Sunday Early Morning, January 27th, 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	01/27/2013
Start Time	0016
Stop Time	0352
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 calx lengths
target?	sky
describe background to plume	sky
unique features of plume or stack	—
Weather:	@0010
ambient temperature (F)	20°
relative humidity	52%
wind direction	SE
wind speed	7-12 mph
barometric pressure	30.38 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: 0016**			
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: 0042				
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: 0108				
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: 0134				
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: 0200**			
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: 0254				
1	5	5	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:	0.8			
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	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 5

Number of readings above 10 % were 0

Observer's Signature

Sunday Early Morning, January 27th, 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	01/27/2013
Start Time	0412
Stop Time	0536
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 cone lengths
target?	Sky
describe background to plume	sky
unique features of plume or stack	—

Weather: @0410

ambient temperature (F)	20°
relative humidity	57%
wind direction	SE
wind speed	4-6 mph
barometric pressure	30.43 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 1 Runs 9-12

sec	0	15	30	45
min	Run 9 Time: 0412			
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	5	5	5	5
6-minute Average: 3.3				
Source Conditions:				
Sun Angle (degrees):				
	Run 10 Time: 0438			
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: 0504			
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: 0530			
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 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

Sunday Morning - January 27, 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	1/27/2013
Start Time	0700
Stop Time	1008
Distance from observer (ft)	150'
Direction from observer	NE
Stack height (fr. observer's elev.) (ft)	9'
Stack Diameter (in)	27' x 9'
Description of plume:	
continuous? fugitive? intermittent?	Continuous
color	White
water drops present? (Y/N)	No
attached steam plume? (Y/N)	No
detached steam plume? (Y/N)	No
secondary plume? (Y/N)	No
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)	21 °F
relative humidity	54 %
wind direction	NW
wind speed	5-10 mph
barometric pressure	30.46 in
rain? fog? snow? haze?	clear
Glasses worn:	
corrective? (Y/N)	No
sunglasses? (Y/N)	No

Observer's name	Aaron T. Johnson
Observer certification date	1/6/2013
Certifying agency	Whitlow Enterprises
Observer affiliation	Avogadro Env. Corp.

@ 840 - Added debris, causing higher opacity readings (10%)

Run Number(s) and Description

ACB 1 - Runs # 13 - 20

sec	0	15	30	45
min	Run 13 Time: 0700			
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 14 Time: 0721			
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 15 Time: 0744			
1	10	10	10	10
2	10	10	10	10
3	5	5	10	10
4	10	5	5	10
5	10	10	5	5
6	5	10	10	10
6-minute Average:	8.33			
Source Conditions:				
Sun Angle (degrees):				
	Run 16 Time: 0816			
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 17 Time: 0746			
1	5	5	0	0
2	0	5	5	0
3	0	0	5	5
4	5	0	0	5
5	0	5	0	5
6	0	0	5	5
6-minute Average:	2.5			
Source Conditions:				
Sun Angle (degrees):				
	Run 18 Time: 0813			
1	0	0	5	5
2	0	5	0	5
3	0	5	5	0
4	5	0	0	5
5	0	5	5	
6	0	0	5	5
6-minute Average:	2.5			
Source Conditions:				
Sun Angle (degrees):				
	Run 19 Time: 0836			
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 20 Time: 1006			
1	0	0	0	5
2	5	5	0	5
3	5	5	0	0
4	0	5	5	0
5	0	0	5	5
6	0	5	0	5
6-minute Average:	2.5			
Source Conditions:				
Sun Angle (degrees):				

Range of opacity readings:

low 0 high 10

Number of readings above 10 % were 0

Aaron T. Johnson

Observer's Signature

Sunday Afternoon – January 27, 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	1/27/2013
Start Time	1028
Stop Time	1336
Distance from observer (ft)	150'
Direction from observer	NE
Stack height (fr. observer's elev.) (ft)	9'
Stack Diameter (in)	27' x 9'
Description of plume:	
continuous? fugitive? intermittent?	Continuous
color	White
water drops present? (Y/N)	No
attached steam plume? (Y/N)	No
detached steam plume? (Y/N)	No
secondary plume? (Y/N)	No
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)	28 °F
relative humidity	38 %
wind direction	NW
wind speed	5-15 mph
barometric pressure	30.52 in
rain? fog? snow? haze?	clear
Glasses worn:	
corrective? (Y/N)	No
sunglasses? (Y/N)	No

Observer's name	Aaron T. Johnson
Observer certification date	1/6/2013
Certifying agency	Whitlow Enterprises
Observer affiliation	Avogadro Env. Corp.

Run Number(s) and Description

ACB 1 – Runs # 21 – 28

sec	0	15	30	45
min	Run 21 Time: 10:16			
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 22 Time: 10:54			
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 23 Time: 11:20			
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			
Source Conditions:				
Sun Angle (degrees):				
	Run 24 Time: 11:26			
1	10	5	10	10
2	5	5	5	10
3	10	5	5	5
4	10	10	5	5
5	10	10	5	5
6	5	10	5	5
6-minute Average:	7.08			
Source Conditions:				
Sun Angle (degrees):				
	Run 25 Time: 11:40			
1	15	15	15	15
2	15	10	10	10
3	10	10	10	10
4	10	10	15	15
5	10	10	15	10
6	10	10	15	10
6-minute Average:	11.04			
Source Conditions:				
Sun Angle (degrees):				
	Run 26 Time: 11:55			
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 27 Time: 12:30			
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 28 Time: 12:50			
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 15

Number of readings above 10 % were 9

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

* High opacity readings @ 10:45 from adding debris (10%)

* ↳ @ 11:15 AM – same thing (evergreen branches causing more smoke than usual)

* 10-20% opacity @ 1215p due to adding evergreen debris

SUNDAY EVENING - JANUARY 27, 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	1/27/2013
Start Time	1356
Stop Time	1702
Distance from observer (ft)	150'
Direction from observer	E
Stack height (fr. observer's elev.) (ft)	9'
Stack Diameter (in)	27" x 9"
Description of plume:	
continuous? fugitive? intermittent?	CONTINUOUS
color	WHITE
water drops present? (Y/N)	No
attached steam plume? (Y/N)	No
detached steam plume? (Y/N)	No
secondary plume? (Y/N)	No
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)	36 °F
relative humidity	31 %
wind direction	NW
wind speed	5-10 mph
barometric pressure	30.47 in
rain? fog? snow? haze?	clear
Glasses worn:	
corrective? (Y/N)	No
sunglasses? (Y/N)	No

Observer's name	AARON T. JOHNSON
Observer certification date	1/6/2013
Certifying agency	WHITLOW ENTERPRISES
Observer affiliation	AVOGADRO ENV. CORP.

Run Number(s) and Description

ACB 1 - RUNS # 29 - 36

sec	0	15	30	45
min	Run 29 Time: 1350			
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 30 Time: 1412			
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 31 Time: 1434				
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 32 Time: 1456				
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 33 Time: 1518				
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 34 Time: 1604				
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 35 Time: 1630				
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 36 Time: 1656				
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 5

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

Ann. Night, January 27th, 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	01/27/2013
Start Time	1900 1902
Stop Time	2228
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 over lengths
target?	sky
describe background to plume	sky
unique features of plume or stack	—
Weather:	@1900
ambient temperature (F)	33°
relative humidity	34%
wind direction	SE
wind speed	
barometric pressure	30.51 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	Whittaker
Observer affiliation	Avogadro Env.

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

sec	0	15	30	45
min	Run 1 Time: 1902			
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 2 Time: 1928			
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: 2012			
1	5	5	5	5
2	5	5	5	5
3	0	0	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):				
	Run 4 Time: 2038			
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: 2104			
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: 2130			
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: 2156			
1	10	10	10	10
2	10	10	10	10
3	10	10	10	10
4	10	10	10	5
5	0	0	0	0
6	0	0	0	0
6-minute Average:	0.5			
Source Conditions:				
Sun Angle (degrees):				
	Run 8 Time: 2222			
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

Visible Emissions Evaluation

Aun. Night, January 27th, 2013

Run Number(s) and Description: ACB1 Runs 9-11

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	01/27/2013
Start Time	2248
Stop Time	2346
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	—
	@2245
Weather:	
ambient temperature (F)	27°
relative humidity	46%
wind direction	NW, SE dir
wind speed	3-7mph
barometric pressure	30.50inHg
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:	2248	
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):				

sec	0	15	30	45
min	Run 10	Time:	2314	
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):				

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:	2340	
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):				

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 5 high 10

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

Sunday Early Morning, January 27th, 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	01/27/2013
Start Time	0016
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 conex lengths
target?	Sky
describe background to plume	Sky
unique features of plume or stack	—
Weather:	0010
ambient temperature (F)	20°
relative humidity	52%
wind direction	SE
wind speed	7-12 mph
barometric pressure	30.38 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	Whittaw
Observer affiliation	Avogadro Env.

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

sec	0	15	30	45
min	Run 1 Time: 0016			
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: 0042			
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: 0108			
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: 0134			
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: 0200			
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: 0254			
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: 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	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

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

Sunday Early Morning, January 27th, 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	01/27/2013
Start Time	0412
Stop Time	0536
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:	@0410
ambient temperature (F)	20°
relative humidity	57%
wind direction	SE
wind speed	WNW/NW 4-6 mph
barometric pressure	30.43 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	Whittaker
Observer affiliation	Avogadro Env.

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

sec	0	15	30	45
min	**Run 9 Time: 0412**			
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: 0438**			
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: 0504**			
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):				
min	**Run 12 Time: 0530**			
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):				

Range of opacity readings: low 0 high 5

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

SUNDAY MORNING - JANUARY 27, 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	1/27/2013
Start Time	0700
Stop Time	
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?	CONTINUOUS
color	WHITE
water drops present? (Y/N)	No
attached steam plume? (Y/N)	No
detached steam plume? (Y/N)	No
secondary plume? (Y/N)	No
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)	21 °F
relative humidity	54 %
wind direction	NW
wind speed	5-10 mph
barometric pressure	30.46 in
rain? fog? snow? haze?	clear
Glasses worn:	
corrective? (Y/N)	No
sunglasses? (Y/N)	No

Observer's name	AARON T. JOHNSON
Observer certification date	1/6/2013
Certifying agency	WHITLOW ENTERPRISES
Observer affiliation	AVOGADRO ENV. CORP.

Run Number(s) and Description

ACB 2 - RUNS #13 - 20

sec	0	15	30	45
min	Run 13 Time: 0700			
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 14 Time: 0736			
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 15 Time: 0812			
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 16 Time: 0848			
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 17 Time: 0924			
1	5	5	0	0
2	0	5	5	5
3	0	0	5	0
4	0	5	5	0
5	0	0	5	5
6	0	5	5	0
6-minute Average:	2.5			
Source Conditions:				
Sun Angle (degrees):				
	Run 18 Time: 1000			
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 19 Time: 1036			
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 20 Time: 1112			
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 5

Number of readings above 10 % were 0

Observer's Signature

SUNDAY AFTERNOON - JANUARY 27, 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	1/27/2013
Start Time	1028
Stop Time	1336
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?	CONTINUOUS
color	WHITE
water drops present? (Y/N)	No
attached steam plume? (Y/N)	No
detached steam plume? (Y/N)	No
secondary plume? (Y/N)	No
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)	28 °F
relative humidity	38 %
wind direction	NW
wind speed	5-15 mph
barometric pressure	30.52 in
rain? fog? snow? haze?	clear
Glasses worn:	
corrective? (Y/N)	No
sunglasses? (Y/N)	No

Observer's name	AARON T. JOHNSON
Observer certification date	1/6/2013
Certifying agency	WHITLOW ENTERPRISES
Observer affiliation	AVOGADRO ENV. CORP.

* LITTLE TO NO OPACITY ALL AFTERNOON

Run Number(s) and Description

ACB 2 - RUNS # 21 - 28

sec	0	15	30	45
min	Run 21 Time: 1028			
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 22 Time: 1043			
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 23 Time: 1219			
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 24 Time: 1304			
1	5	5	0	0
2	0	0	5	5
3	0	5	0	5
4	0	5	5	0
5	0	0	5	5
6	5	5	0	0
6-minute Average:	2.5			
Source Conditions:				
Sun Angle (degrees):				

sec	0	15	30	45
min	Run 25 Time: 1054			
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 26 Time: 1119			
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 27 Time: 1238			
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 28 Time: 1353			
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 5

Number of readings above 10 % were 0

Observer's Signature

Sunday Evening - January 27, 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	1/27/2013
Start Time	1356
Stop Time	1702
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?	Continuous
color	White
water drops present? (Y/N)	No
attached steam plume? (Y/N)	No
detached steam plume? (Y/N)	No
secondary plume? (Y/N)	No
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)	36 °F
relative humidity	31 %
wind direction	NW
wind speed	5-10 mph
barometric pressure	30.47 in
rain? fog? snow? haze?	clear
Glasses worn:	
corrective? (Y/N)	No
sunglasses? (Y/N)	No

Observer's name	Aaron T. Johnson
Observer certification date	1/6/2013
Certifying agency	Whitlow Enterprises
Observer affiliation	Avogadro Env. Corp.

Run Number(s) and Description

ACB 2 - Runs # 29 - 36

sec	0	15	30	45
min	Run 29 Time: 1356			
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 30 Time: 1406			
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 31 Time: 1416			
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 32 Time: 1526			
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 33 Time: 1536			
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 34 Time: 1546			
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 35 Time: 1556			
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 36 Time: 1606			
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 5

Number of readings above 10 % were 0

Observer's Signature

AVOGADRO ENVIRONMENTAL CORPORATION, Easton Pa

Run Night, January 27th, 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	01/27/2013
Start Time	1902
Stop Time	2228
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:	@1900
ambient temperature (F)	33°
relative humidity	34%
wind direction	SE
wind speed	
barometric pressure	30.51 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 2 Runs 1-8

sec	0	15	30	45
min	Run 1 Time: 1902			
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: 1928			
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: 2012			
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: 2038			
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: 2104			
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: 2130			
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: 2156			
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: 2222			
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

Visible Emissions Evaluation

Aun. Night, January 27th, 2013

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

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	01/27/2013
Start Time	2248
Stop Time	2346
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:	@2245
ambient temperature (F)	27°
relative humidity	46%
wind direction	SE
wind speed	3-7 mph
barometric pressure	30.50 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	sec	0	15	30	45
min	Run 9 Time:				min	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 10 Time:					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: 2340					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	5	5	5	5	6				
6-minute Average: 5					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