Friday Early M, February 1st, 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	02/1/2013
Start Time	0034
Stop Time	0342
Distance from observer (ft)	200'
Direction from observer	N
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 cone lengths
target?	sky
describe background to plume	sky
unique features of plume or stack	—
	@0030
Weather:	
ambient temperature (F)	29°
relative humidity	46%
wind direction	SE
wind speed	15-20mph
barometric pressure	29.82 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	Whittow
Observer affiliation	Avogadro Env.

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

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	5	5	5	5
6	5	0	0	0
6-minute Average:	1.0			
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	5
6	0	0	0	0
6-minute Average:	0.7			
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	0	0	0	0
2	5	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:	0.4			
Source Conditions:				
Sun Angle (degrees):				

sec	0	15	30	45
min	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	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: 0310			
1	0	0	0	0
2	5	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:	0.4			
Source Conditions:				
Sun Angle (degrees):				
	Run 8 Time: 0336			
1	0	0	0	0
2	0	0	0	0
3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	0	0	0	0
6-minute Average:	2.5			
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings: low 0 high 5

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

Friday Early Morn. February 1st, 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	02/1/2013
Start Time	0402
Stop Time	0536
Distance from observer (ft)	150'
Direction from observer	NE
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 cmex lengths
target?	sky
describe background to plume	sky
unique features of plume or stack	—
	@0400
Weather:	
ambient temperature (F)	30°
relative humidity	44 %
wind direction	SE
wind speed	15-25 mph
barometric pressure	29.83 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.

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

sec	0	15	30	45
min	Run 9	Time: 0402		
1	0	0	0	0
2	0	0	0	0
3	0	0	5	0
4	0	0	0	5
5	0	0	0	0
6	5	0	0	0
6-minute Average:	0.6			
Source Conditions:				
Sun Angle (degrees):				
	Run 10	Time: 0428		
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: 504		
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: 530		
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:				
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 5

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

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	ACB #1
Date of Observation	2/1/13
Start Time	0714
Stop Time	1022
Distance from observer (ft)	150'
Direction from observer	NNW
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	cloudy sky
unique features of plume or stack	no stack
Weather:	
ambient temperature (F)	30°
relative humidity	
wind direction	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 Enter.
Observer affiliation	Stack Hawk Envir.

Run Number(s) and Description: 1-8

sec	0	15	30	45
min	Run 1	Time:	0714	
1	0	0	5	5
2	5	10	10	5
3	10	10	10	10
4	10	10	15	5
5	10	15	20	20
6	15	10	15	15
6-minute Average:			10.0	
Source Conditions:			ADDING WOOD	
Sun Angle (degrees):			NO SUN	

sec	0	15	30	45
min	Run 5	Time:	0858	
1	5	10	5	5
2	10	5	10	0
3	5	5	0	0
4	5	0	5	0
5	0	5	0	0
6	5	0	0	0
6-minute Average:			3.3	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

	Run 2	Time:	0740	
1	0	5	0	0
2	5	0	0	5
3	0	5	5	0
4	5	5	5	0
5	0	0	0	0
6	0	5	0	0
6-minute Average:			1.9	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

	Run 6	Time:	0924	
1	10	10	0	5
2	5	0	5	5
3	0	5	0	5
4	0	0	0	0
5	0	5	5	5
6	5	5	5	5
6-minute Average:			3.5	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

	Run 3	Time:	0806	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	5	5	5
6	0	0	5	0
6-minute Average:			0.8	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

	Run 7	Time:	0950	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	5	0	0
6	0	5	0	0
6-minute Average:			0.4	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

	Run 4	Time:	0832	
1	5	0	5	5
2	5	5	0	5
3	0	5	0	0
4	10	10	5	5
5	10	10	5	10
6	5	0	0	5
6-minute Average:			4.6	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

	Run 8	Time:	1016	
1	10	10	20	30
2	10	10	10	5
3	15	10	10	5
4	5	10	5	5
5	5	5	10	10
6	5	5	10	10
6-minute Average:			9.6	
Source Conditions:			ADDING WOOD	
Sun Angle (degrees):			NO SUN	

Range of opacity readings: low 0 high 30

Number of readings above 10 % were 10

WM Reamy
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	~~ACB #1~~
Date of Observation	2/1/13
Start Time	1042
Stop Time	1350
Distance from observer (ft)	150'
Direction from observer	NNW
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)	35°
relative humidity	
wind direction	W
wind speed	5-15
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 Enter.
Observer affiliation	Stack Hawk Envir.

Run Number(s) and Description: 9-16

sec	0	15	30	45
min	Run 9	Time:	1042	
1	0	0	5	0
2	0	0	0	0
3	0	5	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):			NO SUN	
	Run 10	Time:	1108	
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	15	15	10	10
6-minute Average:			2.1	
Source Conditions:				
Sun Angle (degrees):			0	
	Run 11	Time:	1134	
1	0	0	0	0
2	0	0	0	5
3	10	5	5	0
4	0	10	5	0
5	5	0	5	0
6	0	0	5	0
6-minute Average:			2.3	
Source Conditions:				
Sun Angle (degrees):			+10	
	Run 12	Time:	1200	
1	0	0	0	0
2	0	0	5	0
3	0	0	5	0
4	0	0	0	0
5	0	5	0	0
6	0	0	0	0
6-minute Average:			0.6	
Source Conditions:				
Sun Angle (degrees):			+20	

sec	0	15	30	45
min	Run 13	Time:	1226	
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):			+25	
	Run 14	Time:	1252	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	10	10	15
6	10	10	15	10
6-minute Average:			3.3	
Source Conditions:				
Sun Angle (degrees):			-25	
	Run 15	Time:	1318	
1	20	15	20	10
2	10	15	15	10
3	10	15	10	15
4	10	10	10	10
5	10	10	5	5
6	10	5	5	5
6-minute Average:			10.8	
Source Conditions:			ADDING WOOD	
Sun Angle (degrees):			-20	
	Run 16	Time:	1344	
1	0	0	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:			0.2	
Source Conditions:				
Sun Angle (degrees):			-15	

Range of opacity readings: low 0 high 20

Number of readings above 10 % were 11

W K Reamy

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	ACB #1
Date of Observation	2/1/13
Start Time	1410
Stop Time	1652
Distance from observer (ft)	150'
Direction from observer	NE
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	W
wind speed	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 Enter.
Observer affiliation	Stack Hawk Envir.

Run Number(s) and Description: 17-23

sec	0	15	30	45
min	Run 17 Time:	1410		
1	5	5	0	0
2	0	0	5	5
3	0	5	0	5
4	0	0	5	0
5	0	5	5	0
6	0	0	5	0
6-minute Average:			2.1	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run 18 Time:	1436		
1	5	5	0	0
2	0	5	0	0
3	0	5	0	0
4	5	5	0	5
5	0	0	0	5
6	0	5	0	0
6-minute Average:			1.9	
Source Conditions:				
Sun Angle (degrees):			-5	
	Run 19 Time:	1502		
1	0	0	5	0
2	5	0	5	0
3	0	0	0	0
4	0	0	0	0
5	0	0	5	0
6	0	0	0	0
6-minute Average:			0.8	
Source Conditions:				
Sun Angle (degrees):			0	
	Run 20 Time:	1528		
1	0	0	5	0
2	0	0	5	5
3	0	0	0	5
4	0	0	0	5
5	5	0	0	20
6	30	5	5	5
6-minute Average:			4.0	
Source Conditions:			MOVING WOOD	
Sun Angle (degrees):			NO SUN	

sec	0	15	30	45
min	Run 21 Time:	1559		
1	0	5	0	5
2	0	0	0	0
3	0	5	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	
	Run 22 Time:	1620		
1	0	0	0	0
2	0	0	0	5
3	0	0	0	5
4	0	0	5	0
5	0	0	0	5
6	0	0	0	0
6-minute Average:			0.8	
Source Conditions:				
Sun Angle (degrees):			+20	
	Run 23 Time:	1646		
1	0	0	0	0
2	5	0	0	0
3	0	0	0	5
4	0	0	0	0
5	5	5	0	5
6	0	0	0	5
6-minute Average:			1.2	
Source Conditions:			NO SUN	
Sun Angle (degrees):			[illegible]	
	Run Time:			
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings: low 0 high 30

Number of readings above 10 % were 2

W M Reamy

Observer's Signature

Friday Night February 1st, 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	02/1/2013
Start Time	1914
Stop Time	2222
Distance from observer (ft)	200'
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 crew lengths
target?	sky
describe background to plume	sky
unique features of plume or stack	—

Weather: @ 1900

ambient temperature (F)	27°
relative humidity	44 %
wind direction	SE
wind speed	8-15 mph
barometric pressure	30.18 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.

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

sec	0	15	30	45
min	Run 1 Time: 1914			
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: 1940			
1	5	5	5	5
2	5	5	5	5
3	10	10	10	10
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average: 5.8				
Source Conditions:				
Sun Angle (degrees):				
	Run 3 Time: 2006			
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:				
Source Conditions:				
Sun Angle (degrees):				
	Run 4 Time: 2032			
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: 2058			
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: 2124			
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: 2150			
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: 2216			
1	0	0	0	0
2	0	0	0	0
3	0	5	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):				

Range of opacity readings: low 0 high 10

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

Night

Friday February 1st, 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	02/1/2013
Start Time	2242
Stop Time	2340
Distance from observer (ft)	200'
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	—
	@2240

Weather:

ambient temperature (F)	25°
relative humidity	52 %
wind direction	SE
wind speed	7-12 mph
barometric pressure	30.22 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	Whittow
Observer affiliation	Avogadro Env.

Run Number(s) and Description: ACB 1 Runs 9-11

sec	0	15	30	45
min	Run 9	Time:	2242	
1	0	0	0	0
2	0	0	0	0
3	0	5	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):				

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

sec	0	15	30	45
min	Run 10	Time:	2308	
1	5	5	5	5
2	5	5	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:	1.46			
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):				

sec	0	15	30	45
min	Run 11	Time:	2334	
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):				

sec	0	15	30	45
min	Run 12	Time:		
1				
2				
3				
4				
5				
6				
6-minute Average:				
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):				

Range of opacity readings: low 0 high 5

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

Friday Early Morn. February 1st, 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	02/1/2013
Start Time	0034
Stop Time	0342
Distance from observer (ft)	200'
Direction from observer	N
Stack height (fr. observer's elev.) (ft)	8'
Stack Diameter (in)	20'x8'
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	—
	@ 0030
Weather:	
ambient temperature (F)	29°
relative humidity	46%
wind direction	SE
wind speed	15-20mph
barometric pressure	29.82 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	Whittow
Observer affiliation	Avogadro Env.

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

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	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: 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	0	0	0	0
2	5	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):				
	Run 7 Time: 0310			
1	0	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: 4.8				
Source Conditions:				
Sun Angle (degrees):				
	Run 8 Time: 0336			
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):				

Range of opacity readings: low 0 high 5

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

Early
Friday Morning February 1st, 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	02/1/2013
Start Time	0402
Stop Time	0536
Distance from observer (ft)	150'
Direction from observer	NE
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	—
	@ 0400
Weather:	
ambient temperature (F)	30°
relative humidity	44%
wind direction	SE
wind speed	15-25 mph
barometric pressure	29.83 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	Whittow
Observer affiliation	Avogadro Env.

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

sec	0	15	30	45	sec	0	15	30	45
min	Run 9 Time: 0402				min	Run Time:			
1	5	5	5	5	1				
2	5	5	5	5	2				
3	5	5	5	5	3				
4	5	5	5	5	4				
5	5	5	5	5	5				
6	0	0	0	0	6				
6-minute Average:	4.2				6-minute Average:				
Source Conditions:					Source Conditions:				
Sun Angle (degrees):					Sun Angle (degrees):				
	Run 10 Time: 0428					Run Time:			
1	0	0	0	0	1				
2	0	0	0	0	2				
3	0	0	0	0	3				
4	0	0	0	0	4				
5	0	0	0	0	5				
6	0	0	0	0	6				
6-minute Average:	0				6-minute Average:				
Source Conditions:					Source Conditions:				
Sun Angle (degrees):					Sun Angle (degrees):				
	Run 11 Time: 0454					Run Time:			
1	0	0	0	0	1				
2	0	0	0	0	2				
3	0	0	0	0	3				
4	0	0	0	0	4				
5	0	0	0	0	5				
6	0	0	0	0	6				
6-minute Average:	0				6-minute Average:				
Source Conditions:					Source Conditions:				
Sun Angle (degrees):					Sun Angle (degrees):				
	Run 12 Time: 530					Run Time:			
1	0	0	0	0	1				
2	0	0	0	0	2				
3	0	0	0	0	3				
4	0	0	0	0	4				
5	0	0	5	5	5				
6	0	0	5	0	6				
6-minute Average:	0.6				6-minute Average:				
Source Conditions:					Source Conditions:				
Sun Angle (degrees):					Sun Angle (degrees):				

Range of opacity readings: low 0 high 5

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

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	ACB #2
Date of Observation	2/1/13
Start Time	0714
Stop Time	1022
Distance from observer (ft)	150'
Direction from observer	NNW
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	cloudy sky
unique features of plume or stack	no stack
Weather:	
ambient temperature (F)	30°
relative humidity	
wind direction	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 Enter.
Observer affiliation	Stack Hawk Envir.

Run Number(s) and Description: 1-8

sec	0	15	30	45
min	Run 1 Time: 0714			
1	5	10	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:			5,2	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run 2 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 3 Time: 0806			
1	0	0	0	0
2	5	0	5	0
3	5	5	0	0
4	0	5	0	5
5	5	0	5	0
6	0	0	0	5
6-minute Average:			1,9	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run 4 Time: 0832			
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 5 Time: 0858			
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 6 Time: 0924			
1	0	0	0	0
2	0	0	0	0
3	0	10	10	5
4	10	10	0	10
5	10	5	5	10
6	0	5	15	15
6-minute Average:			5,0	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run 7 Time: 0950			
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 8 Time: 1016			
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	0
5	5	0	5	5
6	0	0	5	5
6-minute Average:			4,2	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

Range of opacity readings: low 0 high 15

Number of readings above 10 % were 2

WK Reamy

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	ACB #2
Date of Observation	2/1/13
Start Time	1042
Stop Time	1350
Distance from observer (ft)	150'
Direction from observer	NNW
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)	35°
relative humidity	
wind direction	W
wind speed	5-15
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 Enter.
Observer affiliation	Stack Hawk Envir.

Run Number(s) and Description: 9-16

sec	0	15	30	45
min	Run 9 Time:		1042	
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 10 Time:		1108	
1	0	0	0	0
2	0	0	0	5
3	0	5	5	0
4	0	10	15	10
5	15	10	10	10
6	10	5	5	5
6-minute Average:			5.0	
Source Conditions:				
Sun Angle (degrees):			0	
	Run 11 Time:		1134	
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):			+10	
	Run 12 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	

sec	0	15	30	45
min	Run 13 Time:		1226	
1	5	0	5	5
2	0	0	0	10
3	15	10	20	5
4	10	5	5	0
5	0	0	0	0
6	0	5	0	0
6-minute Average:			4.2	
Source Conditions:				
Sun Angle (degrees):			-25	
	Run 14 Time:		1252	
1	5	10	0	0
2	5	0	0	5
3	5	0	5	10
4	15	10	10	20
5	15	10	15	10
6	10	10	10	15
6-minute Average:			8.1	
Source Conditions:			ADDING WOOD	
Sun Angle (degrees):			-15	
	Run 15 Time:		1318	
1	0	0	5	0
2	5	5	0	0
3	0	0	5	0
4	0	0	5	0
5	5	0	0	0
6	5	0	0	5
6-minute Average:			1.6	
Source Conditions:				
Sun Angle (degrees):			-10	
	Run 16 Time:		1344	
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	

Range of opacity readings: low 0 high 20

Number of readings above 10 % were 9

W M Reamy

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

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	ACB #2
Date of Observation	2/1/13
Start Time	1410
Stop Time	1652
Distance from observer (ft)	150'
Direction from observer	NE
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	no stack

Description of plume:

continuous? fugitive? intermittent?	intern.
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	W
wind speed	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 Enter.
Observer affiliation	Stack Hawk Envir.

Run Number(s) and Description: 17-23

sec	0	15	30	45
min	Run 17 Time:		1410	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	10	0	0
5	0	5	0	0
6	0	0	5	0
6-minute Average:			0.8	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run 18 Time:		1436	
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 19 Time:		1502	
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 20 Time:		1528	
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 21 Time:		1554	
1	0	0	0	0
2	0	0	0	0
3	0	5	5	0
4	0	0	5	0
5	0	0	0	0
6	5	0	0	0
6-minute Average:			0.8	
Source Conditions:				
Sun Angle (degrees):			NO SUN	
	Run 22 Time:		1620	
1	0	0	0	5
2	0	0	0	5
3	0	0	0	0
4	5	0	5	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.8	
Source Conditions:				
Sun Angle (degrees):			+25	
	Run 23 Time:		1646	
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:			NO SUN	
Sun Angle (degrees):			+35	
	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 H Reamy

Observer's Signature

Friday Night February 1st, 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	02/1/2013
Start Time	1914
Stop Time	2222
Distance from observer (ft)	200'
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	—
	@1900
Weather:	
ambient temperature (F)	27°
relative humidity	44%
wind direction	SE
wind speed	8-15 mph
barometric pressure	30.18 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	Whittow
Observer affiliation	Avogadro Env.

sec	0	15	30	45
min	Run 1 Time: 1914			
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: 1940			
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: 2006			
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 4 Time: 2032			
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: 2058			
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: 2124			
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: 2150			
1	0	0	0	0
2	5	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: 0.4				
Source Conditions:				
Sun Angle (degrees):				
	Run 8 Time: 2216			
1	0	0	0	0
2	0	0	0	0
3	5	0	0	0
4	0	0	0	0
5	0	5	5	5
6	0	0	0	0
6-minute Average: 0.8				
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings: low 0 high 5

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

Friday Night February 1st, 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	02/1/2013
Start Time	2242
Stop Time	2340
Distance from observer (ft)	200'
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:	
ambient temperature (F)	25°
relative humidity	52 %
wind direction	SE
wind speed	7-12 mph
barometric pressure	30.22 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	WiitHow
Observer affiliation	Avogadro Env.

Run Number(s) and Description: ACB 2 Runs 9-11

sec	0	15	30	45
min	Run 9	Time: 2242		
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: 2308		
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	5	5
6	0	0	0	0
6-minute Average: 0.4				
Source Conditions:				
Sun Angle (degrees):				

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

	Run 11	Time: 2334		
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	5	5	5	5
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0.8				
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 5

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa