ACB-1 → Warmup

1/11/13

Visible Emissions Evaluation

AMEC

Facility Name	FCC/Floyd Bennett
~~AVOCADRO~~ Project No.	6480121005
Location (city, state)	Brooklyn, NY
Type of Facility	Nat'l Park
Control Equipment / Emission Source	ACB-1
Date of Observation	1/11/13
Start Time	0156
Stop Time	0504
Distance from observer (ft)	~250'
Direction from observer	128°/81°/118°
Stack height (fr. observer's elev.) (ft)	8'
Stack Diameter (in)	27"x9'

See 3 min. call

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	~20' ↑
target?	sky
describe background to plume	sky
unique features of plume or stack	startup

Weather:

ambient temperature (F)	37°
relative humidity	56%
wind direction	NNE
wind speed mph	3.5-4.7
barometric pressure	30.54
rain? fog? snow? haze?	none

Glasses worn:

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

Observer's name	Robert Bush
Observer certification date	1/6/13
Certifying agency	Smithflow
Observer affiliation	AMEC

Run Number(s) and Description: 1-8 JAN. 11, 2013

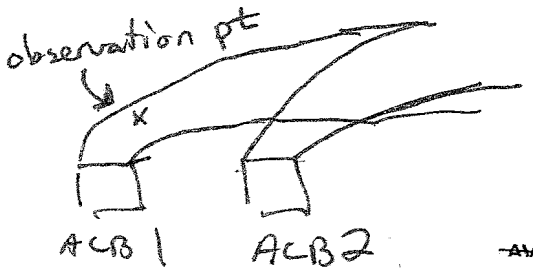
sec	0	15	30	45
min	Run 1 Time: 0156			
1	15	50	50	60
2	40	35	35	50
81°3	30	40	30	45
4	45	40	50	55
5	45	45	50	40
6	40	50	50	55
6-minute Average:	43.5%			
Source Conditions:	Warmup			
Sun Angle (degrees):	—			
	Run 2 Time: 0222			
1	20	15	10	10
2	5	5	5	5
118°3	5	5	5	5
4	5	5	5	5
5	15	15	15	15
6	10	10	10	10
6-minute Average:	9%			
Source Conditions:	Warmup			
Sun Angle (degrees):	—			
	Run 3 Time: 0248			
1	5	5	5	5
2	10	10	5	5
118°3	5	5	5	5
4	10	10	10	5
5	5	5	10	10
6	10	5	10	5
6-minute Average:	6.9%			
Source Conditions:	Warmup			
Sun Angle (degrees):	—			
	Run 4 Time: 0314			
1	5	5	5	10
2	10	5	5	5
118°3	5	10	10	5
4	15	10	10	10
5	10	15	15	10
6	10	10	10	10
6-minute Average:	9.0%			
Source Conditions:	Warmup			
Sun Angle (degrees):	—			

sec	0	15	30	45
min	Run 5 Time: 0340			
1	10	10	10	15
2	5	10	10	15
118°3	15	10	5	5
4	10	15	15	15
5	15	20	10	10
6	5	10	10	10
6-minute Average:	11.0%			
Source Conditions:	Warmup			
Sun Angle (degrees):	—			
	Run 6 Time: 0406			
1	5	5	5	5
2	5	5	5	5
118°3	5	5	5	5
4	10	10	5	5
5	10	10	10	5
6	5	5	5	5
6-minute Average:	6.0%			
Source Conditions:	Warmup			
Sun Angle (degrees):	—			
	Run 7 Time: 0432			
1	5	5	5	5
2	5	5	5	5
128°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:	Warmup			
Sun Angle (degrees):	—			
	Run 8 Time: 0458			
1	15	10	15	10
2	15	10	10	10
128°3	20	40	30	15
4	15	10	10	20
5	35	35	30	20
6	25	15	5	5
6-minute Average:	17.7%			
Source Conditions:	Warmup			
Sun Angle (degrees):	—			

Range of opacity readings: low 5 high 55

Number of readings above 10 % were 56

Observer's Signature



~~AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa~~

AMEC

ACB-1

1/11/13

Visible Emissions Evaluation

Run Number(s) and Description 9-10 JAN. 11, 2013

Facility Name	ECC/Floyd Bennet Field
~~AVOGADRO Project No:~~ AMEC	6480131001
Location (city, state)	Brooklyn, NY
Type of Facility	Nat'l Park
Control Equipment / Emission Source	ACB-1
Date of Observation	1/11/13
Start Time	0524
Stop Time	0556
Distance from observer (ft)	~250'
Direction from observer	128°
Stack height (fr. observer's elev.) (ft)	8'
Stack Diameter (in)	27" x 9"
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	~20 ft ↑
target?	Sky
describe background to plume	Sky
unique features of plume or stack	embers
Weather:	
ambient temperature (F)	33°
relative humidity	70%
wind direction	NE
wind speed	3-4
barometric pressure	30.5
rain? fog? snow? haze?	None
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	

Observer's name	Robert Bush
Observer certification date	1/6/2013
Certifying agency	Whitlow
Observer affiliation	AMEC

sec	0	15	30	45	sec	0	15	30	45
min	Run 9	Time: 0524			min	Run	Time:		
1	5	5	5	5	1				
2	5	5	5	5	2				
128°3	5	5	5	0	3				
4	0	5	5	5	4				
5	5	5	5	5	5				
6	5	5	5	5	6				
6-minute Average:	4.6%				6-minute Average:				
Source Conditions:	75% Capacity				Source Conditions:				
Sun Angle (degrees):	—				Sun Angle (degrees):				
	Run 10	Time: 0550				Run	Time:		
1	0	0	5	0	1				
2	0	0	0	0	2				
128°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:	0.2%				6-minute Average:				
Source Conditions:	75% Capacity				Source Conditions:				
Sun Angle (degrees):	—				Sun Angle (degrees):				
	Run	Time:				Run	Time:		
1					1				
2					2				
3					3				
4					4				
5					5				
6					6				
6-minute Average:					6-minute Average:				
Source Conditions:					Source Conditions:				
Sun Angle (degrees):					Sun Angle (degrees):				
	Run	Time:				Run	Time:		
1					1				
2					2				
3					3				
4					4				
5					5				
6					6				
6-minute Average:					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~~

AMEC

UNIT 1

Run Number(s) and Description Pg. 1 1-11-13

Visible Emissions Evaluation

Facility Name	GCC FBF
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	
Control Equipment / Emission Source	ACB
Date of Observation	1-11-13
Start Time	720
Stop Time	
Distance from observer (ft)	100'
Direction from observer	NW
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	27 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	Top Edge
target?	
describe background to plume	Containers
unique features of plume or stack	
Weather:	
ambient temperature (F)	38°F
relative humidity	50%
wind direction	W
wind speed	5-10
barometric pressure	29.82
rain? fog? snow? haze?	OVERCAST
Glasses worn:	
corrective? (Y/N)	Y
sunglasses? (Y/N)	N

Observer's name	MARK T. READY
Observer certification date	10-22-12
Certifying agency	KOONTZ
Observer affiliation	AVOGADRO/DA

sec	0	15	30	45
min	Run 1 Time: 720			
1	20	10	10	10
2	10	10	10	10
3	15	5	5	5
Fixed 4	5	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:	5.2			
Source Conditions:	BROKEN FAN			
Sun Angle (degrees):	5			
	Run 2 Time: 740			
1	10	5	15	10
2	10	5	5	5
3	15	10	10	15
4	15	5	0	5
5	0	0	0	0
6	5	5	10	10
6-minute Average:	7.1			
Source Conditions:	FIXED			
Sun Angle (degrees):	5			
	Run 3 Time: 800			
1	5	5	5	5
2	5	0	5	5
3	5	5	10	0
4	0	5	0	10
5	5	0	10	15
6	15	15	5	15
6-minute Average:	6.7			
Source Conditions:				
Sun Angle (degrees):	5			
	Run 4 Time: 820			
1	20	20	5	5
2	15	5	0	10
3	5	10	0	0
4	0	0	5	10
5	5	0	0	0
6	0	0	0	5
6-minute Average:	4.6			
Source Conditions:				
Sun Angle (degrees):	10			

sec	0	15	30	45
min	Run 5 Time: 840			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	5	0	5	5
6	5	5	0	0
6-minute Average:	1.0			
Source Conditions:				
Sun Angle (degrees):	10			
	Run 6 Time: 900			
1	5	0	10	5
2	5	15	15	10
3	0	0	0	0
4	15	0	0	0
5	15	10	5	5
6	10	0	10	0
6-minute Average:	5.6			
Source Conditions:				
Sun Angle (degrees):	10			
	Run 7 Time: 920			
1	0	0	5	5
2	0	0	15	15
3	0	0	0	0
4	0	0	0	0
5	5	0	0	0
6	0	0	0	0
6-minute Average:	1.9			
Source Conditions:				
Sun Angle (degrees):	15			
	Run 8 Time: 940			
1	5	5	5	5
2	5	0	10	5
3	5	5	0	0
4	0	0	5	0
5	0	0	0	0
6	0	15	10	10
6-minute Average:	3.8			
Source Conditions:				
Sun Angle (degrees):	15			

Range of opacity readings:
low 0 high 15 20

Number of readings above 10 % were 20

Observer's Signature

UNIT 1

Visible Emissions Evaluation

Run Number(s) and Description: Pg. 2 1-11-13

Facility Name	ECC FBF
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn NY
Type of Facility	
Control Equipment / Emission Source	ACB
Date of Observation	1-11-13
Start Time	1000
Stop Time	
Distance from observer (ft)	100'
Direction from observer	NW
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	27 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	Top edge
target?	
describe background to plume	Containers
unique features of plume or stack	
Weather:	
ambient temperature (F)	42°F
relative humidity	50%
wind direction	NW
wind speed	5-10
barometric pressure	29.82
rain? fog? snow? haze?	Overcast
Glasses worn:	
corrective? (Y/N)	Y
sunglasses? (Y/N)	N

Observer's name	MARK T. READY
Observer certification date	10-22-12
Certifying agency	KOONTZ
Observer affiliation	AVOGADRO / DA

sec	0	15	30	45
min	Run 9 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				
Source Conditions:				
Sun Angle (degrees): 20				
	Run 10 Time: 1020			
1	5	5	10	0
2	0	5	0	15
3	5	10	10	5
4	15	5	5	10
5	5	5	15	5
6	0	0	0	0
6-minute Average: 5.6				
Source Conditions:				
Sun Angle (degrees): 30				
	Run 11 Time: 1040			
1	0	0	0	0
2	5	10	5	0
3	10	0	0	0
4	0	0	0	5
5	0	0	5	0
6	5	5	0	0
6-minute Average: 2.1				
Source Conditions:				
Sun Angle (degrees): 30				
	Run 12 Time: 1100			
1	15	10	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	5	5	5	0
6	0	5	0	10
6-minute Average: 2.3				
Source Conditions:				
Sun Angle (degrees): 35				

sec	0	15	30	45
min	Run 13 Time: 1120			
1	5	5	5	5
2	15	5	5	5
3	0	10	10	0
4	5	10	15	10
5	10	10	5	5
6	5	10	5	5
6-minute Average: 6.9				
Source Conditions:				
Sun Angle (degrees): 55				
	Run 14 Time: 1140			
1	0	5	0	0
2	5	5	0	5
3	5	0	0	0
4	0	0	0	0
5	5	5	0	5
6	5	0	0	10
6-minute Average: 2.3				
Source Conditions:				
Sun Angle (degrees): 55				
	Run 15 Time: 1200			
1	5	10	5	5
2	10	5	10	5
3	5	5	5	5
4	0	10	5	5
5	10	5	5	10
6	10	10	15	10
6-minute Average: 7.1				
Source Conditions:				
Sun Angle (degrees): 55				
	Run 16 Time: 1220			
1	5	5	5	5
2	0	5	5	5
3	5	5	5	5
4	5	5	0	0
5	0	0	5	5
6	0	0	5	5
6-minute Average: 3.5				
Source Conditions:				
Sun Angle (degrees): 50				

Range of opacity readings: low 0 high 15

Number of readings above 10 % were 6

Observer's Signature

UNIT 1

Run Number(s) and Description

 1-11-13

Visible Emissions Evaluation

Facility Name	ECC FBF
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn NY
Type of Facility	
Control Equipment / Emission Source	ACB
Date of Observation	1-11-13
Start Time	1240
Stop Time	
Distance from observer (ft)	160'
Direction from observer	NE
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	27 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	Top edge
target?	
describe background to plume	Containers
unique features of plume or stack	
Weather:	
ambient temperature (F)	45°F
relative humidity	50%
wind direction	WNW
wind speed	5-10
barometric pressure	29.82
rain? fog? snow? haze?	Overcast Rain/Condition
Glasses worn:	
corrective? (Y/N)	Y
sunglasses? (Y/N)	N

Observer's name	MARK J. READY
Observer certification date	10-22-12
Certifying agency	KOONTZ
Observer affiliation	AVOGADRO/DA

sec	0	15	30	45
min	Run 17 Time: 1240			
1	10	10	5	15
2	10	5	10	10
3	0	5	5	15
4	5	15	20	5
5	5	5	5	5
6	5	5	5	5
6-minute Average:	7.7			
Source Conditions:				
Sun Angle (degrees):	50			
	Run 18 Time: 1300			
1	20	15	10	10
2	10	5	10	5
3	5	5	15	20
4	10	15	15	10
5	5	5	5	5
6	5	5	10	5
6-minute Average:	9.4			
Source Conditions:				
Sun Angle (degrees):	50			
	Run 19 Time: 1320			
1	10	5	10	20
2	5	5	5	5
3	5	5	10	15
4	5	5	10	5
5	15	15	15	15
6	15	10	10	10
6-minute Average:	9.6			
Source Conditions:				
Sun Angle (degrees):	50			
	Run 20 Time: 1340			
1	5	15	5	10
2	0	5	15	15
3	5	10	5	5
4	5	15	15	5
5	0	0	0	0
6	5	5	0	0
6-minute Average:	5.6			
Source Conditions:				
Sun Angle (degrees):	45			

sec	0	15	30	45
min	Run 21 Time: 1400			
1	0	0	0	0
2	5	5	0	0
3	5	5	0	0
4	0	0	10	0
5	0	0	5	5
6	0	0	0	0
6-minute Average:	1.7			
Source Conditions:				
Sun Angle (degrees):	40			
	Run 22 Time: 1420			
1	5	5	10	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	5	5	0
6	0	0	0	0
6-minute Average:	4.2			
Source Conditions:				
Sun Angle (degrees):	40			
	Run 23 Time: 1440			
1	0	5	0	5
2	10	5	5	0
3	10	10	5	10
4	5	5	5	5
5	10	5	5	5
6	5	5	5	5
6-minute Average:	5.4			
Source Conditions:				
Sun Angle (degrees):	40			
	Run 24 Time: 1500			
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):	30			

Range of opacity readings:

low 0 high 20

Number of readings above 10, % were 22

Observer's Signature

Visible Emissions Evaluation

UNIT 1

Run Number(s) and Description

 1-11-13

Facility Name	ECC FISF
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn NY
Type of Facility	
Control Equipment / Emission Source	ACB
Date of Observation	1-11-13
Start Time	1520
Stop Time	
Distance from observer (ft)	160'
Direction from observer	NE
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	27 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	Fog edge
target?	
describe background to plume	Containers
unique features of plume or stack	
Weather:	
ambient temperature (F)	44°F
relative humidity	75%
wind direction	WNW
wind speed	5-10
barometric pressure	29.82
rain? fog? snow? haze?	RAIN
Glasses worn:	
corrective? (Y/N)	Y
sunglasses? (Y/N)	N

Observer's name	MARK T. READY
Observer certification date	10-22-12
Certifying agency	KOONTZ
Observer affiliation	AVOGADRO / DA

sec	0	15	30	45
min	Run 26 Time: 1520			
1	0	0	5	5
2	5	5	5	5
3	0	0	0	5
4	0	0	0	0
5	0	5	0	0
6	5	0	0	5
6-minute Average:	2.1			
Source Conditions:				
Sun Angle (degrees):	25			
	Run 26 Time: 1540			
1	5	10	5	10
2	5	5	5	5
3	10	10	5	5
4	15	15	15	10
5	15	10	15	10
6	10	15	10	10
6-minute Average:	9.6			
Source Conditions:				
Sun Angle (degrees):	20			
	Run 27 Time: 1600			
1	0	0	0	0
2	0	0	5	0
3	5	0	0	5
4	0	0	0	0
5	5	10	5	5
6	0	0	5	0
6-minute Average:	1.9			
Source Conditions:				
Sun Angle (degrees):	10			
	Run 28 Time: 1620			
1	0	0	5	5
2	5	5	5	5
3	0	0	5	5
4	5	5	5	5
5	0	0	0	5
6	5	0	0	0
6-minute Average:	2.9			
Source Conditions:				
Sun Angle (degrees):	10			

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 15

Number of readings above 10 % were 16

Observer's Signature

ACB -1 (Night)

Visible Emissions Evaluation

AMEC

Facility Name: ECC/Floyd Bennett Field
~~AVOGADRO~~ Project No.: 6480131005
Location (city, state): Brooklyn NY
Type of Facility: Nat'l Park
Control Equipment / Emission Source: ACB-1

Date of Observation: 1/11/13
Start Time: 1831
Stop Time: 2139

Distance from observer (ft): ~300 ft
Direction from observer: See 3 min cell
Stack height (fr. observer's elev.) (ft): 8'
Stack Diameter (in): 27' x 9'

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: ↑ 20'
- target?: sky/canopy
- describe background to plume: sky/canopy
- unique features of plume or stack:

Weather:
- ambient temperature (F): 45° F
- relative humidity: 93%
- wind direction: ESE
- wind speed: 5-7 mph
- barometric pressure: 30.24"
- rain? fog? snow? haze?: rain

Glasses worn:
- corrective? (Y/N): N
- sunglasses? (Y/N):

Observer's name: Robert Bush
Observer certification date: 1/6/13
Certifying agency: Whitlow
Observer affiliation: AMEC

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

sec	0	15	30	45
min	Run 1	Time: 1831		
1	5	5	10	10
2	5	5	5	5
92°3	5	5	5	5
4	10	5	10	5
5	5	10	5	5
6	10	5	5	5
6-minute Average:	6.25%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			
	Run 2	Time: 1857		
1	10	15	20	15
2	10	15	10	15
92°3	10	10	10	15
4	10	10	10	10
5	5	5	10	10
6	5	5	5	5
6-minute Average:	10.2%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			
	Run 3	Time: 1923		
1	10	5	10	10
2	5	5	5	5
92°3	5	5	10	5
4	10	5	5	5
5	5	0	0	0
6	0	5	5	5
6-minute Average:	5.2%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			
	Run 4	Time: 1949		
1	0	0	0	0
2	0	0	0	0
92°3	0	0	0	0
4	0	5	0	0
5	0	0	0	0
6	0	0	5	5
6-minute Average:	.6%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			

sec	0	15	30	45
min	Run 5	Time: 2015		
1	5	5	0	0
2	0	0	0	0
92°3	0	0	0	0
4	0	0	0	0
5	5	5	5	5
6	5	5	5	5
6-minute Average:	2.1%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			
	Run 6	Time: 2041		
1	5	5	5	5
2	5	5	5	5
92°3	0	0	0	0
4	5	5	5	5
5	5	0	0	0
6	5	0	0	0
6-minute Average:	1.25%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			
	Run 7	Time: 2107		
1	0	0	0	0
2	0	5	0	0
3	5	5	5	5
4	0	0	0	0
5	0	0	0	0
6	0	0	5	5
6-minute Average:	1.5%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			
	Run 8	Time: 2135		
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:	Capacity			
Sun Angle (degrees):	—			

Range of opacity readings: low 0 high 20

Number of readings above 10% were 6

Observer's Signature

~~AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa~~

AMEC

ACB-1 (night)

ACB-1

Fg-4

Visible Emissions Evaluation

Run Number(s) and Description: 9-13

Facility Name	FCC/Floyd Bennt
~~AVOGADRO~~ Project No.	643013/006
Location (city, state)	Brooklyn, NY
Type of Facility	Nat'l Park
Control Equipment / Emission Source	ACB-1
Date of Observation	1/11/13
Start Time	2159
Stop Time	2349
Distance from observer (ft)	~300'
Direction from observer	See 3 min call
Stack height (fr. observer's elev.) (ft)	8'
Stack Diameter (in)	27" x 9"
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	~20' ↑
target?	Sky/corner
describe background to plume	Sky/corner
unique features of plume or stack	
Weather:	
ambient temperature (F)	46°
relative humidity	94%
wind direction	NNE
wind speed	3 mph
barometric pressure	30.19"
rain? fog? snow? haze?	rain
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	

Observer's name	Robert Bush
Observer certification date	1/6/13
Certifying agency	Wh. Plains
Observer affiliation	AMEC

sec	0	15	30	45
min	Run 9 Time: 2159			
1	15	20	20	20
2	25	25	20	15
923	20	20	25	20
4	30	25	20	30
5	25	25	20	25
6	15	15	15	15
6-minute Average:	21.0%			
Source Conditions:	Capacity			
Sun Angle (degrees):				
	Run 10 Time: 2225			
1	5	5	5	5
2	10	10	5	10
893	10	10	10	10
4	15	20	15	15
5	10	10	10	10
6	5	5	10	10
6-minute Average:	9.6%			
Source Conditions:	Capacity			
Sun Angle (degrees):				
	Run 11 Time: 2251			
1	10	15	15	10
2	10	10	10	10
893	10	5	5	0
4	0	5	5	5
5	5	10	5	5
6	5	5	5	5
6-minute Average:	7.1%			
Source Conditions:	Capacity			
Sun Angle (degrees):				
	Run 12 Time: 2317			
1	20	20	20	15
2	15	10	10	15
893	15	20	15	20
4	15	10	15	15
5	10	10	10	15
6	20	20	15	10
6-minute Average:	15%			
Source Conditions:	Capacity			
Sun Angle (degrees):				

sec	0	15	30	45
min	Run 13 Time: 2343			
1	10	10	10	10
2	5	10	10	10
1313	15	15	10	10
4	10	10	5	5
5	10	5	5	10
6	5	10	10	10
6-minute Average:	9.2%			
Source Conditions:	Capacity			
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):				

1/11 End

Range of opacity readings: low 0 high 30

Number of readings above 10 % were 48

Windshift after Run 12
↳ Changed location

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

AMEC

Nighttime ACB-2 only
ACB-1 offline → repairs began ~2130

Visible Emissions Evaluation

AMEC

Facility Name	ECC/Floyd Bennet Field
~~AVOGADRO~~ Project No.	6480131005
Location (city, state)	Brooklyn, NY
Type of Facility	Natl Park
Control Equipment / Emission Source	ACB-2
Date of Observation	1/10/13
Start Time	2228 1/10
Stop Time	0136 1/11
Distance from observer (ft)	~300'
Direction from observer	317°/68°
Stack height (fr. observer's elev.) (ft)	8'
Stack Diameter (in)	20'x8'

See 3 min. call for exact location

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	~30 ft ↑
target?	sky/[illegible] R2B
describe background to plume	sky/[illegible] R2B
unique features of plume or stack	some embers

Weather:

ambient temperature (F)	40°
relative humidity	50%
wind direction	NNE
wind speed	2.75-3.25 mph
barometric pressure	30.54 in
rain? fog? snow? haze?	none

Glasses worn:

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

Observer's name	Robert Bush
Observer certification date	1/6/13
Certifying agency	Whiteflow
Observer affiliation	AMEC

Run Number(s) and Description (Runs)

1/10/13	1/11/13
9-12	1-4

1/11/13 → Start here

sec	0	15	30	45
min	Run 9 Time: 2228			
1	5	5	5	5
2	5	5	5	5
317°3	5	30	10	10
4	5	5	10	10
5	5	5	5	5
6	5	5	5	5
6-minute Average:	6.9%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			
	Run 10 Time: 2254			
1	5	5	5	10
2	10	10	15	10
317°3	10	5	5	10
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average:	6.7%			
Source Conditions:	Capacity			
Sun Angle (degrees):				
	Run 11 Time: 2320			
1	5	5	5	5
2	5	5	5	5
317°3	5	5	5	5
4	10	10	10	5
5	10	10	10	5
6	10	5	5	5
6-minute Average:	6.5%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			
	Run 12 Time: 2346			
1	5	5	5	10
2	10	10	10	10
317°3	10	5	5	5
4	5	10	5	10
5	10	10	10	10
6	15	10	5	10
6-minute Average:	8.3%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			

sec	0	15	30	45
min	Run 1 Time: 0012			
1	0	5	5	5
2	10	10	15	15
317°3	15	15	15	10
4	10	10	5	10
5	5	15	15	15
6	10	10	10	10
6-minute Average:	10.2%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			
	Run 2 Time: 0038			
1	5	5	5	5
2	5	5	5	5
317 3	5	5	10	10
4	10	10	10	10
5	10	15	10	10
6	5	10	5	5
6-minute Average:	7.5%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			
	Run 3 Time: 0104			
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	10	5	10
6	10	5	5	5
6-minute Average:	5.6%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			
	Run 4 Time: 0130			
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:	Capacity			
Sun Angle (degrees):	—			

Range of opacity readings:
low 0 high 30

Number of readings above 10 % were 11

Observer's Signature

~~AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa~~

AMEC

ACB-2

1/11/13

Visible Emissions Evaluation

AMEC

Facility Name	ECC/Floyd Bennet
~~AVOCADRO~~ Project No.	64801.31006
Location (city, state)	Brooklyn, NY
Type of Facility	Nat'l Park
Control Equipment / Emission Source	ACB-2
Date of Observation	1/11/13
Start Time	0156
Stop Time	0504
Distance from observer (ft)	~250 ft
Direction from observer	1D 98°/81°/118°
Stack height (fr. observer's elev.) (ft)	8'
Stack Diameter (in)	20 x 8'

See 3 min call

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	~40' ↑
target?	sky
describe background to plume	sky
unique features of plume or stack	embers

Weather:

ambient temperature (F)	37°
relative humidity	56%
wind direction	NNE
wind speed	3.5-4.7
barometric pressure	30.54
rain? fog? snow? haze?	none

Glasses worn:

corrective? (Y/N)	no
sunglasses? (Y/N)	

Observer's name	Robert Bush
Observer certification date	1/6/13
Certifying agency	Whitlow
Observer affiliation	AMEC

Run Number(s) and Description: 5-12

sec	0	15	30	45
min	Run 5	Time: 0156		
1	15	5	15	15
2	5	5	5	0
81°3	5	0	5	5
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average:	5.4%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			

sec	0	15	30	45
min	Run 9	Time: 0340		
1	5	5	5	5
2	5	5	5	5
118°3	5	10	15	10
4	10	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average:	6.0%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			

	Run 6	Time: 0222		
1	0	0	40	45
2	40	55	60	65
118°3	60	70	65	50
4	40	40	20	20
5	15	5	10	5
6	5	5	5	5
6-minute Average:	30.2%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			

	Run 10	Time: 0406		
1	5	5	5	5
2	5	5	5	0
128°3	0	0	0	0
4	0	0	5	5
5	5	5	5	20
6	30	35	25	15
6-minute Average:	7.7%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			

	Run 7	Time: 0248		
1	5	0	0	0
2	5	5	5	5
118°3	5	5	5	5
4	5	5	0	0
5	0	5	5	5
6	5	5	5	5
6-minute Average:	3.75%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			

	Run 11	Time: 0432		
1	10	20	15	20
2	10	10	5	5
128°3	5	5	10	10
4	10	10	5	5
5	5	5	5	5
6	5	5	10	5
6-minute Average:	8.3%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			

	Run 8	Time: 0314		
1	5	5	5	5
2	5	5	5	5
118°3	5	5	5	5
4	5	5	5	10
5	10	5	5	10
6	10	10	5	5
6-minute Average:	6.0%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			

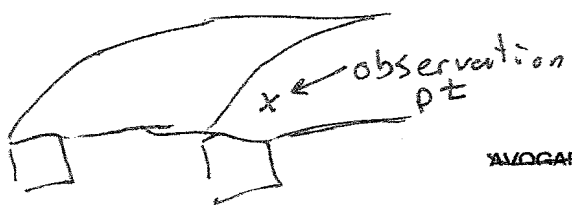
	Run 12	Time: 0458		
1	5	5	0	0
2	0	0	0	5
128°3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average:	3.8%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			

Range of opacity readings: low 0 high 70

Number of readings above 10 % were 26

Observer's Signature

~~AVOCADRO~~ ENVIRONMENTAL CORPORATION, Easton Pa



ACB-1 ACB-2

AMEC

Run 6 → Wind shift here / turbulence, plumes indistinguishable

ACB-2

1/11/13

Visible Emissions Evaluation

Facility Name: Ecc/Floyd Bennet Field

AMEC ~~AVOGADRO~~ Project No.: 6480131001

Location (city, state): Brooklyn, NY

Type of Facility: Nat'l Park

Control Equipment / Emission Source: ACB-2

Date of Observation: 1/11/13

Start Time: 0524

Stop Time: 0556

Distance from observer (ft): ~250'

Direction from observer: 128°

Stack height (fr. observer's elev.) (ft): 8'

Stack Diameter (in): 20'x8'

Description of plume: Cont

- continuous? fugitive? intermittent? ~~27x~~ 9'RLB
- 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: ~20 ft ↑
- target? sky
- describe background to plume: sky
- unique features of plume or stack: embers

Weather:

- ambient temperature (F): 33°
- relative humidity: 70%
- wind direction: NE
- wind speed: 3-4
- barometric pressure: 30.5
- rain? fog? snow? haze? ~~3~~ None

Glasses worn:

- corrective? (Y/N): N
- sunglasses? (Y/N):

Observer's name	Robert Bush
Observer certification date	1/6/13
Certifying agency	Whitlow
Observer affiliation	AMEC

Run Number(s) and Description: 13-14

sec	0	15	30	45
min	Run 13 Time: 0524			
1	0	0	0	0
2	0	0	5	5
128° 3	5	5	5	5
4	5	5	0	5
5	0	5	0	5
6	0	5	10	5
6-minute Average:	3.1%			
Source Conditions:	Capacity			
Sun Angle (degrees):	—			
	Run 14 Time: 0550			
1	0	0	0	0
2	0	0	0	0
128° 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:	Capacity			
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):				

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):				

Range of opacity readings: low 0 high 10

Number of readings above 10 % were 0

Observer's Signature

~~AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa~~

AMEC

Visible Emissions Evaluation

UNIT 2

Run Number(s) and Description

Pg. 1 1-11-13

Facility Name	ECC EBF
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn NY
Type of Facility	
Control Equipment / Emission Source	ACB
Date of Observation	1-11-13
Start Time	720
Stop Time	
Distance from observer (ft)	100'
Direction from observer	NW
Stack height (fr. observer's elev.) (ft)	10'
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	Top edge
target?	
describe background to plume	Containers
unique features of plume or stack	
Weather:	
ambient temperature (F)	38°F
relative humidity	50%
wind direction	W
wind speed	5-10
barometric pressure	29.82
rain? fog? snow? haze?	OVERCAST
Glasses worn:	
corrective? (Y/N)	Y
sunglasses? (Y/N)	N

Observer's name	MARC T. READY
Observer certification date	10-22-12
Certifying agency	KEYSTONE
Observer affiliation	AVOGADRO / DA

sec	0	15	30	45
min	Run 1 Time: 720			
1	0	5	15	15
2	5	5	10	10
3	5	5	10	5
4	5	5	5	5
5	5	5	0	0
6	5	0	0	0
6-minute Average:	5.2			
Source Conditions:				
Sun Angle (degrees):	5			
	Run 4 Time: 740			
1	5	5	0	0
2	5	0	5	5
3	0	5	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:	1.3			
Source Conditions:				
Sun Angle (degrees):	5			
	Run 7 Time: 820			
1	5	5	5	5
2	5	0	5	5
3	5	5	0	0
4	0	0	0	0
5	0	0	5	0
6	0	0	0	0
6-minute Average:	2.1			
Source Conditions:				
Sun Angle (degrees):	5			
	Run 10 Time: 900			
1	5	5	5	5
2	5	5	0	5
3	5	5	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:	1.7			
Source Conditions:				
Sun Angle (degrees):	10			

sec	0	15	30	45
min	Run 5 Time: 840			
1	0	0	0	0
2	0	0	0	0
3	0	0	5	0
4	5	5	5	5
5	0	5	5	5
6	5	5	0	0
6-minute Average:	2.1			
Source Conditions:				
Sun Angle (degrees):	10			
	Run 6 Time: 900			
1	0	0	0	5
2	5	0	0	5
3	10	15	5	0
4	0	0	5	5
5	0	5	0	5
6	5	0	0	0
6-minute Average:	2.9			
Source Conditions:				
Sun Angle (degrees):	10			
	Run 9 Time: 920			
1	5	5	5	5
2	5	5	0	5
3	0	0	0	0
4	0	5	5	5
5	5	0	0	10
6	0	10	5	5
6-minute Average:	3.5			
Source Conditions:				
Sun Angle (degrees):	15			
	Run 8 Time: 940			
1	0	0	0	0
2	0	5	5	5
3	0	0	0	0
4	10	0	0	5
5	0	0	0	0
6	0	0	0	0
6-minute Average:	1.3			
Source Conditions:				
Sun Angle (degrees):	15			

Range of opacity readings:

low 0 high 15

Number of readings above 10 % were 3

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

UNIT 2

Run Number(s) and Description

 1-11-13

Visible Emissions Evaluation

Facility Name	ECC FBF
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn NY
Type of Facility	
Control Equipment / Emission Source	ACB
Date of Observation	1-11-13
Start Time	1000
Stop Time	
Distance from observer (ft)	100'
Direction from observer	NW
Stack height (fr. observer's elev.) (ft)	10'
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	Top Edge
target?	
describe background to plume	Containers
unique features of plume or stack	
Weather:	
ambient temperature (F)	42°F
relative humidity	50%
wind direction	NW
wind speed	5-10
barometric pressure	29.82
rain? fog? snow? haze?	Overcast
Glasses worn:	
corrective? (Y/N)	Y
sunglasses? (Y/N)	N

Observer's name	MARK T. READY
Observer certification date	10-22-12
Certifying agency	KOONTZ
Observer affiliation	AVOGADRO/DA

sec	0	15	30	45	sec	0	15	30	45
min	Run 9 Time: 1000				min	Run 10 Time: 1020			
1	0	0	5	5	1	0	0	0	5
2	0	5	5	5	2	0	0	0	0
3	0	0	0	5	3	0	5	0	0
4	5	0	0	5	4	0	5	0	5
5	5	5	0	0	5	0	0	0	5
6	0	0	5	5	6	0	5	10	5
6-minute Average:	2.5				6-minute Average:	1.7			
Source Conditions:					Source Conditions:				
Sun Angle (degrees):					Sun Angle (degrees):	30			
min	Run 11 Time: 1040				min	Run 12 Time: 1100			
1	5	10	10	5	1	5	0	5	5
2	5	5	5	5	2	5	5	5	5
3	5	0	5	5	3	0	0	15	10
4	5	0	5	10	4	15	5	5	5
5	5	10	5	5	5	10	5	10	10
6	10	10	0	5	6	10	10	10	10
6-minute Average:	5.6				6-minute Average:	6.9			
Source Conditions:					Source Conditions:				
Sun Angle (degrees):	30				Sun Angle (degrees):	35			
min	Run 13 Time: 1140				min	Run 14 Time: 1220			
1	0	0	0	0	1	15	10	10	10
2	0	5	5	5	2	5	5	5	5
3	5	5	5	5	3	5	10	10	5
4	0	5	5	5	4	5	10	10	5
5	5	0	0	0	5	5	5	5	5
6	0	5	0	5	6	0	0	0	5
6-minute Average:	2.7				6-minute Average:	6.3			
Source Conditions:					Source Conditions:				
Sun Angle (degrees):	35				Sun Angle (degrees):	50			

Range of opacity readings:

low 0 high 20

Number of readings above 10 % were 5

Observer's Signature

UNIT 2

Run Number(s) and Description

 1-11-13

Visible Emissions Evaluation

Facility Name	ECC FBF
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn NY
Type of Facility	
Control Equipment / Emission Source	ACB
Date of Observation	1-11-13
Start Time	1240
Stop Time	
Distance from observer (ft)	160'
Direction from observer	NE
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	70 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	Top edge
target?	
describe background to plume	Containers
unique features of plume or stack	
Weather:	
ambient temperature (F)	45°F
relative humidity	50%
wind direction	WNW
wind speed	5-10
barometric pressure	29.82
rain? fog? snow? haze?	Overcast RAIN
Glasses worn:	
corrective? (Y/N)	Y
sunglasses? (Y/N)	N

Observer's name	MARK J. READY
Observer certification date	10-22-12
Certifying agency	KOONTZ
Observer affiliation	AVOGADRO / DA

sec	0	15	30	45
min	Run 17 Time:		1240	
1	5	5	0	0
2	5	5	5	0
3	0	0	0	5
4	5	5	5	5
5	15	5	5	5
6	5	5	5	15
6-minute Average:			4.6	
Source Conditions:				
Sun Angle (degrees):			50	
	Run 18 Time:		1300	
1	0	5	0	5
2	5	5	0	0
3	0	5	5	0
4	0	0	0	0
5	0	0	0	0
6	0	0	5	5
6-minute Average:			1.7	
Source Conditions:				
Sun Angle (degrees):			50	
	Run 19 Time:		1320	
1	5	5	5	5
2	0	0	5	5
3	5	0	5	0
4	5	10	5	5
5	0	0	0	5
6	5	5	5	5
6-minute Average:			3.3	
Source Conditions:				
Sun Angle (degrees):			50	
	Run 20 Time:		1340	
1	10	10	5	10
2	0	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	10	10	5
6	5	5	0	0
6-minute Average:			5.4	
Source Conditions:				
Sun Angle (degrees):			5045	

sec	0	15	30	45
min	Run 21 Time:		1400	
1	15	15	15	10
2	10	10	5	10
3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average:			7.1	
Source Conditions:				
Sun Angle (degrees):			40	
	Run 22 Time:		1420	
1	15	15	15	10
2	10	10	10	5
3	10	5	5	5
4	10	5	5	5
5	5	5	5	5
6	0	0	5	0
6-minute Average:			6.9	
Source Conditions:				
Sun Angle (degrees):			40	
	Run 23 Time:		1440	
1	10	5	5	5
2	5	10	10	5
3	5	5	5	0
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average:			5.4	
Source Conditions:				
Sun Angle (degrees):			40	
	Run 24 Time:		1500	
1	5	10	5	5
2	5	5	5	5
3	5	5	5	5
4	5	0	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average:			5.0	
Source Conditions:				
Sun Angle (degrees):			30	

Range of opacity readings:

low 0 high 15

Number of readings above 10 % were 8

Observer's Signature

Visible Emissions Evaluation

UNIT 2

Run Number(s) and Description

 1-11-13

Facility Name	ECC FBF
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn NY
Type of Facility	
Control Equipment / Emission Source	ACB
Date of Observation	1-11-13
Start Time	1520
Stop Time	
Distance from observer (ft)	160'
Direction from observer	NE
Stack height (fr. observer's elev.) (ft)	10'
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	Top edge
target?	
describe background to plume	Containers
unique features of plume or stack	

Weather:

ambient temperature (F)	44°F
relative humidity	75%
wind direction	WNW
wind speed	5-10
barometric pressure	29.82
rain? fog? snow? haze?	RAIN

Glasses worn:

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

Observer's name	MARK T. READY
Observer certification date	10-22-12
Certifying agency	KOOMTZ
Observer affiliation	AVOGADRO / DA

sec	0	15	30	45	sec	0	15	30	45
min	Run 25 Time: 1520				min	Run	Time:		
1	15	20	15	15	1				
2	15	10	10	10	2				
3	20	10	5	5	3				
4	5	5	5	5	4				
5	5	5	5	5	5				
6	5	0	5	5	6				
6-minute Average:	8.5				6-minute Average:				
Source Conditions:					Source Conditions:				
Sun Angle (degrees):	25				Sun Angle (degrees):				
	Run 26 Time: 1540					Run Time:			
1	5	5	5	5	1				
2	10	5	5	0	2				
3	0	0	0	5	3				
4	5	5	5	5	4				
5	5	5	5	5	5				
6	0	0	5	5	6				
6-minute Average:	4.0				6-minute Average:				
Source Conditions:					Source Conditions:				
Sun Angle (degrees):	20				Sun Angle (degrees):				
	Run 27 Time: 1600					Run Time:			
1	15	15	15	15	1				
2	5	5	10	10	2				
3	5	5	5	5	3				
4	5	5	10	10	4				
5	5	5	5	5	5				
6	5	5	10	10	6				
6-minute Average:	7.9				6-minute Average:				
Source Conditions:					Source Conditions:				
Sun Angle (degrees):	10				Sun Angle (degrees):				
	Run 28 Time: 1620					Run Time:			
1	10	10	5	5	1				
2	5	5	5	5	2				
3	5	0	0	5	3				
4	5	5	5	10	4				
5	10	10	5	10	5				
6	10	5	5	5	6				
6-minute Average:	6.0				6-minute Average:				
Source Conditions:					Source Conditions:				
Sun Angle (degrees):	10				Sun Angle (degrees):				

Range of opacity readings:

low 0 high 15 20

Number of readings above 10 % were 10

Observer's Signature

ACB-2 (Night)

Visible Emissions Evaluation

Facility Name	ECC/Floyd Bennet Field
AMEC ~~AVOGADRO~~ Project No.	648013100S
Location (city, state)	Brooklyn NY
Type of Facility	Nat'l Park
Control Equipment / Emission Source	ACB-2
Date of Observation	1/11/13
Start Time	1831
Stop Time	2139
Distance from observer (ft)	~300'
Direction from observer	See 3 min call
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	↖ 20'
target?	sky/connex
describe background to plume	sky/connex
unique features of plume or stack	
Weather:	
ambient temperature (F)	45° F
relative humidity	93%
wind direction	ESE
wind speed	5-7 mph
barometric pressure	30.24"
rain? fog? snow? haze?	rain
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	

Observer's name	Robert Bush
Observer certification date	1/6/13
Certifying agency	Whitlam
Observer affiliation	AMEC

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

sec	0	15	30	45
min	Run 1 Time: 1831			
1	5	5	5	5
2	10	10	10	5
92°3	5	5	5	10
4	5	5	5	10
5	5	5	5	5
6	5	5	10	10
6-minute Average: 6.5%				
Source Conditions: Capacity				
Sun Angle (degrees): —				
	Run 2 Time: 1857			
1	5	5	5	5
2	5	5	5	5
92°3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	5	10	15	15
6-minute Average: 6.0%				
Source Conditions: Capacity				
Sun Angle (degrees): —				
	Run 3 Time: 1923			
1	10	15	10	10
2	10	10	10	10
92°3	10	10	10	10
4	10	10	15	10
5	10	10	15	15
6	10	15	10	15
6-minute Average: 11.25%				
Source Conditions: Capacity				
Sun Angle (degrees): —				
	Run 4 Time: 1949			
1	5	5	5	10
2	5	5	5	10
92°3	10	5	5	5
4	5	5	10	10
5	10	5	5	5
6	5	5	5	5
6-minute Average: 6.25%				
Source Conditions: Capacity				
Sun Angle (degrees): —				

sec	0	15	30	45
min	Run 5 Time: 2015			
1	10	15	15	15
2	10	15	15	20
92°3	20	20	20	15
4	15	10	10	10
5	20	25	25	25
6	30	20	20	15
6-minute Average: 17.3%				
Source Conditions: Capacity				
Sun Angle (degrees): —				
	Run 6 Time: 2041			
1	10	15	15	10
2	10	15	10	10
92°3	10	10	10	10
4	10	10	15	10
5	15	10	15	15
6	10	10	10	10
6-minute Average: 11.5%				
Source Conditions: Capacity				
Sun Angle (degrees): —				
	Run 7 Time: 2107			
1	10	10	15	15
2	15	15	10	10
3	10	15	10	10
4	10	10	10	15
5	15	15	15	15
6	15	15	15	10
6-minute Average: 12.7%				
Source Conditions: Capacity				
Sun Angle (degrees): —				
	Run 8 Time: 2133			
1	5	5	5	5
2	5	5	5	5
3	10	10	10	10
4	15	10	15	25
5	25	20	20	25
6	20	20	25	20
6-minute Average: 13.3%				
Source Conditions: Capacity				
Sun Angle (degrees): —				

Range of opacity readings: low 0 high 30

Number of readings above 16 % were 58

Observer's Signature

ACB-2 ACB-2 19.2

Visible Emissions Evaluation

Run Number(s) and Description 9-13

Facility Name	FCE/Floyd Bennet
AMEC/AVOGADRO Project No.	6480131006
Location (city, state)	Brooklyn, NY
Type of Facility	Nat'l Park
Control Equipment / Emission Source	ACB-2
Date of Observation	1/11/13
Start Time	2159
Stop Time	2349
Distance from observer (ft)	~300'
Direction from observer	See 3 min cell
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	~20' ↑
target?	sky/corner
describe background to plume	sky/corner
unique features of plume or stack	
Weather:	
ambient temperature (F)	46°
relative humidity	94%
wind direction	NNE
wind speed	3 mph
barometric pressure	30.19"
rain? fog? snow? haze?	rain
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	

sec	0	15	30	45
min	Run 9	Time: 2159		
1	15	15	15	15
2	10	10	15	15
392°3	20	20	20	20
4	25	25	20	20
5	25	20	25	25
6	20	20	20	25
6-minute Average:	19.2%			
Source Conditions:	Capacity			
Sun Angle (degrees):				

sec	0	15	30	45
min	Run 13	Time: 2343		
1	0	5	5	5
2	10	10	5	5
131°3	5	10	10	10
4	10	10	10	15
5	10	10	5	5
6	5	5	5	5
6-minute Average:	7.3%			
Source Conditions:	Capacity			
Sun Angle (degrees):				

1/11 End

	Run 10	Time: 2225		
1	5	10	10	10
2	5	10	5	10
89°3	10	5	5	10
4	10	5	5	10
5	15	10	15	15
6	10	10	5	5
6-minute Average:	8.75%			
Source Conditions:	Capacity			
Sun Angle (degrees):				

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

	Run 1	Time: 225		
1	10	5	0	5
2	0	5	5	5
89°3	5	5	5	5
4	5	5	5	10
5	5	5	5	10
6	5	5	5	0
6-minute Average:	5%			
Source Conditions:	Capacity			
Sun Angle (degrees):				

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

	Run 12	Time: 2317		
1	20	20	15	15
2	20	25	15	15
89°3	10	10	15	15
4	10	10	10	10
5	10	10	5	10
6	10	15	10	10
6-minute Average:	13.1%			
Source Conditions:	Capacity			
Sun Angle (degrees):				

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

Observer's name	Robert Bush
Observer certification date	1/6/13
Certifying agency	Whitlow
Observer affiliation	AMEC

Range of opacity readings: low 0 high 25

Number of readings above 10 % were 37

Wind Shift after run 12.
↳ Changed locations

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

AMEC