



02-Mar-2016

Roger Bellas
Pennsylvania DEP Bureau of Air Quality
12th Floor RCSOB
400 Market Street
Harrisburg, PA 17105

Tel: (570) 826-2511
Fax:

Re: Keystone Landfill Site (KSL)- 2/13/2016

Work Order: **1602543**

Dear Roger,

ALS Environmental received 6 samples on 15-Feb-2016 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 12.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Rob Nieman

Electronically approved by: Rob Nieman

Rob Nieman
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, Ohio 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental 

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RIGHT SOLUTIONS RIGHT PARTNER

Client: Pennsylvania DEP Bureau of Air Quality
Project: Keystone Landfill Site (KSL)- 2/13/2016
Work Order: 1602543

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1602543-01	KSL021316-1 / Red	Air		2/13/2016	2/15/2016	<input type="checkbox"/>
1602543-02	KSL021316-2 / Blue	Air		2/13/2016	2/15/2016	<input type="checkbox"/>
1602543-03	KSL021316-3 / Green	Air		2/13/2016	2/15/2016	<input type="checkbox"/>
1602543-04	KSL021316-4 / Orange	Air		2/13/2016	2/15/2016	<input type="checkbox"/>
1602543-05	KSL021316-5 / Yellow	Air		2/13/2016	2/15/2016	<input type="checkbox"/>
1602543-06	KSL021316-Summa	Air		2/13/2016	2/15/2016	<input type="checkbox"/>

Client: Pennsylvania DEP Bureau of Air Quality
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Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Client: Pennsylvania DEP Bureau of Air Quality
Project: Keystone Landfill Site (KSL)- 2/13/2016

Work Order: 1602543

Analytical Results

Lab ID: 1602543-01A
Client Sample ID: KSL021316-1 / Red

Collection Date: 2/13/2016
Matrix: AIR

Analyses

AMMONIA BY NIOSH 6015 MOD.		Method: N6015	Air Volume (L): 95.457	Analyst: ALST
Date Analyzed: 2/22/2016		Reporting Limit		
	µg/sample	µg/sample	mg/m3	ug/m3
Ammonia	4.8	1.2	0.050	50

Lab ID: 1602543-02A
Client Sample ID: KSL021316-2 / Blue

Collection Date: 2/13/2016
Matrix: AIR

Analyses

ALDEHYDES BY HPLC		Method: ETO-11	Air Volume (L): 213.75	Analyst: JMB
Date Analyzed: 2/24/2016 21:59		Reporting Limit		
	µg/sample	µg/sample	mg/m3	ug/m3
Acetaldehyde	ND	0.20	<0.00094	<0.94
Acrolein	ND	12	<0.056	<56
Formaldehyde	ND	0.20	<0.00094	<0.94

Lab ID: 1602543-03A
Client Sample ID: KSL021316-3 / Green

Collection Date: 2/13/2016
Matrix: AIR

Analyses

METHANOL BY NIOSH 2000 MOD.		Method: N2000	Air Volume (L): 7.125	Analyst: TSA
Date Analyzed: 2/24/2016		Reporting Limit		
	µg/sample	µg/sample	mg/m3	ug/m3
Methanol	ND	10	<1.4	<1,400

Lab ID: 1602543-04A
Client Sample ID: KSL021316-4 / Orange

Collection Date: 2/13/2016
Matrix: AIR

Analyses

METHYLAMINE BY OSHA 40		Method: O40	Air Volume (L): 9.975	Analyst: JMB
Date Analyzed: 2/29/2016 17:32		Reporting Limit		
	ug/samp	ug/samp	mg/m3	ug/m3
Methylamine	ND	10	<1.0	<1,000

Note:

Client: Pennsylvania DEP Bureau of Air Quality
Project: Keystone Landfill Site (KSL)- 2/13/2016**Work Order:** 1602543**Analytical Results****Lab ID:** 1602543-05A
Client Sample ID: KSL021316-5 / Yellow**Collection Date:** 2/13/2016
Matrix: AIR**Analyses**

AMINE(S) BY OSHA PV2060 MOD.	Method: O2060		Air Volume (L): 21.375	Analyst: MHW
Date Analyzed: 2/26/2016	$\mu\text{g}/\text{sample}$	Reporting Limit $\mu\text{g}/\text{sample}$	mg/m^3	ug/m^3
Triethylamine	ND	10	<0.47	<470

Note:

ALS Environmental

Date: 02-Mar-16

Client: Pennsylvania DEP Bureau of Air Quality
Project: Keystone Landfill Site (KSL)- 2/13/2016
Work Order: 1602543

Analytical Comments

Method	Type:	SampID	SeqNo	Analysis	Comments
Batch	<u>R126208</u>				
	Analysis	1602543-01A	1227365	Ammonia by NIOSH 6015 Mod.	Higher ammonia levels in the backup portion of the tube than in the forward portion indicates that this sample was collected in reverse orientation. There was no evidence that oversampling had occurred.

ALS Environmental

Date: 02-Mar-16

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QC BATCH REPORT

Batch ID: **34069** Instrument ID: **GC10** Method: **N2000**

MBLK	Sample ID: MBLK-34069-34069			Units: µg/sample		Analysis Date: 2/24/2016				
Client ID:	Run ID: GC10_160224B			SeqNo: 1229518		Prep Date: 2/24/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Methanol ND 10

LCS	Sample ID: LCS-34069-34069			Units: µg/sample		Analysis Date: 2/24/2016				
Client ID:	Run ID: GC10_160224B			SeqNo: 1229519		Prep Date: 2/24/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Methanol 78.9 10 79.1 0 99.7 64.1-145 0

LCSD	Sample ID: LCSD-34069-34069			Units: µg/sample		Analysis Date: 2/24/2016				
Client ID:	Run ID: GC10_160224B			SeqNo: 1229534		Prep Date: 2/24/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Methanol 83.6 10 79.1 0 106 64.1-145 78.9 5.78 20

The following samples were analyzed in this batch: 1602543-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pennsylvania DEP Bureau of Air Quality
Work Order: 1602543
Project: Keystone Landfill Site (KSL)- 2/13/2016

QC BATCH REPORT

Batch ID: **34091** Instrument ID: **GC5** Method: **O2060**

MBLK		Sample ID: MBLK-34091-34091			Units: µg/sample			Analysis Date: 2/26/2016		
Client ID:		Run ID: GC5_160226A			SeqNo: 1230468			Prep Date: 2/25/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Triethylamine	ND	10								

LCS		Sample ID: LCS-34091-34091			Units: µg/sample			Analysis Date: 2/26/2016		
Client ID:		Run ID: GC5_160226A			SeqNo: 1230469			Prep Date: 2/25/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Triethylamine	103.5	10	90.75	0	114	70-130	0			

LCSD		Sample ID: LCSD-34091-34091			Units: µg/sample			Analysis Date: 2/26/2016		
Client ID:		Run ID: GC5_160226A			SeqNo: 1230484			Prep Date: 2/25/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Triethylamine	107.9	10	90.75	0	119	70-130	103.5	4.22	20	

The following samples were analyzed in this batch: 1602543-05A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pennsylvania DEP Bureau of Air Quality
Work Order: 1602543
Project: Keystone Landfill Site (KSL)- 2/13/2016

QC BATCH REPORT

Batch ID: **34152** Instrument ID: **HPLC1** Method: **ETO-11**

MBLK		Sample ID: MBLK-34152-34152			Units: µg/sample		Analysis Date: 2/24/2016 09:59 PM			
Client ID:		Run ID: HPLC1_160224A			SeqNo: 1231940		Prep Date: 2/19/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acetaldehyde	ND	0.20								
Formaldehyde	ND	0.20								

LCS		Sample ID: LCS-34152-34152			Units: µg/sample		Analysis Date: 2/24/2016 09:59 PM			
Client ID:		Run ID: HPLC1_160224A			SeqNo: 1231941		Prep Date: 2/19/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acetaldehyde	0.887	0.20	1	0	88.7	70-130	0			
Formaldehyde	1.05	0.20	1	0	105	70-130	0			

LCSD		Sample ID: LCSD-34152-34152			Units: µg/sample		Analysis Date: 2/24/2016 09:59 PM			
Client ID:		Run ID: HPLC1_160224A			SeqNo: 1231956		Prep Date: 2/19/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acetaldehyde	0.902	0.20	1	0	90.2	70-130	0.887	1.68	20	
Formaldehyde	1.087	0.20	1	0	109	70-130	1.05	3.46	20	

The following samples were analyzed in this batch:

1602543-02A

Client: Pennsylvania DEP Bureau of Air Quality
Work Order: 1602543
Project: Keystone Landfill Site (KSL)- 2/13/2016

QC BATCH REPORT

Batch ID: **R126387** Instrument ID: **HPLC2** Method: **O40**

MBLK		Sample ID: MB-R126387-R126387			Units: ug/samp			Analysis Date: 2/29/2016 05:32 PM		
Client ID:		Run ID: HPLC2_160229A			SeqNo: 1231850			Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methylamine	ND	10								

LCS		Sample ID: LCS-R126387-R126387			Units: ug/samp			Analysis Date: 2/29/2016 05:32 PM		
Client ID:		Run ID: HPLC2_160229A			SeqNo: 1231851			Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methylamine	25.04	10	22.96	0	109	70-130	0			

LCSD		Sample ID: LCSD-R126387-R126387			Units: ug/samp			Analysis Date: 2/29/2016 05:32 PM		
Client ID:		Run ID: HPLC2_160229A			SeqNo: 1231852			Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methylamine	18.9	10	22.96	0	82.3	70-130	25.04	28	20	R

The following samples were analyzed in this batch: 1602543-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Pennsylvania DEP Bureau of Air Quality
Project: Keystone Landfill Site (KSL)- 2/13/2016
WorkOrder: 1602543

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	
ppbv	
ppm	

Sample Receipt Checklist

Client Name: PADEP-HARRISBURG

Date/Time Received: 15-Feb-16 09:30

Work Order: 1602543

Received by: SNH

Checklist completed by: Jan Wilcox 15-Feb-16
eSignature Date

Reviewed by: Rob Nieman 16-Feb-16
eSignature Date

Matrices:

Carrier name: FedEx

- Shipping container/cooler in good condition? Yes [checked] No [] Not Present []
Custody seals intact on shipping container/cooler? Yes [checked] No [] Not Present []
Custody seals intact on sample bottles? Yes [] No [] Not Present [checked]
Chain of custody present? Yes [checked] No []
Chain of custody signed when relinquished and received? Yes [checked] No []
Chain of custody agrees with sample labels? Yes [checked] No []
Samples in proper container/bottle? Yes [checked] No []
Sample containers intact? Yes [checked] No []
Sufficient sample volume for indicated test? Yes [checked] No []
All samples received within holding time? Yes [checked] No []
Container/Temp Blank temperature in compliance? Yes [checked] No []

Temperature(s)/Thermometer(s): 4.1

Cooler(s)/Kit(s):

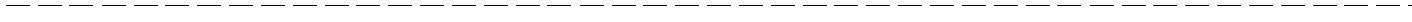
Water - VOA vials have zero headspace? Yes [] No [] No VOA vials submitted []

Water - pH acceptable upon receipt? Yes [] No [] N/A []

pH adjusted? Yes [] No [] N/A []

pH adjusted by:

Login Notes:



Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

[Empty text box for comments]

CorrectiveAction:

[Empty text box for corrective action]