



10-May-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 (KSL)- 4/16/16

Work Order: **1604619**

Dear Roger,

ALS Environmental received 6 samples on 19-Apr-2016 10:00 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 11.

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

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Environmental 

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Client: Pennsylvania DEP Bureau of Air Quality
Project: Keystone Landfill (KSL)- 4/16/16
Work Order: 1604619

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>
1604619-01	KSL041616-1 / Red	Air		4/16/2016 09:15	4/19/2016 10:00	<input type="checkbox"/>
1604619-02	KSL041616-2 / Blue	Air		4/16/2016 09:15	4/19/2016 10:00	<input type="checkbox"/>
1604619-03	KSL041616-3 / Green	Air		4/16/2016 09:15	4/19/2016 10:00	<input type="checkbox"/>
1604619-04	KSL041616-4 / Orange	Air		4/16/2016 09:15	4/19/2016 10:00	<input type="checkbox"/>
1604619-05	KSL041616-5 / Yellow	Air		4/16/2016 09:15	4/19/2016 10:00	<input type="checkbox"/>
1604619-06	KSL041616-6-Summa	Air		4/16/2016 09:15	4/19/2016 10:00	<input type="checkbox"/>

ALS Environmental

Date: 10-May-16

Client: Pennsylvania DEP Bureau of Air Quality
Project: Keystone Landfill (KSL)- 4/16/16

Work Order: 1604619**Analytical Results**

Lab ID: 1604619-01A
Client Sample ID: KSL041616-1 / Red

Collection Date: 4/16/2016 9:15:00 AM
Matrix: AIR

Analyses

AMMONIA BY NIOSH 6015 MOD.		Method: N6015	Air Volume (L): 67	Analyst: ALST
Date Analyzed: 4/23/2016		Reporting Limit		
	µg/sample	µg/sample	ug/m3	ppb
Ammonia	ND	1.2	<18	<26

Lab ID: 1604619-02A
Client Sample ID: KSL041616-2 / Blue

Collection Date: 4/16/2016 9:15:00 AM
Matrix: AIR

Analyses

ALDEHYDES BY HPLC		Method: ETO-11	Air Volume (L): 150	Analyst: JMB
Date Analyzed: 4/20/2016 11:04		Reporting Limit		
	µg/sample	µg/sample	ug/m3	ppb
Acetaldehyde	0.22	0.20	1.5	0.83
Acrolein	0.36	0.20	2.4	1.0
Formaldehyde	0.20	0.20	1.3	1.1

Lab ID: 1604619-03A
Client Sample ID: KSL041616-3 / Green

Collection Date: 4/16/2016 9:15:00 AM
Matrix: AIR

Analyses

METHANOL BY NIOSH 2000 MOD.		Method: N2000	Air Volume (L): 30	Analyst: MHW
Date Analyzed: 4/26/2016		Reporting Limit		
	µg/sample	µg/sample	ug/m3	ppb
Methanol	ND	10	<330	<250

Lab ID: 1604619-04A
Client Sample ID: KSL041616-4 / Orange

Collection Date: 4/16/2016 9:15:00 AM
Matrix: AIR

Analyses

METHYLAMINE BY OSHA 40		Method: O40	Air Volume (L): 62	Analyst: MHW
Date Analyzed: 5/4/2016 21:39		Reporting Limit		
	µg/sample	µg/sample	ug/m3	ppb
Methylamine	ND	3.0	<48	<38

Note:

Client: Pennsylvania DEP Bureau of Air Quality
Project: Keystone Landfill (KSL)- 4/16/16**Work Order:** 1604619**Analytical Results****Lab ID:** 1604619-05A
Client Sample ID: KSL041616-5 / Yellow**Collection Date:** 4/16/2016 9:15:00 AM
Matrix: AIR**Analyses**

AMINE(S) BY OSHA PV2060 MOD.	Method: O2060		Air Volume (L): 59	Analyst: MHW
Date Analyzed: 4/25/2016	$\mu\text{g}/\text{sample}$	Reporting Limit $\mu\text{g}/\text{sample}$	ug/m^3	ppb
Triethylamine	ND	10	<170	<41

Note:

ALS Environmental

Date: 10-May-16

Client: Pennsylvania DEP Bureau of Air Quality
Work Order: 1604619
Project: Keystone Landfill (KSL)- 4/16/16

QC BATCH REPORT

Batch ID: **35446** Instrument ID: **GC5** Method: **O2060**

MBLK	Sample ID: MBLK-35446-35446			Units: µg/sample		Analysis Date: 4/25/2016				
Client ID:	Run ID: GC5_160425A			SeqNo: 1267616		Prep Date: 4/25/2016		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-35446-35446			Units: µg/sample		Analysis Date: 4/25/2016				
Client ID:	Run ID: GC5_160425A			SeqNo: 1267617		Prep Date: 4/25/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Triethylamine 92.57 10 90.75 0 102 70-130 0

LCSD	Sample ID: LCSD-35446-35446			Units: µg/sample		Analysis Date: 4/25/2016				
Client ID:	Run ID: GC5_160425A			SeqNo: 1267636		Prep Date: 4/25/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Triethylamine 78.96 10 90.75 0 87 70-130 92.57 15.9 20

The following samples were analyzed in this batch: 1604619-05A

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

Client: Pennsylvania DEP Bureau of Air Quality
Work Order: 1604619
Project: Keystone Landfill (KSL)- 4/16/16

QC BATCH REPORT

Batch ID: **35466** Instrument ID: **GC1** Method: **N2000**

MBLK		Sample ID: MBLK-35466-35466			Units: µg/sample			Analysis Date: 4/26/2016		
Client ID:		Run ID: GC1_160426A			SeqNo: 1268968			Prep Date: 4/26/2016		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-35466-35466			Units: µg/sample			Analysis Date: 4/26/2016		
Client ID:		Run ID: GC1_160426A			SeqNo: 1268969			Prep Date: 4/26/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methanol	87.03	10	79.1	0	110	64.1-145	0			

LCSD		Sample ID: LCSD-35466-35466			Units: µg/sample			Analysis Date: 4/26/2016		
Client ID:		Run ID: GC1_160426A			SeqNo: 1268988			Prep Date: 4/26/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methanol	88.32	10	79.1	0	112	64.1-145	87.03	1.47	20	

The following samples were analyzed in this batch: 1604619-03A

Client: Pennsylvania DEP Bureau of Air Quality
 Work Order: 1604619
 Project: Keystone Landfill (KSL)- 4/16/16

QC BATCH REPORT

Batch ID: 35337 Instrument ID: HPLC2 Method: ETO-11

MBLK		Sample ID: MBLK-35337-35337			Units: µg/sample		Analysis Date: 4/20/2016 11:04 AM			
Client ID:		Run ID: HPLC2_160420B			SeqNo: 1265970		Prep Date: 4/20/2016		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-35337-35337			Units: µg/sample		Analysis Date: 4/20/2016 11:04 AM			
Client ID:		Run ID: HPLC2_160420B			SeqNo: 1265971		Prep Date: 4/20/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acetaldehyde	1.296	0.20	2	0	64.8	61.5-120	0			
Formaldehyde	2.106	0.20	2	0	105	70-130	0			

LCSD		Sample ID: LCSD-35337-35337			Units: µg/sample		Analysis Date: 4/20/2016 11:04 AM			
Client ID:		Run ID: HPLC2_160420B			SeqNo: 1265986		Prep Date: 4/20/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acetaldehyde	1.292	0.20	2	0	64.6	61.5-120	1.296	0.317	20	
Formaldehyde	2.067	0.20	2	0	103	70-130	2.106	1.83	20	

The following samples were analyzed in this batch:

1604619-02A

Client: Pennsylvania DEP Bureau of Air Quality
 Work Order: 1604619
 Project: Keystone Landfill (KSL)- 4/16/16

QC BATCH REPORT

Batch ID: **R128610** Instrument ID: **HPLC1** Method: **O40**

MBLK	Sample ID: MB-R128610-R128610			Units: µg/sample			Analysis Date: 5/4/2016 09:39 PM			
Client ID:	Run ID: HPLC1_160504A			SeqNo: 1275560			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Methylamine ND 3.0

LCS	Sample ID: LCS-R128610-R128610			Units: µg/sample			Analysis Date: 5/4/2016 09:39 PM			
Client ID:	Run ID: HPLC1_160504A			SeqNo: 1275561			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Methylamine 7.601 3.0 9.175 0 82.8 9.88-161 0

LCSD	Sample ID: LCSD-R128610-R128610			Units: µg/sample			Analysis Date: 5/4/2016 09:39 PM			
Client ID:	Run ID: HPLC1_160504A			SeqNo: 1275562			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Methylamine 10.22 3.0 9.175 0 111 9.88-161 7.601 29.3 20 R

The following samples were analyzed in this batch:

1604619-04A

Client: Pennsylvania DEP Bureau of Air Quality

QC BATCH REPORT

Work Order: 1604619

Project: Keystone Landfill (KSL)- 4/16/16

Batch ID: R128209

Instrument ID: SUB

Method: N6015

MBLK	Sample ID: MB-R128209-R128209			Units: µg/sample			Analysis Date: 4/23/2016			
Client ID:	Run ID: SUB_160423A			SeqNo: 1267545			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia	ND	1.2								

LCS	Sample ID: LCS-R128209-R128209			Units: µg/sample			Analysis Date: 4/23/2016			
Client ID:	Run ID: SUB_160423A			SeqNo: 1267546			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia	22.1	1.2	24.3	0	90.9	74.3-115.2	0			

LCSD	Sample ID: LCSD-R128209			Units: µg/sample			Analysis Date: 4/23/2016			
Client ID:	Run ID: SUB_160423A			SeqNo: 1267561			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia	22.6	1.2	24.3	0	93	74.3-115.2	22.1	2.24	20	

The following samples were analyzed in this batch:

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

Client: Pennsylvania DEP Bureau of Air Quality
Project: Keystone Landfill (KSL)- 4/16/16
WorkOrder: 1604619

**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: 19-Apr-16 10:00

Work Order: 1604619

Received by: SNH

Checklist completed by: Stephanie Harrington 19-Apr-16
eSignature Date

Reviewed by: Rob Nieman 21-Apr-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 [] No [] Not Present [checked]
Custody seals intact on sample bottles? Yes [checked] No [] Not Present []
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 [] No [checked]

Temperature(s)/Thermometer(s): 10.5

Cooler(s)/Kit(s):

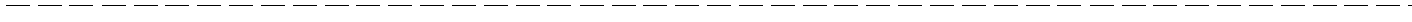
Water - VOA vials have zero headspace? Yes [] No [] No VOA vials submitted [checked]

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

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

pH adjusted by:

Login Notes:



Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: