: Method Blank

Prep Type: Total

Prep Batch: 5324011_P

Analyte	Result	MB MB Qualifier	ML	EDL	TEF	TEQ	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.00	0.573	1		pg/g		11/19/15 12:32	11/30/15 03:48	1
1,2,3,7,8-PeCDD	ND		5.00	0.300	0.5		pg/g		11/19/15 12:32	11/30/15 03:48	1
1,2,3,4,7,8-HxCDD	ND		5.00	0.294	0.1		pg/g		11/19/15 12:32	11/30/15 03:48	1
1,2,3,6,7,8-HxCDD	ND		5.00	0.306	0.1		pg/g		11/19/15 12:32	11/30/15 03:48	1
1,2,3,7,8,9-HxCDD	ND		5.00	0.279	0.1		pg/g		11/19/15 12:32	11/30/15 03:48	1
1,2,3,4,6,7,8-HpCDD	ND		5.00	0.285	0.01		pg/g		11/19/15 12:32	11/30/15 03:48	1
OCDD	ND		10.0	0.385	0.001		pg/g		11/19/15 12:32	11/30/15 03:48	1
2,3,7,8-TCDF	ND		1.00	0.451	0.1		pg/g		11/19/15 12:32	11/30/15 03:48	1
1,2,3,7,8-PeCDF	ND		5.00	0.197	0.05		pg/g		11/19/15 12:32	11/30/15 03:48	1
2,3,4,7,8-PeCDF	ND		5.00	0.193	0.5		pg/g		11/19/15 12:32	11/30/15 03:48	1
Total TCDD	ND		1.00	0.573			pg/g		11/19/15 12:32	11/30/15 03:48	1
1,2,3,4,7,8-HxCDF	0.526	J I	5.00	0.129	0.1	0.053	pg/g		11/19/15 12:32	11/30/15 03:48	1
1,2,3,6,7,8-HxCDF	ND		5.00	0.127	0.1		pg/g		11/19/15 12:32	11/30/15 03:48	1
2,3,4,6,7,8-HxCDF	ND		5.00	0.139	0.1		pg/g		11/19/15 12:32	11/30/15 03:48	1
1,2,3,7,8,9-HxCDF	ND		5.00	0.181	0.1		pg/g		11/19/15 12:32	11/30/15 03:48	1
1,2,3,4,6,7,8-HpCDF	ND		5.00	0.241	0.01		pg/g		11/19/15 12:32	11/30/15 03:48	1
1,2,3,4,7,8,9-HpCDF	ND		5.00	0.311	0.01		pg/g		11/19/15 12:32	11/30/15 03:48	1
OCDF	ND		10.0	0.388	0.001		pg/g		11/19/15 12:32	11/30/15 03:48	1
Total PeCDD	ND		5.00	0.300			pg/g		11/19/15 12:32	11/30/15 03:48	1
Total HxCDD	ND		5.00	0.293			pg/g		11/19/15 12:32	11/30/15 03:48	1
Total HpCDD	ND		5.00	0.285			pg/g		11/19/15 12:32	11/30/15 03:48	1
Total TCDF	ND		1.00	0.451			pg/g		11/19/15 12:32	11/30/15 03:48	1
Total PeCDF	0.386	J I	5.00	0.195			pg/g		11/19/15 12:32	11/30/15 03:48	1
Total HxCDF	0.526	J I	5.00	0.141			pg/g		11/19/15 12:32	11/30/15 03:48	1
Total HpCDF	ND		5.00	0.272			pg/g		11/19/15 12:32	11/30/15 03:48	1

Total TEQ

0.053

Internal Standard	%Recovery	MB MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	72		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-1,2,3,7,8-PeCDD	68		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-1,2,3,4,7,8-HxCDD	70		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-1,2,3,6,7,8-HxCDD	76		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-1,2,3,4,6,7,8-HpCDD	72		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-OCDD	65		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-2,3,7,8-TCDF	61		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-1,2,3,7,8-PeCDF	62		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-2,3,4,7,8-PeCDF	61		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-1,2,3,4,7,8-HxCDF	62		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-1,2,3,6,7,8-HxCDF	65		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-2,3,4,6,7,8-HxCDF	67		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-1,2,3,7,8,9-HxCDF	62		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-1,2,3,4,6,7,8-HpCDF	62		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-1,2,3,4,7,8,9-HpCDF	60		40 - 135	11/19/15 12:32	11/30/15 03:48	1
13C-OCDF	62		40 - 135	11/19/15 12:32	11/30/15 03:48	1

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A) (Continued)

Lab Sample ID: H5K20000011C
Matrix: Solid
Analysis Batch: 5324011

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 5324011_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,3,7,8-TCDD	40.0	38.3		pg/g		96	79 - 129
1,2,3,7,8-PeCDD	200	190		pg/g		95	79 - 129
1,2,3,4,7,8-HxCDD	200	194		pg/g		97	73 - 123
1,2,3,6,7,8-HxCDD	200	184		pg/g		92	74 - 124
1,2,3,7,8,9-HxCDD	200	187		pg/g		93	70 - 124
1,2,3,4,6,7,8-HpCDD	200	177		pg/g		89	73 - 123
OCDD	400	355		pg/g		89	75 - 125
2,3,7,8-TCDF	40.0	38.6		pg/g		96	75 - 125
1,2,3,7,8-PeCDF	200	179		pg/g		90	74 - 124
2,3,4,7,8-PeCDF	200	185		pg/g		92	75 - 125
1,2,3,4,7,8-HxCDF	200	191	V	pg/g		95	75 - 125
1,2,3,6,7,8-HxCDF	200	190		pg/g		95	76 - 126
2,3,4,6,7,8-HxCDF	200	195		pg/g		97	76 - 126
1,2,3,7,8,9-HxCDF	200	190		pg/g		95	77 - 127
1,2,3,4,6,7,8-HpCDF	200	194		pg/g		97	77 - 127
1,2,3,4,7,8,9-HpCDF	200	199		pg/g		99	73 - 123
OCDF	400	367		pg/g		92	49 - 128

Internal Standard	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	63		40 - 135
13C-1,2,3,7,8-PeCDD	70		40 - 135
13C-1,2,3,4,7,8-HxCDD	70		40 - 135
13C-1,2,3,6,7,8-HxCDD	76		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	80		40 - 135
13C-OCDD	76		40 - 135
13C-2,3,7,8-TCDF	57		40 - 135
13C-1,2,3,7,8-PeCDF	59		40 - 135
13C-2,3,4,7,8-PeCDF	62		40 - 135
13C-1,2,3,4,7,8-HxCDF	61		40 - 135
13C-1,2,3,6,7,8-HxCDF	64		40 - 135
13C-2,3,4,6,7,8-HxCDF	65		40 - 135
13C-1,2,3,7,8,9-HxCDF	61		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	65		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	65		40 - 135
13C-OCDF	70		40 - 135

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-410896/1-A
Matrix: Solid
Analysis Batch: 411130

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410896

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.089	U	0.27	0.089	mg/Kg		11/18/15 09:00	11/18/15 18:24	1
Barium	0.054	U	0.45	0.054	mg/Kg		11/18/15 09:00	11/18/15 18:24	1
Cadmium	0.013	U	0.045	0.013	mg/Kg		11/18/15 09:00	11/18/15 18:24	1
Chromium	0.168	I	0.89	0.098	mg/Kg		11/18/15 09:00	11/18/15 18:24	1

TestAmerica Tampa

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 680-410896/1-A
Matrix: Solid
Analysis Batch: 411130

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410896

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.045	U	0.18	0.045	mg/Kg		11/18/15 09:00	11/18/15 18:24	1
Selenium	0.089	U	0.45	0.089	mg/Kg		11/18/15 09:00	11/18/15 18:24	1
Silver	0.0089	U	0.089	0.0089	mg/Kg		11/18/15 09:00	11/18/15 18:24	1

Lab Sample ID: LCS 680-410896/2-A
Matrix: Solid
Analysis Batch: 411130

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410896

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	9.26	10.2		mg/Kg		110	75 - 125
Barium	9.26	10.8		mg/Kg		117	75 - 125
Cadmium	4.63	4.90		mg/Kg		106	75 - 125
Chromium	9.26	10.5		mg/Kg		114	75 - 125
Lead	46.3	51.1		mg/Kg		110	75 - 125
Selenium	9.26	9.99		mg/Kg		108	75 - 125
Silver	4.63	5.00		mg/Kg		108	75 - 125

Lab Sample ID: 660-70475-1 MS
Matrix: Solid
Analysis Batch: 411130

Client Sample ID: LB11 (0-2)
Prep Type: Total/NA
Prep Batch: 410896

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.25	I	8.67	9.54		mg/Kg	☼	107	75 - 125
Barium	2.0		8.67	12.1		mg/Kg	☼	117	75 - 125
Cadmium	0.013	U	4.33	4.48		mg/Kg	☼	103	75 - 125
Chromium	1.8		8.67	11.2		mg/Kg	☼	108	75 - 125
Lead	0.40		43.3	46.8		mg/Kg	☼	107	75 - 125
Selenium	0.23	I	8.67	8.60		mg/Kg	☼	97	75 - 125
Silver	0.0087	U	4.33	4.41		mg/Kg	☼	102	75 - 125

Lab Sample ID: 660-70475-1 MSD
Matrix: Solid
Analysis Batch: 411130

Client Sample ID: LB11 (0-2)
Prep Type: Total/NA
Prep Batch: 410896

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.25	I	8.60	9.21		mg/Kg	☼	104	75 - 125	3	20
Barium	2.0		8.60	12.1		mg/Kg	☼	117	75 - 125	0	20
Cadmium	0.013	U	4.30	4.10		mg/Kg	☼	95	75 - 125	9	20
Chromium	1.8		8.60	10.8		mg/Kg	☼	104	75 - 125	4	20
Lead	0.40		43.0	44.0		mg/Kg	☼	101	75 - 125	6	20
Selenium	0.23	I	8.60	8.42		mg/Kg	☼	95	75 - 125	2	20
Silver	0.0087	U	4.30	4.12		mg/Kg	☼	96	75 - 125	7	20

QC Sample Results

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 680-411027/13-A
Matrix: Solid
Analysis Batch: 411216

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 411027

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0080	U	0.020	0.0080	mg/Kg		11/18/15 14:56	11/19/15 10:03	1

Lab Sample ID: LCS 680-411027/14-A
Matrix: Solid
Analysis Batch: 411216

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 411027

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.227	0.230		mg/Kg		101	80 - 120

Lab Sample ID: 680-119130-A-2-B MS
Matrix: Solid
Analysis Batch: 411216

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 411027

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.0089	U	0.106	0.127		mg/Kg	☼	120	80 - 120

Lab Sample ID: 680-119130-A-2-C MSD
Matrix: Solid
Analysis Batch: 411216

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 411027

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Mercury	0.0089	U	0.115	0.137		mg/Kg	☼	119	80 - 120	8	20

Internal Standards Summary

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method: 8290A - Dioxins/Furans, HRGC/HRMS (8290A)

Matrix: Solid

Prep Type: Total

Lab Sample ID	Client Sample ID	Percent Internal Standard Recovery (Acceptance Limits)							
		TCDD (40-135)	,2,3,7,8-P (40-135)	2,3,4,7,8-F (40-135)	2,3,6,7,8-F (40-135)	,3,4,6,7,8- (40-135)	13C-OCDF (40-135)	TCDF (40-135)	,2,3,7,8-P (40-135)
660-70475-1	LB11 (0-2)	67	66	67	72	72	67	59	53
660-70475-2	LB11 (2-4)	66	74	76	74	77	75	59	61
660-70475-3	CS1 (0-4)	69	72	78	77	81	77	60	62
660-70475-4	LB12 (0-2)	64	65	67	68	69	64	55	57
660-70475-4	LB12 (0-2)							67	
660-70475-5	LB12 (2-4)	65	67	73	72	74	73	56	57
660-70475-6	LB10 (0-2)	68	68	76	81	71	62	60	58
660-70475-7	LB10 (2-4)	73	73	77	81	76	69	62	62
H5K200000011B	Method Blank	72	68	70	76	72	65	61	62
H5K200000011C	Lab Control Sample	63	70	70	76	80	76	57	59

Lab Sample ID	Client Sample ID	Percent Internal Standard Recovery (Acceptance Limits)							
		PeCDF2 (40-135)	2,3,4,7,8-F (40-135)	HxCDF2 (40-135)	HxCDF3 (40-135)	HxCDF4 (40-135)	,3,4,6,7,8- (40-135)	,3,4,7,8,9- (40-135)	13C-OCDF (40-135)
660-70475-1	LB11 (0-2)	56	58	64	65	60	66	61	60
660-70475-2	LB11 (2-4)	64	64	65	67	64	68	68	70
660-70475-3	CS1 (0-4)	64	65	66	71	64	69	69	67
660-70475-4	LB12 (0-2)	59	57	58	58	58	55	58	58
660-70475-4	LB12 (0-2)								
660-70475-5	LB12 (2-4)	59	62	62	64	59	64	60	66
660-70475-6	LB10 (0-2)	60	64	69	68	63	66	59	58
660-70475-7	LB10 (2-4)	64	64	70	69	64	64	63	61
H5K200000011B	Method Blank	61	62	65	67	62	62	60	62
H5K200000011C	Lab Control Sample	62	61	64	65	61	65	65	70

Internal Standard Legend

- TCDD = 13C-2,3,7,8-TCDD
- 13C-1,2,3,7,8-PeCDD = 13C-1,2,3,7,8-PeCDD
- 13C-1,2,3,4,7,8-HxCDD = 13C-1,2,3,4,7,8-HxCDD
- 13C-1,2,3,6,7,8-HxCDD = 13C-1,2,3,6,7,8-HxCDD
- 13C-1,2,3,4,6,7,8-HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
- 13C-OCDD = 13C-OCDD
- TCDF = 13C-2,3,7,8-TCDF
- 13C-1,2,3,7,8-PeCDF = 13C-1,2,3,7,8-PeCDF
- PeCDF2 = 13C-2,3,4,7,8-PeCDF
- 13C-1,2,3,4,7,8-HxCDF = 13C-1,2,3,4,7,8-HxCDF
- HxCDF2 = 13C-1,2,3,6,7,8-HxCDF
- HxCDF3 = 13C-2,3,4,6,7,8-HxCDF
- HxCDF4 = 13C-1,2,3,7,8,9-HxCDF
- 13C-1,2,3,4,6,7,8-HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
- 13C-1,2,3,4,7,8,9-HpCDF = 13C-1,2,3,4,7,8,9-HpCDF
- 13C-OCDF = 13C-OCDF

QC Association Summary

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

GC/MS VOA

Prep Batch: 163456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	5035	
660-70475-1 DU	LB11 (0-2)	Total/NA	Solid	5035	
660-70475-2	LB11 (2-4)	Total/NA	Solid	5035	
660-70475-2 MS	LB11 (2-4)	Total/NA	Solid	5035	
660-70475-5	LB12 (2-4)	Total/NA	Solid	5035	
660-70475-6	LB10 (0-2)	Total/NA	Solid	5035	

Analysis Batch: 163525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	8260B	163456
660-70475-1 DU	LB11 (0-2)	Total/NA	Solid	8260B	163456
660-70475-2	LB11 (2-4)	Total/NA	Solid	8260B	163456
660-70475-2 MS	LB11 (2-4)	Total/NA	Solid	8260B	163456
660-70475-5	LB12 (2-4)	Total/NA	Solid	8260B	163456
660-70475-6	LB10 (0-2)	Total/NA	Solid	8260B	163456
LCS 660-163525/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 660-163525/7	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 163716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-3	CS1 (0-4)	Total/NA	Solid	8260B	163767
660-70475-4	LB12 (0-2)	Total/NA	Solid	8260B	163767
660-70475-7	LB10 (2-4)	Total/NA	Solid	8260B	163767
660-70536-D-7-B DU	Duplicate	Total/NA	Solid	8260B	163740
660-70536-D-7-C MS	Matrix Spike	Total/NA	Solid	8260B	163740
LCS 660-163716/4	Lab Control Sample	Total/NA	Solid	8260B	
MB 660-163716/6	Method Blank	Total/NA	Solid	8260B	

Prep Batch: 163740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70536-D-7-B DU	Duplicate	Total/NA	Solid	5030A	
660-70536-D-7-C MS	Matrix Spike	Total/NA	Solid	5030A	

Prep Batch: 163767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-3	CS1 (0-4)	Total/NA	Solid	5030A	
660-70475-4	LB12 (0-2)	Total/NA	Solid	5030A	
660-70475-7	LB10 (2-4)	Total/NA	Solid	5030A	

GC/MS Semi VOA

Prep Batch: 284126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	3546	
660-70475-2	LB11 (2-4)	Total/NA	Solid	3546	
660-70475-3	CS1 (0-4)	Total/NA	Solid	3546	
660-70475-4	LB12 (0-2)	Total/NA	Solid	3546	
660-70475-5	LB12 (2-4)	Total/NA	Solid	3546	
660-70475-6	LB10 (0-2)	Total/NA	Solid	3546	
660-70475-7	LB10 (2-4)	Total/NA	Solid	3546	

TestAmerica Tampa

QC Association Summary

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

GC/MS Semi VOA (Continued)

Prep Batch: 284126 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-284126/12-A	Lab Control Sample	Total/NA	Solid	3546	
MB 400-284126/13-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 284241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-284126/12-A	Lab Control Sample	Total/NA	Solid	8270D LL	284126
MB 400-284126/13-A	Method Blank	Total/NA	Solid	8270D LL	284126

Analysis Batch: 284515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	8270D LL	284126
660-70475-2	LB11 (2-4)	Total/NA	Solid	8270D LL	284126
660-70475-3	CS1 (0-4)	Total/NA	Solid	8270D LL	284126
660-70475-4	LB12 (0-2)	Total/NA	Solid	8270D LL	284126
660-70475-5	LB12 (2-4)	Total/NA	Solid	8270D LL	284126
660-70475-6	LB10 (0-2)	Total/NA	Solid	8270D LL	284126
660-70475-7	LB10 (2-4)	Total/NA	Solid	8270D LL	284126

GC Semi VOA

Prep Batch: 284107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	3550B	
660-70475-2	LB11 (2-4)	Total/NA	Solid	3550B	
660-70475-3	CS1 (0-4)	Total/NA	Solid	3550B	
660-70475-4	LB12 (0-2)	Total/NA	Solid	3550B	
660-70475-5	LB12 (2-4)	Total/NA	Solid	3550B	
660-70475-6	LB10 (0-2)	Total/NA	Solid	3550B	
660-70475-7	LB10 (2-4)	Total/NA	Solid	3550B	
660-70476-B-1-B MS	Matrix Spike	Total/NA	Solid	3550B	
660-70476-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	3550B	
LCS 400-284107/2-A	Lab Control Sample	Total/NA	Solid	3550B	
MB 400-284107/1-A	Method Blank	Total/NA	Solid	3550B	

Analysis Batch: 284332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	FL-PRO	284107
660-70475-2	LB11 (2-4)	Total/NA	Solid	FL-PRO	284107
660-70475-3	CS1 (0-4)	Total/NA	Solid	FL-PRO	284107
660-70475-4	LB12 (0-2)	Total/NA	Solid	FL-PRO	284107
660-70475-5	LB12 (2-4)	Total/NA	Solid	FL-PRO	284107
660-70475-6	LB10 (0-2)	Total/NA	Solid	FL-PRO	284107
660-70475-7	LB10 (2-4)	Total/NA	Solid	FL-PRO	284107
660-70476-B-1-B MS	Matrix Spike	Total/NA	Solid	FL-PRO	284107
660-70476-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	FL-PRO	284107
LCS 400-284107/2-A	Lab Control Sample	Total/NA	Solid	FL-PRO	284107
MB 400-284107/1-A	Method Blank	Total/NA	Solid	FL-PRO	284107

TestAmerica Tampa

QC Association Summary

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

GC Semi VOA (Continued)

Prep Batch: 304923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	3540C	
660-70475-2	LB11 (2-4)	Total/NA	Solid	3540C	
660-70475-3	CS1 (0-4)	Total/NA	Solid	3540C	
660-70475-3 MS	CS1 (0-4)	Total/NA	Solid	3540C	
660-70475-3 MSD	CS1 (0-4)	Total/NA	Solid	3540C	
660-70475-4	LB12 (0-2)	Total/NA	Solid	3540C	
660-70475-5	LB12 (2-4)	Total/NA	Solid	3540C	
660-70475-6	LB10 (0-2)	Total/NA	Solid	3540C	
660-70475-7	LB10 (2-4)	Total/NA	Solid	3540C	
LCS 280-304923/2-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 280-304923/1-A	Method Blank	Total/NA	Solid	3540C	

Analysis Batch: 305431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	8141B	304923
660-70475-2	LB11 (2-4)	Total/NA	Solid	8141B	304923
660-70475-3	CS1 (0-4)	Total/NA	Solid	8141B	304923
660-70475-3 MS	CS1 (0-4)	Total/NA	Solid	8141B	304923
660-70475-3 MSD	CS1 (0-4)	Total/NA	Solid	8141B	304923
660-70475-4	LB12 (0-2)	Total/NA	Solid	8141B	304923
660-70475-5	LB12 (2-4)	Total/NA	Solid	8141B	304923
660-70475-6	LB10 (0-2)	Total/NA	Solid	8141B	304923
660-70475-7	LB10 (2-4)	Total/NA	Solid	8141B	304923
LCS 280-304923/2-A	Lab Control Sample	Total/NA	Solid	8141B	304923
MB 280-304923/1-A	Method Blank	Total/NA	Solid	8141B	304923

Prep Batch: 410930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	3546	
660-70475-2	LB11 (2-4)	Total/NA	Solid	3546	
660-70475-3	CS1 (0-4)	Total/NA	Solid	3546	
660-70475-4	LB12 (0-2)	Total/NA	Solid	3546	
660-70475-5	LB12 (2-4)	Total/NA	Solid	3546	
660-70475-5 MS	LB12 (2-4)	Total/NA	Solid	3546	
660-70475-5 MSD	LB12 (2-4)	Total/NA	Solid	3546	
660-70475-6	LB10 (0-2)	Total/NA	Solid	3546	
660-70475-7	LB10 (2-4)	Total/NA	Solid	3546	
LCS 680-410930/12-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 680-410930/9-A	Lab Control Sample	Total/NA	Solid	3546	
MB 680-410930/8-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 410951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	8081B/8082A	410930
660-70475-2	LB11 (2-4)	Total/NA	Solid	8081B/8082A	410930
660-70475-3	CS1 (0-4)	Total/NA	Solid	8081B/8082A	410930
660-70475-4	LB12 (0-2)	Total/NA	Solid	8081B/8082A	410930
660-70475-5	LB12 (2-4)	Total/NA	Solid	8081B/8082A	410930
660-70475-5 MS	LB12 (2-4)	Total/NA	Solid	8081B/8082A	410930
660-70475-5 MSD	LB12 (2-4)	Total/NA	Solid	8081B/8082A	410930
660-70475-6	LB10 (0-2)	Total/NA	Solid	8081B/8082A	410930

TestAmerica Tampa

QC Association Summary

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

GC Semi VOA (Continued)

Analysis Batch: 410951 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-7	LB10 (2-4)	Total/NA	Solid	8081B/8082A	410930
LCS 680-410930/12-A	Lab Control Sample	Total/NA	Solid	8081B/8082A	410930
LCS 680-410930/9-A	Lab Control Sample	Total/NA	Solid	8081B/8082A	410930
MB 680-410930/8-A	Method Blank	Total/NA	Solid	8081B/8082A	410930

Analysis Batch: 411063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-3	CS1 (0-4)	Total/NA	Solid	8081B/8082A	410930
660-70475-4	LB12 (0-2)	Total/NA	Solid	8081B/8082A	410930

Specialty Organics

Analysis Batch: 5324011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total	Solid	8290A	
660-70475-2	LB11 (2-4)	Total	Solid	8290A	
660-70475-3	CS1 (0-4)	Total	Solid	8290A	
660-70475-4	LB12 (0-2)	Total	Solid	8290A	
660-70475-5	LB12 (2-4)	Total	Solid	8290A	
660-70475-6	LB10 (0-2)	Total	Solid	8290A	
660-70475-7	LB10 (2-4)	Total	Solid	8290A	
H5K200000011B	Method Blank	Total	Solid	8290A	
H5K200000011C	Lab Control Sample	Total	Solid	8290A	

Prep Batch: 5324011_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total	Solid	Microwave Extraction	
660-70475-2	LB11 (2-4)	Total	Solid	Microwave Extraction	
660-70475-3	CS1 (0-4)	Total	Solid	Microwave Extraction	
660-70475-4	LB12 (0-2)	Total	Solid	Microwave Extraction	
660-70475-5	LB12 (2-4)	Total	Solid	Microwave Extraction	
660-70475-6	LB10 (0-2)	Total	Solid	Microwave Extraction	
660-70475-7	LB10 (2-4)	Total	Solid	Microwave Extraction	
H5K200000011B	Method Blank	Total	Solid	Microwave Extraction	
H5K200000011C	Lab Control Sample	Total	Solid	Microwave Extraction	

Metals

Prep Batch: 410896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	3050B	
660-70475-1 MS	LB11 (0-2)	Total/NA	Solid	3050B	
660-70475-1 MSD	LB11 (0-2)	Total/NA	Solid	3050B	

TestAmerica Tampa

QC Association Summary

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Metals (Continued)

Prep Batch: 410896 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-2	LB11 (2-4)	Total/NA	Solid	3050B	
660-70475-3	CS1 (0-4)	Total/NA	Solid	3050B	
660-70475-4	LB12 (0-2)	Total/NA	Solid	3050B	
660-70475-5	LB12 (2-4)	Total/NA	Solid	3050B	
660-70475-6	LB10 (0-2)	Total/NA	Solid	3050B	
660-70475-7	LB10 (2-4)	Total/NA	Solid	3050B	
LCS 680-410896/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 680-410896/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 411027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	7471B	
660-70475-2	LB11 (2-4)	Total/NA	Solid	7471B	
660-70475-3	CS1 (0-4)	Total/NA	Solid	7471B	
660-70475-4	LB12 (0-2)	Total/NA	Solid	7471B	
660-70475-5	LB12 (2-4)	Total/NA	Solid	7471B	
660-70475-6	LB10 (0-2)	Total/NA	Solid	7471B	
660-70475-7	LB10 (2-4)	Total/NA	Solid	7471B	
680-119130-A-2-B MS	Matrix Spike	Total/NA	Solid	7471B	
680-119130-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	
LCS 680-411027/14-A	Lab Control Sample	Total/NA	Solid	7471B	
MB 680-411027/13-A	Method Blank	Total/NA	Solid	7471B	

Analysis Batch: 411130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	6020A	410896
660-70475-1 MS	LB11 (0-2)	Total/NA	Solid	6020A	410896
660-70475-1 MSD	LB11 (0-2)	Total/NA	Solid	6020A	410896
660-70475-2	LB11 (2-4)	Total/NA	Solid	6020A	410896
660-70475-3	CS1 (0-4)	Total/NA	Solid	6020A	410896
660-70475-4	LB12 (0-2)	Total/NA	Solid	6020A	410896
660-70475-5	LB12 (2-4)	Total/NA	Solid	6020A	410896
660-70475-6	LB10 (0-2)	Total/NA	Solid	6020A	410896
660-70475-7	LB10 (2-4)	Total/NA	Solid	6020A	410896
LCS 680-410896/2-A	Lab Control Sample	Total/NA	Solid	6020A	410896
MB 680-410896/1-A	Method Blank	Total/NA	Solid	6020A	410896

Analysis Batch: 411216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	7471B	411027
660-70475-2	LB11 (2-4)	Total/NA	Solid	7471B	411027
660-70475-3	CS1 (0-4)	Total/NA	Solid	7471B	411027
660-70475-4	LB12 (0-2)	Total/NA	Solid	7471B	411027
660-70475-5	LB12 (2-4)	Total/NA	Solid	7471B	411027
660-70475-6	LB10 (0-2)	Total/NA	Solid	7471B	411027
660-70475-7	LB10 (2-4)	Total/NA	Solid	7471B	411027
680-119130-A-2-B MS	Matrix Spike	Total/NA	Solid	7471B	411027
680-119130-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	411027
LCS 680-411027/14-A	Lab Control Sample	Total/NA	Solid	7471B	411027
MB 680-411027/13-A	Method Blank	Total/NA	Solid	7471B	411027

TestAmerica Tampa

QC Association Summary

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

General Chemistry

Analysis Batch: 163442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total/NA	Solid	Moisture	
660-70475-1 DU	LB11 (0-2)	Total/NA	Solid	Moisture	
660-70475-2	LB11 (2-4)	Total/NA	Solid	Moisture	
660-70475-3	CS1 (0-4)	Total/NA	Solid	Moisture	
660-70475-4	LB12 (0-2)	Total/NA	Solid	Moisture	
660-70475-5	LB12 (2-4)	Total/NA	Solid	Moisture	
660-70475-6	LB10 (0-2)	Total/NA	Solid	Moisture	
660-70475-7	LB10 (2-4)	Total/NA	Solid	Moisture	

Analysis Batch: 5323017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-1	LB11 (0-2)	Total	Solid	160.3 MOD	
660-70475-2	LB11 (2-4)	Total	Solid	160.3 MOD	
660-70475-3	CS1 (0-4)	Total	Solid	160.3 MOD	
660-70475-4	LB12 (0-2)	Total	Solid	160.3 MOD	

Analysis Batch: 5323018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-70475-5	LB12 (2-4)	Total	Solid	160.3 MOD	
660-70475-6	LB10 (0-2)	Total	Solid	160.3 MOD	
660-70475-7	LB10 (2-4)	Total	Solid	160.3 MOD	

Lab Chronicle

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (0-2)

Date Collected: 11/16/15 11:40

Date Received: 11/17/15 08:50

Lab Sample ID: 660-70475-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	163442	11/18/15 04:52	AJG	TAL TAM

Client Sample ID: LB11 (0-2)

Date Collected: 11/16/15 11:40

Date Received: 11/17/15 08:50

Lab Sample ID: 660-70475-1

Matrix: Solid

Percent Solids: 95.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Microwave Extraction			5324011_P	11/19/15 12:32		TAL KNX
Total	Analysis	8290A		1	5324011	11/30/15 04:48	LKM	TAL KNX

Client Sample ID: LB11 (0-2)

Date Collected: 11/16/15 11:40

Date Received: 11/17/15 08:50

Lab Sample ID: 660-70475-1

Matrix: Solid

Percent Solids: 99.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			163456	11/18/15 10:27	ECC	TAL TAM
Total/NA	Analysis	8260B		1	163525	11/20/15 10:17	ECC	TAL TAM
Total/NA	Prep	3546			284126	11/19/15 11:17	RDT	TAL PEN
Total/NA	Analysis	8270D LL		1	284515	11/23/15 15:21	CEP	TAL PEN
Total/NA	Prep	3546			410930	11/18/15 11:47	ZDW	TAL SAV
Total/NA	Analysis	8081B/8082A		1	410951	11/18/15 16:19	JCK	TAL SAV
Total/NA	Prep	3540C			304923	11/19/15 17:45	EJP	TAL DEN
Total/NA	Analysis	8141B		1	305431	11/24/15 18:34	AMP	TAL DEN
Total/NA	Prep	3550B			284107	11/19/15 10:17	RDT	TAL PEN
Total/NA	Analysis	FL-PRO		1	284332	11/20/15 18:13	C1M	TAL PEN
Total/NA	Prep	3050B			410896	11/18/15 09:00	CDD	TAL SAV
Total/NA	Analysis	6020A		1	411130	11/18/15 18:34	BWR	TAL SAV
Total/NA	Prep	7471B			411027	11/18/15 14:56	JKL	TAL SAV
Total/NA	Analysis	7471B		1	411216	11/19/15 10:30	JKL	TAL SAV

Client Sample ID: LB11 (2-4)

Date Collected: 11/16/15 12:00

Date Received: 11/17/15 08:50

Lab Sample ID: 660-70475-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	163442	11/18/15 05:04	AJG	TAL TAM

Lab Chronicle

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB11 (2-4)

Lab Sample ID: 660-70475-2

Date Collected: 11/16/15 12:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 88

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Microwave			5324011_P	11/19/15 12:32		TAL KNX
Total	Analysis	Extraction 8290A		1	5324011	11/30/15 05:48	LKM	TAL KNX

Client Sample ID: LB11 (2-4)

Lab Sample ID: 660-70475-2

Date Collected: 11/16/15 12:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			163456	11/18/15 10:28	ECC	TAL TAM
Total/NA	Analysis	8260B		1	163525	11/20/15 10:35	ECC	TAL TAM
Total/NA	Prep	3546			284126	11/19/15 11:17	RDT	TAL PEN
Total/NA	Analysis	8270D LL		1	284515	11/23/15 15:56	CEP	TAL PEN
Total/NA	Prep	3546			410930	11/18/15 11:47	ZDW	TAL SAV
Total/NA	Analysis	8081B/8082A		1	410951	11/18/15 16:34	JCK	TAL SAV
Total/NA	Prep	3540C			304923	11/19/15 17:45	EJP	TAL DEN
Total/NA	Analysis	8141B		1	305431	11/24/15 19:03	AMP	TAL DEN
Total/NA	Prep	3550B			284107	11/19/15 10:17	RDT	TAL PEN
Total/NA	Analysis	FL-PRO		1	284332	11/20/15 18:24	C1M	TAL PEN
Total/NA	Prep	3050B			410896	11/18/15 09:00	CDD	TAL SAV
Total/NA	Analysis	6020A		1	411130	11/18/15 19:34	BWR	TAL SAV
Total/NA	Prep	7471B			411027	11/18/15 14:56	JKL	TAL SAV
Total/NA	Analysis	7471B		1	411216	11/19/15 10:40	JKL	TAL SAV

Client Sample ID: CS1 (0-4)

Lab Sample ID: 660-70475-3

Date Collected: 11/16/15 12:15

Matrix: Solid

Date Received: 11/17/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	163442	11/18/15 05:22	AJG	TAL TAM

Client Sample ID: CS1 (0-4)

Lab Sample ID: 660-70475-3

Date Collected: 11/16/15 12:15

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 77

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Microwave			5324011_P	11/19/15 12:32		TAL KNX
Total	Analysis	Extraction 8290A		1	5324011	11/30/15 06:49	LKM	TAL KNX
Total	Analysis	160.3 MOD		1	5323017	11/19/15 11:11		TAL KNX

Lab Chronicle

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: CS1 (0-4)

Lab Sample ID: 660-70475-3

Date Collected: 11/16/15 12:15

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 85.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			163767	11/27/15 14:27	ECC	TAL TAM
Total/NA	Analysis	8260B		1	163716	11/27/15 15:04	ECC	TAL TAM
Total/NA	Prep	3546			284126	11/19/15 11:17	RDT	TAL PEN
Total/NA	Analysis	8270D LL		1	284515	11/23/15 16:31	CEP	TAL PEN
Total/NA	Prep	3546			410930	11/18/15 11:47	ZDW	TAL SAV
Total/NA	Analysis	8081B/8082A		1	410951	11/18/15 16:48	JCK	TAL SAV
Total/NA	Prep	3546			410930	11/18/15 11:47	ZDW	TAL SAV
Total/NA	Analysis	8081B/8082A		4	411063	11/18/15 18:05	JCK	TAL SAV
Total/NA	Prep	3540C			304923	11/19/15 17:45	EJP	TAL DEN
Total/NA	Analysis	8141B		1	305431	11/24/15 19:33	AMP	TAL DEN
Total/NA	Prep	3550B			284107	11/19/15 10:17	RDT	TAL PEN
Total/NA	Analysis	FL-PRO		1	284332	11/20/15 18:34	C1M	TAL PEN
Total/NA	Prep	3050B			410896	11/18/15 09:00	CDD	TAL SAV
Total/NA	Analysis	6020A		1	411130	11/18/15 19:09	BWR	TAL SAV
Total/NA	Prep	7471B			411027	11/18/15 14:56	JKL	TAL SAV
Total/NA	Analysis	7471B		1	411216	11/19/15 10:43	JKL	TAL SAV

Client Sample ID: LB12 (0-2)

Lab Sample ID: 660-70475-4

Date Collected: 11/16/15 10:00

Matrix: Solid

Date Received: 11/17/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	163442	11/18/15 05:16	AJG	TAL TAM

Client Sample ID: LB12 (0-2)

Lab Sample ID: 660-70475-4

Date Collected: 11/16/15 10:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 93.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Microwave Extraction			5324011_P	11/19/15 12:32		TAL KNX
Total	Analysis	8290A		1	5324011	12/02/15 14:56	KLR	TAL KNX
Total	Prep	Microwave Extraction			5324011_P	11/19/15 12:32		TAL KNX
Total	Analysis	8290A		1	5324011	11/30/15 07:48	LKM	TAL KNX
Total	Analysis	160.3 MOD		1	5323017	11/19/15 11:12		TAL KNX

Client Sample ID: LB12 (0-2)

Lab Sample ID: 660-70475-4

Date Collected: 11/16/15 10:00

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			163767	11/27/15 14:28	ECC	TAL TAM
Total/NA	Analysis	8260B		1	163716	11/27/15 15:23	ECC	TAL TAM

TestAmerica Tampa

Lab Chronicle

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			284126	11/19/15 11:17	RDT	TAL PEN
Total/NA	Analysis	8270D LL		1	284515	11/23/15 17:06	CEP	TAL PEN
Total/NA	Prep	3546			410930	11/18/15 11:47	ZDW	TAL SAV
Total/NA	Analysis	8081B/8082A		1	410951	11/18/15 17:02	JCK	TAL SAV
Total/NA	Prep	3546			410930	11/18/15 11:47	ZDW	TAL SAV
Total/NA	Analysis	8081B/8082A		4	411063	11/18/15 18:19	JCK	TAL SAV
Total/NA	Prep	3540C			304923	11/19/15 17:45	EJP	TAL DEN
Total/NA	Analysis	8141B		1	305431	11/24/15 21:00	AMP	TAL DEN
Total/NA	Prep	3550B			284107	11/19/15 10:17	RDT	TAL PEN
Total/NA	Analysis	FL-PRO		1	284332	11/20/15 18:44	C1M	TAL PEN
Total/NA	Prep	3050B			410896	11/18/15 09:00	CDD	TAL SAV
Total/NA	Analysis	6020A		1	411130	11/18/15 19:29	BWR	TAL SAV
Total/NA	Prep	7471B			411027	11/18/15 14:56	JKL	TAL SAV
Total/NA	Analysis	7471B		1	411216	11/19/15 10:46	JKL	TAL SAV

Client Sample ID: LB12 (2-4)
 Date Collected: 11/16/15 10:20
 Date Received: 11/17/15 08:50

Lab Sample ID: 660-70475-5
 Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	163442	11/18/15 05:31	AJG	TAL TAM

Client Sample ID: LB12 (2-4)
 Date Collected: 11/16/15 10:20
 Date Received: 11/17/15 08:50

Lab Sample ID: 660-70475-5
 Matrix: Solid
 Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Microwave Extraction			5324011_P	11/19/15 12:32		TAL KNX
Total	Analysis	8290A		1	5324011	11/30/15 08:49	LKM	TAL KNX

Client Sample ID: LB12 (2-4)
 Date Collected: 11/16/15 10:20
 Date Received: 11/17/15 08:50

Lab Sample ID: 660-70475-5
 Matrix: Solid
 Percent Solids: 98.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			163456	11/18/15 10:30	ECC	TAL TAM
Total/NA	Analysis	8260B		1	163525	11/20/15 12:53	ECC	TAL TAM
Total/NA	Prep	3546			284126	11/19/15 11:17	RDT	TAL PEN
Total/NA	Analysis	8270D LL		1	284515	11/23/15 17:41	CEP	TAL PEN
Total/NA	Prep	3546			410930	11/18/15 11:47	ZDW	TAL SAV
Total/NA	Analysis	8081B/8082A		4	410951	11/18/15 17:45	JCK	TAL SAV
Total/NA	Prep	3540C			304923	11/19/15 17:45	EJP	TAL DEN
Total/NA	Analysis	8141B		1	305431	11/24/15 21:30	AMP	TAL DEN
Total/NA	Prep	3550B			284107	11/19/15 10:17	RDT	TAL PEN
Total/NA	Analysis	FL-PRO		1	284332	11/20/15 17:21	C1M	TAL PEN
Total/NA	Prep	3050B			410896	11/18/15 09:00	CDD	TAL SAV
Total/NA	Analysis	6020A		1	411130	11/18/15 19:24	BWR	TAL SAV

TestAmerica Tampa

Lab Chronicle

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			411027	11/18/15 14:56	JKL	TAL SAV
Total/NA	Analysis	7471B		1	411216	11/19/15 10:49	JKL	TAL SAV

Client Sample ID: LB10 (0-2)

Lab Sample ID: 660-70475-6

Date Collected: 11/16/15 14:00
 Date Received: 11/17/15 08:50

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	163442	11/18/15 05:22	AJG	TAL TAM

Client Sample ID: LB10 (0-2)

Lab Sample ID: 660-70475-6

Date Collected: 11/16/15 14:00
 Date Received: 11/17/15 08:50

Matrix: Solid

Percent Solids: 91.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Microwave Extraction			5324011_P	11/19/15 12:32		TAL KNX
Total	Analysis	8290A		1	5324011	11/30/15 14:06	KBL	TAL KNX
Total	Analysis	160.3 MOD		1	5323018	11/19/15 11:20		TAL KNX

Client Sample ID: LB10 (0-2)

Lab Sample ID: 660-70475-6

Date Collected: 11/16/15 14:00
 Date Received: 11/17/15 08:50

Matrix: Solid

Percent Solids: 92.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			163456	11/18/15 10:31	ECC	TAL TAM
Total/NA	Analysis	8260B		1	163525	11/20/15 13:12	ECC	TAL TAM
Total/NA	Prep	3546			284126	11/19/15 11:17	RDT	TAL PEN
Total/NA	Analysis	8270D LL		1	284515	11/23/15 18:16	CEP	TAL PEN
Total/NA	Prep	3546			410930	11/18/15 11:47	ZDW	TAL SAV
Total/NA	Analysis	8081B/8082A		1	410951	11/18/15 17:16	JCK	TAL SAV
Total/NA	Prep	3540C			304923	11/19/15 17:45	EJP	TAL DEN
Total/NA	Analysis	8141B		1	305431	11/24/15 21:59	AMP	TAL DEN
Total/NA	Prep	3550B			284107	11/19/15 12:03	RDT	TAL PEN
Total/NA	Analysis	FL-PRO		1	284332	11/20/15 19:05	C1M	TAL PEN
Total/NA	Prep	3050B			410896	11/18/15 09:00	CDD	TAL SAV
Total/NA	Analysis	6020A		1	411130	11/18/15 18:59	BWR	TAL SAV
Total/NA	Prep	7471B			411027	11/18/15 14:56	JKL	TAL SAV
Total/NA	Analysis	7471B		1	411216	11/19/15 10:52	JKL	TAL SAV

Client Sample ID: LB10 (2-4)

Lab Sample ID: 660-70475-7

Date Collected: 11/16/15 14:20
 Date Received: 11/17/15 08:50

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	163442	11/18/15 05:03	AJG	TAL TAM

Lab Chronicle

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Client Sample ID: LB10 (2-4)

Lab Sample ID: 660-70475-7

Date Collected: 11/16/15 14:20

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 78

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Microwave			5324011_P	11/19/15 12:32		TAL KNX
Total	Analysis	Extraction 8290A		1	5324011	11/30/15 15:05	KBL	TAL KNX

Client Sample ID: LB10 (2-4)

Lab Sample ID: 660-70475-7

Date Collected: 11/16/15 14:20

Matrix: Solid

Date Received: 11/17/15 08:50

Percent Solids: 95.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			163767	11/27/15 14:29	ECC	TAL TAM
Total/NA	Analysis	8260B		1	163716	11/27/15 15:41	ECC	TAL TAM
Total/NA	Prep	3546			284126	11/19/15 11:17	RDT	TAL PEN
Total/NA	Analysis	8270D LL		1	284515	11/23/15 18:51	CEP	TAL PEN
Total/NA	Prep	3546			410930	11/18/15 11:47	ZDW	TAL SAV
Total/NA	Analysis	8081B/8082A		1	410951	11/18/15 17:30	JCK	TAL SAV
Total/NA	Prep	3540C			304923	11/19/15 17:45	EJP	TAL DEN
Total/NA	Analysis	8141B		1	305431	11/24/15 22:28	AMP	TAL DEN
Total/NA	Prep	3550B			284107	11/19/15 10:17	RDT	TAL PEN
Total/NA	Analysis	FL-PRO		1	284332	11/20/15 17:31	C1M	TAL PEN
Total/NA	Prep	3050B			410896	11/18/15 09:00	CDD	TAL SAV
Total/NA	Analysis	6020A		1	411130	11/18/15 19:04	BWR	TAL SAV
Total/NA	Prep	7471B			411027	11/18/15 14:56	JKL	TAL SAV
Total/NA	Analysis	7471B		1	411216	11/19/15 10:55	JKL	TAL SAV

Laboratory References:

- TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
- TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000
- TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
- TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858
- TAL TAM = TestAmerica Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

Method Summary

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL TAM
8270D LL	Semivolatile Organic Compounds by GC/MS - Low Level	SW846	TAL PEN
8081B/8082A	Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography	SW846	TAL SAV
8141B	Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique	SW846	TAL DEN
FL-PRO	Florida - Petroleum Range Organics (GC)	FL-DEP	TAL PEN
8290A	Dioxins/Furans, HRGC/HRMS (8290A)	SW846	TAL KNX
6020A	Metals (ICP/MS)	SW846	TAL SAV
7471B	Mercury (CVAA)	SW846	TAL SAV
160.3 MOD	Moisture, Percent (160.3)	MCAWW	TAL KNX
Moisture	Percent Moisture	EPA	TAL TAM

Protocol References:

EPA = US Environmental Protection Agency

FL-DEP = State Of Florida Department Of Environmental Protection, Florida Administrative Code.

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAM = TestAmerica Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

Certification Summary

Client: Langan Engineering & Environmental Svcs
 Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Laboratory: TestAmerica Tampa

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E84282	06-30-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: TestAmerica Denver

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E87667	06-30-16

Laboratory: TestAmerica Knoxville

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0688	06-16-16
California	State Program	9	2423	06-30-16
Colorado	State Program	8	N/A	02-28-16
Connecticut	State Program	1	PH-0223	09-30-17
Florida	NELAP	4	E87177	06-30-16
Georgia	State Program	4	906	04-13-17
Hawaii	State Program	9	N/A	04-13-16
Kansas	NELAP	7	E-10349	01-31-16
Kentucky (DW)	State Program	4	90101	12-31-15
L-A-B	DoD ELAP		L2311	02-13-16
Louisiana	NELAP	6	83979	06-30-16
Louisiana (DW)	NELAP	6	LA110001	12-31-15
Maryland	State Program	3	277	03-31-16
Michigan	State Program	5	9933	04-13-17
Nevada	State Program	9	TN00009	07-31-16
New Jersey	NELAP	2	TN001	11-30-15
New York	NELAP	2	10781	03-31-16
North Carolina (DW)	State Program	4	21705	07-31-16
North Carolina (WW/SW)	State Program	4	64	12-31-15
Ohio VAP	State Program	5	CL0059	01-16-17
Oklahoma	State Program	6	9415	08-31-16
Pennsylvania	NELAP	3	68-00576	12-31-15
South Carolina	State Program	4	84001	06-30-16
Tennessee	State Program	4	2014	04-13-17
Texas	NELAP	6	T104704380-15-8	08-31-16
USDA	Federal		P330-13-00260	08-29-16
Utah	NELAP	8	QUAN3	07-31-16
Virginia	NELAP	3	460176	09-14-16
Washington	State Program	10	C593	01-19-16
West Virginia (DW)	State Program	3	9955C	12-31-15
West Virginia DEP	State Program	3	345	04-30-16
Wisconsin	State Program	5	998044300	08-31-16

Laboratory: TestAmerica Pensacola

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Certification Summary

Client: Langan Engineering & Environmental Svcs
Project/Site: City of Hollywood

TestAmerica Job ID: 660-70475-1

Laboratory: TestAmerica Pensacola (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E81010	06-30-16
Analysis Method	Prep Method	Matrix	Analyte	

Laboratory: TestAmerica Savannah

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E87052	06-30-16
The following analytes are included in this report, but are not certified under this certification:				
Analysis Method	Prep Method	Matrix	Analyte	
8081B/8082A	3546	Solid	Total PCBs	

Chain of Custody Record

Client Information

Client Contact: Dan Spedler
Company: Langen Engineering & Environmental Svcs

Sampler: Robert Forrester
Phone: ken.hayes@testamericainc.com

Lab P/N: Hayes, Ken
E-Mail: ken.hayes@testamericainc.com

Carrier Tracking No(s):

COC No: 680-65908-21147.1

Page: Page 1 of 1

Address: 15150 NW 79th Court, Suite 200

City: Miami Lakes

State: FL

Zip: 33016

Phone: 786-264-7218 (Tel)

Email: dspedler@langen.com

Project Name: City of Hollywood

Site: SSON#:

Due Date Requested:

TAT Requested (day):

PO #:

Purchase Order not required

Project #:

66008634

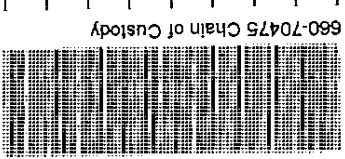
SSON#:

Analysis Requested

Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)
8260B - Standard 8260 List (QV)	N
6020A, 7471B	N
FL_PRO - C8-C40 FLPRO	N
SUBCONTRACT - 17 Isomers & Totals	N
8270D_LL - Low Level PAHs by 8270	N
8081B_8082A - Routine Pesticides and PCBs	N
8141B - Standard 8141B list	N

LOC: 660
70475

Preservation Codes:	Special Instructions/Note:
A - HCL	<p>See Project Analytical Parameters p. 14.</p>
B - NaOH	
C - Zn Acetate	
D - Nitric Acid	
E - NaHSO4	
F - MeOH	
G - Ammonia	
H - Acetic Acid	
I - Ice	
J - DI Water	
K - EDTA	
L - EDTA	
M - Hexane	
N - None	
O - As/NO2	
P - Na2CO3	
Q - Na2SO3	
R - Na2S2O3	
S - H2SO4	
T - TSP Dodecylhydrate	
U - Acetone	
V - MCAA	
W - pH 4.5	
Z - other (specify)	

Sample Identification	Sample Date	Sample Time	Sample Type (Co-comp, Gravim, etc.)	Matrix (Water, Solid, etc.)	Preservation Code:	Total Number of Containers	Special Instructions/Note:
LB11(CO-2)	11/16/15	1140	G	S			<p>660-70475 Chain of Custody</p> 
LB11(CO-4)	11/16/15	1200	G	S			
CS1(CO-4)	11/16/15	1215	C	S			
LB12(CO-2)	11/16/15	1000	G	S			
LB12(CO-4)	11/16/15	1090	G	S			
LB10(CO-2)	11/16/15	1400	G	S			
LB10(CO-4)	11/16/15	1420	G	S			

Possible Hazard Identification

Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:

Date: 11/16/15

Time:

Method of Shipment:

Relinquished by:

Date/Time:

11/16/15 1535

Company:

Received by:

Date/Time:

11/16/15 1534

Company: JN

Relinquished by:

Date/Time:

11/17/15 0850

Company:

Received by:

Date/Time:

11/17/15 0850

Company: TARA

Relinquished by:

Date/Time:

11/17/15 0850

Company:

Received by:

Date/Time:

11/17/15 0850

Company: TARA

Custody Seals Intact

Custody Seal No.:

Δ Yes Δ No

Cooler Temperature(s) / C and Other Remarks:

36/3.2, 2.8/2.4 CW-09

Login Sample Receipt Checklist

Client: Langan Engineering & Environmental Svcs

Job Number: 660-70475-1

Login Number: 70475

List Source: TestAmerica Tampa

List Number: 1

Creator: Betancourt, Jonathan

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

Login Sample Receipt Checklist

Client: Langan Engineering & Environmental Svcs

Job Number: 660-70475-1

Login Number: 70475
List Number: 4
Creator: White, Denise E

List Source: TestAmerica Denver
List Creation: 11/18/15 03:07 PM

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



Login Sample Receipt Checklist

Client: Langan Engineering & Environmental Svcs

Job Number: 660-70475-1

Login Number: 70475
List Number: 3
Creator: Perez, Trina M

List Source: TestAmerica Pensacola
List Creation: 11/18/15 03:09 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR-6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Langan Engineering & Environmental Svcs

Job Number: 660-70475-1

Login Number: 70475
List Number: 2
Creator: Kirkland, Keyon A

List Source: TestAmerica Savannah
List Creation: 11/18/15 08:37 AM

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

