Visible Emissions Evaluation

Tues. Early Morning, January 29th, 2013

Run Number(s) and Description: ACB1 Runs 1-8

Facility Name	ECC Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	Debris Removal
Control Equipment / Emission Source	ACB 1
Date of Observation	01/29/2013
Start Time	0034
Stop Time	0352
Distance from observer (ft)	150'
Direction from observer	E
Stack height (ft. observer's elev.) (ft)	9'
Stack Diameter (in)	27'x9'
Description of plume:	
continuous? fugitive? intermittent?	cont.
color	white
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	1-3 cubic lengths
target?	Sky
describe background to plume	sky
unique features of plume or stack	—
Weather:	@0034
ambient temperature (F)	36°
relative humidity	86%
wind direction	N
wind speed	0-4 mph
barometric pressure	30.03 in Hg
rain? fog? snow? haze?	clear
Glasses worn:	
corrective? (Y/N)	yes
sunglasses? (Y/N)	—

Observer's name	Joshua Wagner
Observer certification date	Night 12/20/2012
Certifying agency	Whitlow
Observer affiliation	Avogadro Env.

sec	0	15	30	45
Run 1 Time: 0034				
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average: 5				
Source Conditions:				
Sun Angle (degrees):				
Run 2 Time: 0100				
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average: 5				
Source Conditions:				
Sun Angle (degrees):				
Run 3 Time: 0126				
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
Run 4 Time: 0152				
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average: 5				
Source Conditions:				
Sun Angle (degrees):				

sec	0	15	30	45
Run 5 Time: 0218				
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
Run 6 Time: 0244				
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average: 5				
Source Conditions:				
Sun Angle (degrees):				
Run 7 Time: 0320				
1	10	10	10	10
2	10	10	10	10
3	10	10	10	10
4	10	10	10	10
5	10	10	10	10
6	10	10	10	10
6-minute Average: 10				
Source Conditions:				
Sun Angle (degrees):				
Run 8 Time: 0346				
1	5	5	5	5
2	10	10	10	10
3	10	10	10	10
4	5	5	5	5
5	10	10	10	10
6	5	5	5	5
6-minute Average: 7.5				
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings: low 0 high 10

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

Visible Emissions Evaluation

Tues. Early Morning, January 29th, 2013

Run Number(s) and Description: ACB 1 Runs 9-12

Facility Name	ECC Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	Debris Removal
Control Equipment / Emission Source	ACB 1
Date of Observation	01/29/2013
Start Time	0434
Stop Time	0550
Distance from observer (ft)	150'
Direction from observer	E
Stack height (fr. observer's elev.) (ft)	9'
Stack Diameter (in)	27'x9'

Description of plume:

continuous? fugitive? intermittent?	cont.
color	white
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	1-3 conex lengths
target?	sky
describe background to plume	sky
unique features of plume or stack	—

Weather: @ 434

ambient temperature (F)	35°
relative humidity	92%
wind direction	calm
wind speed	calm
barometric pressure	30.02 inHg
rain? fog? snow? haze?	clear

Glasses worn:

corrective? (Y/N)	yes
sunglasses? (Y/N)	—

Observer's name	Joshua Wagner
Observer certification date	Night 12/20/2012
Certifying agency	Whitlow
Observer affiliation	Avogadro Env.

sec	0	15	30	45
min	Run 9 Time: 0434			
1	10	10	10	10
2	10	10	10	10
3	10	10	10	10
4	10	10	10	10
5	10	10	10	10
6	5	5	5	5

6-minute Average: 9.2
Source Conditions:
Sun Angle (degrees):

	Run 10 Time: 0500			
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5

6-minute Average: 5
Source Conditions:
Sun Angle (degrees):

	Run 11 Time: 0526			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0

6-minute Average: 0
Source Conditions:
Sun Angle (degrees):

	Run 12 Time: 0544			
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5

6-minute Average: 5
Source Conditions:
Sun Angle (degrees):

sec	0	15	30	45
min	Run Time:			
1				
2				
3				
4				
5				
6				

6-minute Average:
Source Conditions:
Sun Angle (degrees):

	Run Time:			
1				
2				
3				
4				
5				
6				

6-minute Average:
Source Conditions:
Sun Angle (degrees):

	Run Time:			
1				
2				
3				
4				
5				
6				

6-minute Average:
Source Conditions:
Sun Angle (degrees):

	Run Time:			
1				
2				
3				
4				
5				
6				

6-minute Average:
Source Conditions:
Sun Angle (degrees):

Range of opacity readings: low 0 high 10

Number of readings above 10 % were 0

note: @ ~410am, wet brush added, causing a spike in visible emissions lasting ~25min

Observer's Signature

Visible Emissions Evaluation

Facility Name	ECC/Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	national park
Control Equipment / Emission Source	Air Curtain Burner #1
Date of Observation	11/29/13
Start Time	0720
Stop Time	0946
Distance from observer (ft)	100'
Direction from observer	NW
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	no stack
Description of plume:	
continuous? fugitive? intermittent?	interm.
color	gray
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	above barrier
target?	
describe background to plume	gray sky
unique features of plume or stack	no stack
Weather:	
ambient temperature (F)	40°
relative humidity	
wind direction	SW
wind speed	5-10
barometric pressure	
rain? fog? snow? haze?	no
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	N

Observer's name	William Reamy
Observer certification date	10-10-12
Certifying agency	Whitlow Envtr.
Observer affiliation	Stack Hawk Envir.

Run Number(s) and Description: 13

sec	0	15	30	45
min	Run	Time: 0720		
1	5	5	5	5
2	5	5	10	5
3	5	5	5	5
4	5	0	5	0
5	10	5	5	5
6	5	5	0	5
6-minute Average:			4.8	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time: 0740		
1	0	0	5	0
2	0	5	0	5
3	5	5	5	0
4	5	5	0	5
5	5	0	5	0
6	0	0	0	0
6-minute Average:			4.8	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time: 0800		
1	0	5	0	0
2	0	5	0	0
3	0	0	5	0
4	5	5	10	10
5	5	5	0	5
6	5	5	10	5
6-minute Average:			3.5	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time: 0820		
1	5	5	5	0
2	0	5	0	0
3	0	0	0	5
4	0	0	0	0
5	0	0	0	0
6	5	0	10	0
6-minute Average:			1.3	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

sec	0	15	30	45
min	Run	Time: 0840		
1	5	5	5	0
2	0	0	0	0
3	0	0	0	5
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.6	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time: 9:00		
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	5
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.2	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time: 9:20		
1	5	5	0	0
2	0	5	0	0
3	0	0	0	0
4	5	0	5	5
5	5	0	0	0
6	0	0	0	0
6-minute Average:			1.5	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time: 9:40		
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			-15	

Range of opacity readings: low 0 high 10

Number of readings above 10 % were 0

W M Reamy
Observer's Signature

Visible Emissions Evaluation

Facility Name	Ecc/Floyd Bennett Fld
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	nat'l park
Control Equipment / Emission Source	ACB #1
Date of Observation	1/29/13
Start Time	1000
Stop Time	1226
Distance from observer (ft)	100'
Direction from observer	NW
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	no stack
Description of plume:	
continuous? fugitive? intermittent?	interm.
color	gray
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	above barrier
target?	
describe background to plume	gray sky *
unique features of plume or stack	no stalk
Weather:	
ambient temperature (F)	40°
relative humidity	
wind direction *	SW/W
wind speed	5-10
barometric pressure	
rain? fog? snow? haze?	no
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	N

Observer's name	William Reamy
Observer certification date	10-10-12
Certifying agency	Whitlow Enterp.
Observer affiliation	Stack Hawk Envir.

Run Number(s) and Description: 14

sec	0	15	30	45
min	Run	Time:	1000	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			-15	
	Run	Time:	1020	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			-10	
	Run	Time:	1040	
1	0	5	0	5
2	0	5	5	5
3	0	0	0	0
4	0	0	5	0
5	5	5	10	5
6	0	5	0	0
6-minute Average:			2.5	
Source Conditions:				
Sun Angle (degrees):			-10	
	Run	Time:	1100	
1	0	5	5	0
2	0	0	0	5
3	0	0	0	0
4	5	5	0	0
5	0	0	5	0
6	0	0	0	5
6-minute Average:			1.5	
Source Conditions:				
Sun Angle (degrees):			0	

sec	0	15	30	45
min	Run	Time:	1120	
1	0	0	5	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	5	0
6	0	0	0	0
6-minute Average:			0.4	
Source Conditions:				
Sun Angle (degrees):			+10	
	Run	Time:	1140	
1	10	10	5	10
2	5	5	0	5
3	5	5	5	0
4	5	0	0	0
5	0	0	0	0
6	0	5	0	0
6-minute Average:			3.1	
Source Conditions:				
Sun Angle (degrees):			-30	
	Run	Time:	1200	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			-20	
	Run	Time:	1220	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			-10	

Range of opacity readings: low 0 high 10

Number of readings above 10 % were 0

W H Reamy
Observer's Signature

* sky clear @ 1040, cloudy again @ 1120; wind shift to NE

Visible Emissions Evaluation

Run Number(s) and Description: 15

Facility Name	FCC/Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	nat'l park
Control Equipment / Emission Source	ACB #1
Date of Observation	1/29/13
Start Time	1260
Stop Time	1506
Distance from observer (ft)	130'
Direction from observer	N
Stack height (ft, observer's elev.) (ft)	10'
Stack Diameter (in)	no stack
Description of plume:	
continuous? fugitive? intermittent?	intermit.
color	gray
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	above barrier
target?	
describe background to plume	gray sky
unique features of plume or stack	no stack
Weather:	
ambient temperature (F)	45°
relative humidity	
wind direction	NE
wind speed	5-10
barometric pressure	
rain? fog? snow? haze?	no
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	N

Observer's name	William Reamy
Observer certification date	10-10-12
Certifying agency	Whitlow Enterp.
Observer affiliation	Stack Hawk Envir.

sec	0	15	30	45
min	Run	Time:	1240	
1	0	0	0	0
2	0	0	5	0
3	0	0	0	0
4	0	0	0	0
5	5	0	0	0
6	0	0	0	0
6-minute Average:			0.4	
Source Conditions:				
Sun Angle (degrees):			+5	
	Run	Time:	1300	
1	0	0	0	0
2	0	0	5	5
3	0	5	5	5
4	5	10	5	5
5	5	5	5	5
6	5	5	10	5
6-minute Average:			4.0	
Source Conditions:				
Sun Angle (degrees):			0	
	Run	Time:	1320	
1	0	0	0	0
2	0	0	0	0
3	0	5	0	0
4	5	0	0	5
5	0	5	0	0
6	5	0	5	0
6-minute Average:			1.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1340	
1	0	0	0	0
2	0	5	5	0
3	0	5	0	0
4	0	0	5	5
5	5	0	0	0
6	5	0	0	5
6-minute Average:			1.7	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

sec	0	15	30	45
min	Run	Time:	1400	
1	10	5	0	5
2	5	0	0	5
3	0	5	0	5
4	0	0	0	5
5	5	5	5	0
6	0	0	5	0
6-minute Average:			2.7	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1420	
1	5	5	0	5
2	0	5	0	0
3	0	5	0	5
4	5	5	5	5
5	5	5	5	10
6	5	5	0	5
6-minute Average:			3.8	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1440	
1	0	0	5	0
2	0	5	0	5
3	0	0	0	0
4	0	5	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.8	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1500	
1	0	5	0	0
2	0	0	5	0
3	0	0	5	0
4	0	0	5	0
5	0	5	0	0
6	0	0	0	0
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings:
low 0 high 10

Number of readings above 10 % were 0

W H Reamy
Observer's Signature

Visible Emissions Evaluation

Run Number(s) and Description: 16

Facility Name	ECE/Floyd Bennett Fld
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	nat'l Park
Control Equipment / Emission Source	ACB #1
Date of Observation	1/29/13
Start Time	1520
Stop Time	1706
Distance from observer (ft)	130'
Direction from observer	N
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	no stack
Description of plume:	
continuous? fugitive? intermittent?	interm.
color	gray
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	above barrier
target?	
describe background to plume	gray sky
unique features of plume or stack	no stack
Weather:	
ambient temperature (F)	40°
relative humidity	
wind direction	NE
wind speed	5-10
barometric pressure	
rain? fog? snow? haze?	no
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	N

Observer's name	William Reamy
Observer certification date	10-10-12
Certifying agency	Whittaker Enterp.
Observer affiliation	Stack Hawk Envir.

sec	0	15	30	45
min	Run	Time:	1520	
1	0	5	0	0
2	0	0	5	0
3	0	5	5	0
4	0	0	5	0
5	0	0	0	5
6	0	0	0	0
6-minute Average:			1.3	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1540	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1600	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1620	
1	5	5	0	0
2	0	5	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.6	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

sec	0	15	30	45
min	Run	Time:	1640	
1	0	0	0	0
2	0	5	0	5
3	0	0	0	0
4	0	0	0	5
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.4	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1700	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:		
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				
	Run	Time:		
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings:
low 0 high 5

Number of readings above 10 % were 0

WM Reamy
Observer's Signature

Visible Emissions Evaluation

Tues. Night, January 29th, 2013

Facility Name	ECC Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	Debris Removal
Control Equipment / Emission Source	ACB 1
Date of Observation	01/29/2013
Start Time	1844
Stop Time	2152
Distance from observer (ft)	150'
Direction from observer	E
Stack height (fr. observer's elev.) (ft)	9'
Stack Diameter (in)	27'x9'

Description of plume:

continuous? fugitive? intermittent?	cont.
color	white
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	1-3 conex lengths
target?	sky
describe background to plume	sky
unique features of plume or stack	—

@1844

Weather:

ambient temperature (F)	42°
relative humidity	82%
wind direction	N
wind speed	calm
barometric pressure	30.15 in Hg
rain? fog? snow? haze?	intermittent rain / fog

Glasses worn:

corrective? (Y/N)	yes
sunglasses? (Y/N)	—

Observer's name	Joshua Wagner
Observer certification date	Night 12/20/2012
Certifying agency	Whittlow
Observer affiliation	Avogadro Env.

Run Number(s) and Description

ACB 1 Runs 1-8

sec	0	15	30	45
min	Run 1 Time: 1844			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 2 Time: 1910			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 3 Time: 1936			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 4 Time: 2001			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				

sec	0	15	30	45
min	Run 5 Time: 2028			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 6 Time: 2054			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 7 Time: 2120			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 8 Time: 2146			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings:

low 0 high 0

Number of readings above 10 % were 0

Observer's Signature

Tues. Night, January 29th, 2013

Visible Emissions Evaluation

Facility Name	ECC Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	Debris Removal
Control Equipment / Emission Source	ACB 1
Date of Observation	01/29/2013
Start Time	2212
Stop Time	2402
Distance from observer (ft)	150'
Direction from observer	E
Stack height (fr. observer's elev.) (ft)	9'
Stack Diameter (in)	27'x9'

Description of plume:

continuous? fugitive? intermittent?	cont.
color	white
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	1-3 exit lengths
target?	sky
describe background to plume	sky
unique features of plume or stack	—

Weather: @2210

ambient temperature (F)	41°
relative humidity	92%
wind direction	calm
wind speed	calm
barometric pressure	30.42 inHg
rain? fog? snow? haze?	fog

Glasses worn:

corrective? (Y/N)	yes
sunglasses? (Y/N)	—

Observer's name	Joshua Wagner
Observer certification date	Night 12/20/2012
Certifying agency	Whittow
Observer affiliation	Avogadro Env.

Run Number(s) and Description: ACB1 Runs 9-13

sec	0	15	30	45
min	Run 9 Time: 2212			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 10 Time: 2238			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 11 Time: 2304			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 12 Time: 2330			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				

sec	0	15	30	45
min	Run 13 Time: 2356			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run Time:			
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				
	Run Time:			
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				
	Run Time:			
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings: low 0 high 0

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

Visible Emissions Evaluation

Tues. Early Morning, January 29th, 2013

Run Number(s) and Description: ACB 2 Runs 1-8

Facility Name	ECC Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	Debris Removal
Control Equipment / Emission Source	ACB 2
Date of Observation	01/29/2013
Start Time	0034
Stop Time	0352
Distance from observer (ft)	150'
Direction from observer	E
Stack height (fr. observer's elev.) (ft)	8'
Stack Diameter (in)	20' x 8'
Description of plume:	
continuous? fugitive? intermittent?	Cont.
color	white
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	1-3 corner lengths
target?	Sky
describe background to plume	Sky
unique features of plume or stack	—
Weather:	@0034
ambient temperature (F)	36°
relative humidity	86%
wind direction	N
wind speed	0-4 mph
barometric pressure	30.03 inHg
rain? fog? snow? haze?	clear
Glasses worn:	
corrective? (Y/N)	yes
sunglasses? (Y/N)	—

Observer's name	Joshua Wagner
Observer certification date	Night 12/20/2012
Certifying agency	Whitlow
Observer affiliation	Avogadro Env.

sec	0	15	30	45
min	Run 1 Time: 0034			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 2 Time: 0100			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 3 Time: 0126			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 4 Time: 0152			
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average: 5				
Source Conditions:				
Sun Angle (degrees):				

sec	0	15	30	45
min	Run 5 Time: 0218			
1	10	10	10	10
2	10	10	10	10
3	10	10	10	10
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average: 7.5				
Source Conditions:				
Sun Angle (degrees):				
	Run 6 Time: 0244			
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average: 5				
Source Conditions:				
Sun Angle (degrees):				
	Run 7 Time: 0320			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 8 Time: 0346			
1	5	5	5	5
2	5	5	5	5
3	10	10	10	10
4	5	5	5	5
5	10	10	10	10
6	10	10	10	10
6-minute Average: 7.5				
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings: low 0 high 10

Number of readings above 10 % were 0

Observer's Signature

Visible Emissions Evaluation

Tues Early Morning, January 29th, 2013

Run Number(s) and Description: ACB 2 Runs 9-12

Facility Name	ECC Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	Debris Removal
Control Equipment / Emission Source	ACB 2
Date of Observation	01/29/2013
Start Time	per 0434 over
Stop Time	0550
Distance from observer (ft)	150'
Direction from observer	E
Stack height (fr. observer's elev.) (ft)	8'
Stack Diameter (in)	20' x 8'
Description of plume:	
continuous? fugitive? intermittent?	cont.
color	white
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	1-3 canes lengths
target?	sky
describe background to plume	sky
unique features of plume or stack	—
Weather:	@ 434
ambient temperature (F)	35°
relative humidity	92%
wind direction	calm
wind speed	calm
barometric pressure	30.02 in Hg
rain? fog? snow? haze?	clear
Glasses worn:	
corrective? (Y/N)	yes
sunglasses? (Y/N)	—

Observer's name	Josiane Magnus
Observer certification date	Night 12/20/2012
Certifying agency	Whittaker
Observer affiliation	Avogadro Env.

sec	0	15	30	per 45
min	Run: 9 Time: per 434			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				

sec	0	15	30	45
min	Run: Time:			
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				

	Run: 10 Time: 0500			
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average: 5				
Source Conditions:				
Sun Angle (degrees):				

	Run: Time:			
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				

	Run: 11 Time: 0536			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				

	Run: Time:			
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				

	Run: 12 Time: 0544			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				

	Run: Time:			
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings:

low 0 high —

Number of readings above 10 % were —

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

Visible Emissions Evaluation

Run Number(s) and Description: 13

Facility Name	ECC/Fort Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	national park
Control Equipment / Emission Source	Air Curtain Burner #2
Date of Observation	1/29/13
Start Time	0720
Stop Time	0946
Distance from observer (ft)	100'
Direction from observer	NW
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	no stack
Description of plume:	
continuous? fugitive? intermittent?	INTERM.
color	gray
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	above top of burner
target?	
describe background to plume	gray sky
unique features of plume or stack	no stack
Weather:	
ambient temperature (F)	40°
relative humidity	
wind direction	SW
wind speed	5-10
barometric pressure	
rain? fog? snow? haze?	no
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	N

Observer's name	William Reamy
Observer certification date	10-10-12
Certifying agency	Whiteflow Enterp.
Observer affiliation	StackHawk Envir.

sec	0	15	30	45
min	Run	Time:	0720	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	0740	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	0800	
1	5	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.2	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	0820	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

sec	0	15	30	45
min	Run	Time:	0840	
1	10	10	10	10
2	10	10	10	10
3	10	10	10	10
4	5	5	5	5
5	5	5	0	5
6	0	0	0	0
6-minute Average:			6.5	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	9:00	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			No SUN	
	Run	Time:	9:20	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	9:40	
1	0	5	10	5
2	5	5	5	0
3	5	5	5	5
4	5	0	0	0
5	0	0	0	0
6	0	0	0	5
6-minute Average:			2.7	
Source Conditions:				
Sun Angle (degrees):			-5	

Range of opacity readings: low 0 high 10

Number of readings above 10 % were 0

WM Reamy

Observer's Signature

Visible Emissions Evaluation

Run Number(s) and Description: 14

Facility Name	ECC/Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	national park
Control Equipment / Emission Source	ACB #2
Date of Observation	1/29/13
Start Time	1000
Stop Time	1226
Distance from observer (ft)	100'
Direction from observer	NW
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	no stack
Description of plume:	
continuous? fugitive? intermittent?	interm.
color	gray
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	above barrier
target?	
describe background to plume	gray sky *
unique features of plume or stack	no stack
Weather:	
ambient temperature (F)	40°
relative humidity	
wind direction *	SW/W
wind speed	5-10
barometric pressure	
rain? fog? snow? haze?	no
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	N

Observer's name	William Reamy
Observer certification date	10-10-12
Certifying agency	Whitlow Enterpr.
Observer affiliation	Stack Hawk Envir.

sec	0	15	30	45
min	Run	Time:	1000	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			0	
	Run	Time:	1020	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			0	
	Run	Time:	1040	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			+10	
	Run	Time:	1100	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			+15	

sec	0	15	30	45
min	Run	Time:	1120	
1	0	0	5	0
2	0	0	0	0
3	5	0	0	0
4	0	5	0	0
5	0	0	5	0
6	0	0	0	0
6-minute Average:			0.8	
Source Conditions:				
Sun Angle (degrees):			+20	
	Run	Time:	1140	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			-30	
	Run	Time:	1200	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			-20	
	Run	Time:	1220	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			-10	

Range of opacity readings: low 0 high 5

Number of readings above 10 % were 0

W K Reamy
Observer's Signature

* sky clear @ 1040, cloudy again @ 1120; wind shift to NE

Visible Emissions Evaluation

Facility Name	Ecc/Floyd Bennett Fld
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	nat'l park
Control Equipment / Emission Source	ACB #2
Date of Observation	1/29/13
Start Time	1240
Stop Time	1506
Distance from observer (ft)	130'
Direction from observer	N
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	no stack
Description of plume:	
continuous? fugitive? intermittent?	intermit.
color	gray
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	above barrier
target?	
describe background to plume	gray sky
unique features of plume or stack	no stack
Weather:	
ambient temperature (F)	45°
relative humidity	
wind direction	NE
wind speed	5-10
barometric pressure	
rain? fog? snow? haze?	no
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	N

Observer's name	William Reamy
Observer certification date	10-10-12
Certifying agency	Whitlow Enterp.
Observer affiliation	Stack Hawk Envir.

Run Number(s) and Description: 15

sec	0	15	30	45
min	Run	Time:	1240	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			+5	
	Run	Time:	1300	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			0	
	Run	Time:	1320	
1	0	0	0	5
2	0	0	5	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.4	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1340	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

sec	0	15	30	45
min	Run	Time:	1400	
WP 1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1420	
WP 1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1440	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	5	0	0
6-minute Average:			0.2	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1500	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

Range of opacity readings: low 0 high 5

Number of readings above 10 % were 0

W K Reamy

Observer's Signature

Visible Emissions Evaluation

Facility Name	ECC/Floyd Bennett Fld
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	natl park
Control Equipment / Emission Source	ACB #2
Date of Observation	1/29/13
Start Time	1520
Stop Time	1706
Distance from observer (ft)	130'
Direction from observer	N
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	no stack
Description of plume:	
continuous? fugitive? intermittent?	intermn.
color	gray
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	above barrier
target?	
describe background to plume	gray sky
unique features of plume or stack	no stack
Weather:	
ambient temperature (F)	40°
relative humidity	%
wind direction	NE
wind speed	5-10
barometric pressure	
rain? fog? snow? haze?	no
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	N

Observer's name	William Reamy
Observer certification date	10-10-12
Certifying agency	Whitlow Enterp.
Observer affiliation	Stack Hawk Envir.

Run Number(s) and Description: 16

sec	0	15	30	45
min	Run	Time:	1520	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1540	
1	5	10	5	10
2	5	5	5	5
3	0	5	5	10
4	5	5	0	5
5	5	0	5	0
6	5	10	0	0
6-minute Average:			4.6	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1600	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1620	
1	5	5	5	5
2	5	0	5	0
3	5	5	5	5
4	5	0	5	0
5	0	0	5	0
6	0	5	0	0
6-minute Average:			2.9	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

sec	0	15	30	45
min	Run	Time:	1640	
1	5	5	5	5
2	0	5	0	0
3	0	5	0	0
4	5	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			1.5	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:	1700	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run	Time:		
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				
	Run	Time:		
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings:
low 0 high 10

Number of readings above 10 % were 0

W K Reamy
Observer's Signature

Tues. Night, January 29th 2013

Run Number(s) and Description

ACB 2 Runs 1-8

Visible Emissions Evaluation

Facility Name	ECC Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	Debris Removal
Control Equipment / Emission Source	ACB 2
Date of Observation	01/29/2013
Start Time	1844
Stop Time	2152
Distance from observer (ft)	150'
Direction from observer	E
Stack height (fr. observer's elev.) (ft)	8'
Stack Diameter (in)	20' x 8'
Description of plume:	
continuous? fugitive? intermittent?	Cont.
color	white
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	1-3 conex lengths
target?	Sky
describe background to plume	Sky
unique features of plume or stack	—
Weather:	@1844
ambient temperature (F)	42°
relative humidity	82%
wind direction	N
wind speed	Calm
barometric pressure	30.15 in Hg
rain? fog? snow? haze?	Intermittent rain/fog
Glasses worn:	
corrective? (Y/N)	yes
sunglasses? (Y/N)	—

Observer's name	Joshua Wagner
Observer certification date	Night 12/20/2012
Certifying agency	Whittow
Observer affiliation	Avogadro Env.

sec	0	15	30	45
min	Run 1 Time: 1844			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 2 Time: 1910			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 3 Time: 1936			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 4 Time: 2002			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				

sec	0	15	30	45
min	Run 5 Time: 2028			
1	5	5	5	5
2	10	10	10	10
3	5	5	5	5
4	0	0	0	0
5	5	5	5	5
6	0	0	0	0
6-minute Average: 4.2				
Source Conditions:				
Sun Angle (degrees):				
	Run 6 Time: 2054			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 7 Time: 2120			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
	Run 8 Time: 2140			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings:

low 0 high 10

Number of readings above 10 % were 0

Observer's Signature

Tues. Night, January 29th, 2013

Visible Emissions Evaluation

Facility Name	ECC Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	Debris Removal
Control Equipment / Emission Source	ACB 2
Date of Observation	01/29/2013
Start Time	2210
Stop Time	2402
Distance from observer (ft)	150'
Direction from observer	E
Stack height (fr. observer's elev.) (ft)	8'
Stack Diameter (in)	20' x 8'

Description of plume:

continuous? fugitive? intermittent?	Cont.
color	white
water drops present? (Y/N)	N
attached steam plume? (Y/N)	N
detached steam plume? (Y/N)	N
secondary plume? (Y/N)	N
point where opacity read	1-3 const lengths
target?	sky
describe background to plume	sky
unique features of plume or stack	—

Weather: @2210

ambient temperature (F)	41°
relative humidity	92%
wind direction	calm
wind speed	calm
barometric pressure	30.12 in Hg
rain? fog? snow? haze?	fog

Glasses worn:

corrective? (Y/N)	yes
sunglasses? (Y/N)	—

Observer's name	Joshua Hayes
Observer certification date	Night 12/20/2012
Certifying agency	Whitlow
Observer affiliation	Avogadro Env.

Run Number(s) and Description: ACB 2 Runs 9-13

sec	0	15	30	45
min	Run 9 Time: 2212			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
min	Run 10 Time: 2238			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
min	Run 11 Time: 2304			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
min	Run 12 Time: 2330			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				

sec	0	15	30	45
min	Run 13 Time: 2356			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees):				
min	Run Time:			
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				
min	Run Time:			
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				
min	Run Time:			
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings: low 0 high 0

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa