12/31/2012

Run Number(s) and Description Morning Runs 1-8

Visible Emissions Evaluation

Facility Name	ECC Debris.
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	Em. Ops.
Control Equipment / Emission Source	ACB
Date of Observation	12/31/2012
Start Time	0005
Stop Time	0512
Distance from observer (ft)	~100 ft
Direction from observer	N
Stack height (fr. observer's elev.) (ft)	~10 ft
Stack Diameter (in)	
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	1-2 inches [illegible]
target?	night sky / 150 ft
describe background to plume	"
unique features of plume or stack	
Weather:	@ N 0000
ambient temperature (F)	29°
relative humidity	51%
wind direction	WNW
wind speed	15 mph
barometric pressure	30.19 in Hg
rain? fog? snow? haze?	clear
Glasses worn:	
corrective? (Y/N)	Y
sunglasses? (Y/N)	N

Observer's name	Joshua Wagner
Observer certification date	
Certifying agency	PSH & Whitlow
Observer affiliation	Avogadro Env

sec	0	15	30	45
min	Run 1 Time: 0005			
1	10	10	10	5
2	10	10	10	5
3	10	10	5	10
4	15	5	15	10
5	10	10	10	10
6	10	10	10	10
6-minute Average: 9.6				
Source Conditions:				
Sun Angle (degrees): —				

sec	0	15	30	45
min	Run 5 Time: 0148			
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	10	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average: 5.2				
Source Conditions:				
Sun Angle (degrees): —				

	Run 2 Time: 0031			
1	5	5	10	10
2	10	10	10	10
3	5	5	10	10
4	5	5	10	15
5	5	5	5	5
6	10	5	5	10
6-minute Average: 7.7				
Source Conditions:				
Sun Angle (degrees): —				

	Run 6 Time: 0214			
1	5	5	5	5
2	10	10	5	10
3	10	10	10	10
4	5	5	10	5
5	10	10	5	10
6	5	5	10	10
6-minute Average: 7.7				
Source Conditions:				
Sun Angle (degrees): —				

	Run 3 Time: 0056			
1	10	10	5	10
2	10	10	5	10
3	5	10	10	10
4	5	5	5	10
5	10	10	10	10
6	10	5	5	10
6-minute Average: 8.3				
Source Conditions:				
Sun Angle (degrees): —				

	Run 7 Time: 0240			
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: 0122			
1	5	5	10	10
2	10	10	10	10
3	5	5	5	10
4	5	5	10	5
5	5	5	5	5
6	10	10	10	10
6-minute Average: 7.5				
Source Conditions:				
Sun Angle (degrees): —				

	Run 8 Time: 0306			
1	5	5	5	5
2	5	5	5	5
3	10	10	10	10
4	10	15	10	10
5	10	10	10	10
6	10	10	10	10
6-minute Average: 8.5				
Source Conditions:				
Sun Angle (degrees): —				

Range of opacity readings: low 5 high 15

Number of readings above _____ % were _____

Observer's Signature

12/31/2012

Visible Emissions Evaluation

Run Number(s) and Description: Morning Runs 9-14

Facility Name	ECC F.B.F
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	Em. Ops
Control Equipment / Emission Source	ACB
Date of Observation	12/31/2012
Start Time	0332
Stop Time	0542
Distance from observer (ft)	~100 Ft
Direction from observer	N
Stack height (fr. observer's elev.) (ft)	~10Ft
Stack Diameter (in)	
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	1-2 Iso conts. Most
target?	night sky/Iso conts
describe background to plume	
unique features of plume or stack	
Weather: @N 0330	
ambient temperature (F)	29°
relative humidity	53%
wind direction	W
wind speed	13 mph
barometric pressure	30.21 in Hg
rain? fog? snow? haze?	Clear
Glasses worn:	
corrective? (Y/N)	Y
sunglasses? (Y/N)	N

Observer's name	Joshua Wagner
Observer certification date	
Certifying agency	PSU & WhitHow
Observer affiliation	Avogadro Env

sec	0	15	30	45
min	Run 9 Time: 0332			
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 10 Time: 0358			
1	10	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: 5.2				
Source Conditions:				
Sun Angle (degrees): —				
	Run 11 Time: 0424			
1	5	5	5	10
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): —				
	Run 12 Time: 0450			
1	10	10	10	10
2	5	10	5	10
3	10	5	10	5
4	10	10	10	5
5	10	5	5	5
6	10	10	5	10
6-minute Average: 8.1				
Source Conditions:				
Sun Angle (degrees): —				

sec	0	15	30	45
min	Run 13 Time: 0516			
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: 0542			
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
6	5	5	5	5
6-minute Average: 5				
Source Conditions:				
Sun Angle (degrees): —				
	Run Time:			
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees): —				
	Run 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 _____ % were _____

Observer's Signature

Visible Emissions Evaluation

Facility Name	Ecc/Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	national park
Control Equipment / Emission Source	air curtain burner
Date of Observation	12/31/12
Start Time	0720
Stop Time	
Distance from observer (ft)	120'
Direction from observer	NW
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	no stack
Description of plume:	
continuous? fugitive? intermittent?	Cont.
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	top of burner
target?	
describe background to plume	shipping crates
unique features of plume or stack	no stack
Weather:	
ambient temperature (F)	33°
relative humidity	
wind direction	W
wind speed	10 mph
barometric pressure	
rain? fog? snow? haze?	None
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	N

Observer's name	William Reamy
Observer certification date	10/10/12
Certifying agency	Whitflow Enterp.
Observer affiliation	Stackhawk Envir.

Run Number(s) and Description: 15

sec	0	15	30	45
min	Run	Time:	0720	
1	10	5	10	5
2	10	5	10	10
3	10	10	10	10
4	5	10	10	10
5	10	10	10	10
6	10	10	15	5
6-minute Average:			9.2	
Source Conditions:				
Sun Angle (degrees):			no sun	
	Run	Time:	0740	
1	15	15	15	10
2	15	10	10	15
3	15	10	10	10
4	15	10	15	15
5	10	10	10	15
6	15	15	10	15
6-minute Average:			12.7	
Source Conditions:				
Sun Angle (degrees):			-25	
	Run	Time:	0800	
1	10	15	15	10
2	10	10	15	10
3	10	10	15	10
4	15	10	10	10
5	15	15	15	15
6	10	15	15	15
6-minute Average:			12.3	
Source Conditions:				
Sun Angle (degrees):			-25	
	Run	Time:	0820	
1	5	5	10	15
2	10	15	15	10
3	15	15	15	15
4	10	10	5	10
5	5	10	10	10
6	10	10	10	5
6-minute Average:			10.4	
Source Conditions:				
Sun Angle (degrees):			-25	

sec	0	15	30	45
min	Run	Time:	0840	
1	10	10	10	10
2	10	10	10	10
3	15	15	15	10
4	10	10	15	10
5	10	15	10	10
6	15	15	15	10
6-minute Average:			11.7	
Source Conditions:				
Sun Angle (degrees):			-20	
	Run	Time:	900	
1	10	10	10	10
2	15	15	10	10
3	10	10	10	10
4	10	10	15	15
5	15	10	10	10
6	10	10	10	15
6-minute Average:			11.3	
Source Conditions:				
Sun Angle (degrees):			-20	
	Run	Time:	9:20	
1	10	15	15	20
2	15	10	10	15
3	10	15	20	15
4	10	15	10	10
5	10	15	15	10
6	10	10	15	15
6-minute Average:			13.1	
Source Conditions:				
Sun Angle (degrees):			-15	
	Run	Time:	9:40	
1	10	10	10	10
2	10	15	10	10
3	10	15	10	10
4	10	10	10	15
5	15	10	10	10
6	10	15	15	10
6-minute Average:			11.3	
Source Conditions:				
Sun Angle (degrees):			-15	

Range of opacity readings:

low _____ high _____

Number of readings above _____ % were _____

W H Reamy

Observer's Signature

Visible Emissions Evaluation

Facility Name	Eac/Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	national park
Control Equipment / Emission Source	air curtain burner
Date of Observation	12/31/12
Start Time	10:00
Stop Time	
Distance from observer (ft)	120'
Direction from observer	NW
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	no stack
Description of plume:	
continuous? fugitive? intermittent?	cont.
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	top of burner
target?	
describe background to plume	Shipping crates
unique features of plume or stack	no stack
Weather:	
ambient temperature (F)	32°
relative humidity	
wind direction	W
wind speed	10 mph
barometric pressure	
rain? fog? snow? haze?	no
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	N

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

Run Number(s) and Description: 16

sec	0	15	30	45
min	Run	Time:	10:00	
1	15	20	15	15
2	15	20	20	15
3	20	20	15	15
4	20	15	20	15
5	20	15	15	20
6	15	20	15	20
6-minute Average:			17.3	
Source Conditions:				
Sun Angle (degrees):			−10	
	Run	Time:	10:20	
1	10	15	10	10
2	10	15	15	15
3	15	15	10	15
4	10	10	10	10
5	15	10	10	10
6	10	10	10	15
6-minute Average:			11.9	
Source Conditions:				
Sun Angle (degrees):			−5	
	Run	Time:	10:40	
1	5	10	10	10
2	10	10	5	5
3	10	15	10	10
4	10	10	10	10
5	10	5	10	10
6	5	5	10	10
6-minute Average:			9.0	
Source Conditions:				
Sun Angle (degrees):			0	
	Run	Time:	11:00	
1	5	10	5	10
2	10	10	10	10
3	5	5	10	5
4	10	10	10	10
5	5	5	10	5
6	5	10	5	10
6-minute Average:			7.9	
Source Conditions:				
Sun Angle (degrees):			+5	

sec	0	15	30	45
min	Run	Time:	11:20	
1	5	10	5	10
2	5	10	10	5
3	10	5	10	5
4	10	10	5	5
5	10	5	5	5
6	10	5	0	5
6-minute Average:			6.9	
Source Conditions:				
Sun Angle (degrees):			+10	
	Run	Time:	11:40	
1	0	5	5	5
2	10	5	10	5
3	5	10	5	5
4	10	5	10	5
5	10	5	5	5
6	10	5	10	5
6-minute Average:			6.5	
Source Conditions:				
Sun Angle (degrees):			+15	
	Run	Time:	12:00	
1	0	0	0	5
2	0	5	5	0
3	0	5	0	5
4	0	0	5	5
5	0	5	5	5
6	5	0	5	10
6-minute Average:			2.9	
Source Conditions:				
Sun Angle (degrees):			+20	
	Run	Time:	12:20	
1	0	0	0	0
2	5	0	0	0
3	0	5	5	0
4	5	5	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			1.0	
Source Conditions:				
Sun Angle (degrees):			+20	

Range of opacity readings:

low _____ high _____

Number of readings above _____ % were _____

W H Reamy

Observer's Signature

Visible Emissions Evaluation

Facility Name	FCC/Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	national park
Control Equipment / Emission Source	air curtain burner
Date of Observation	12/31/12
Start Time	12:40
Stop Time	
Distance from observer (ft)	130'
Direction from observer	N
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	no stack
Description of plume:	
continuous? fugitive? intermittent?	inter.
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	top of burner
target?	
describe background to plume	shipping crates
unique features of plume or stack	no stack
Weather:	
ambient temperature (F)	38°
relative humidity	
wind direction	W
wind speed	10 mph
barometric pressure	
rain? fog? snow? haze?	no
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	N

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

Run Number(s) and Description: 17

sec	0	15	30	45
min	Run	Time:	12:40	
1	0	0	0	0
2	5	0	5	0
3	0	0	0	0
4	0	0	0	0
5	5	0	0	0
6	0	0	0	0
6-minute Average:			0.6	
Source Conditions:				
Sun Angle (degrees):			+5	
	Run	Time:	13:00	
1	0	5	0	0
2	0	5	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.4	
Source Conditions:				
Sun Angle (degrees):			+5	
	Run	Time:	13:20	
1	0	0	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:			0.4	
Source Conditions:				
Sun Angle (degrees):			+10	
	Run	Time:	13:40	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average:			0.0	
Source Conditions:				
Sun Angle (degrees):			+10	

sec	0	15	30	45
min	Run	Time:	14:00	
1	0	0	0	0
2	0	0	0	0
3	0	0	0	5
4	0	0	0	0
5	5	0	0	0
6	0	0	0	0
6-minute Average:			0.4	
Source Conditions:				
Sun Angle (degrees):			+15	
	Run	Time:	14:20	
1	5	5	5	5
2	5	5	5	5
3	10	10	5	5
4	10	5	10	5
5	5	5	5	10
6	5	5	5	5
6-minute Average:			6.0	
Source Conditions:				
Sun Angle (degrees):			+25	
	Run	Time:	14:40	
1	5	5	10	10
2	5	10	10	10
3	10	5	5	10
4	10	5	10	5
5	5	10	10	15
6	5	5	5	10
6-minute Average:			7.9	
Source Conditions:				
Sun Angle (degrees):			+30	
	Run	Time:	15:00	
1	5	0	5	5
2	5	5	5	0
3	0	0	0	5
4	5	0	0	5
5	5	0	0	0
6	0	5	0	0
6-minute Average:			2.3	
Source Conditions:				
Sun Angle (degrees):			+40	

Range of opacity readings:

low _____ high _____

Number of readings above _____ % were _____

W N 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	air curtain burner
Date of Observation	12-31-12
Start Time	15:20
Stop Time	
Distance from observer (ft)	130'
Direction from observer	N
Stack height (fr. observer's elev.) (ft)	10'
Stack Diameter (in)	no stack
Description of plume:	
continuous? fugitive? intermittent?	inter
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	top of burner
target?	
describe background to plume	shipping crates
unique features of plume or stack	no stack
Weather:	
ambient temperature (F)	40°
relative humidity	
wind direction	W
wind speed	10 mph
barometric pressure	
rain? fog? snow? haze?	no
Glasses worn:	
corrective? (Y/N)	N
sunglasses? (Y/N)	N

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

Run Number(s) and Description: 18

sec	0	15	30	45
min	Run	Time:	15:20	
1	0	0	5	0
2	0	5	0	0
3	5	0	5	5
4	0	0	0	0
5	5	0	5	5
6	0	5	0	5
6-minute Average:			2.1	
Source Conditions:				
Sun Angle (degrees):			+45	

	Run	Time:	15:40	
1	0	0	0	5
2	0	0	0	0
3	0	0	5	0
4	5	0	0	0
5	0	0	0	5
6	0	0	0	5
6-minute Average:			1.0	
Source Conditions:				
Sun Angle (degrees):			+50	

	Run	Time:	16:00	
1	0	5	0	0
2	0	0	0	0
3	0	0	0	5
4	0	0	5	0
5	0	0	0	0
6	0	5	0	5
6-minute Average:			1.0	
Source Conditions:				
Sun Angle (degrees):			+55	

	Run	Time:	16:20	
1	0	5	0	0
2	5	0	5	0
3	5	5	5	5
4	5	5	0	5
5	0	5	0	5
6	0	5	5	0
6-minute Average:			2.9	
Source Conditions:				
Sun Angle (degrees):			+55	

sec	0	15	30	45
min	Run	Time:	16:40	
1	5	5	5	5
2	0	0	5	5
3	10	10	5	10
4	5	5	5	10
5	0	5	5	10
6	5	5	5	5
6-minute Average:			5.6	
Source Conditions:				
Sun Angle (degrees):			NO SUN	

	Run	Time:	17:00	
1				
2				
3	DARK			
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 _____ high _____

Number of readings above _____ % were _____

W W Reamy

Observer's Signature

12/31/2012 Night 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	Em. Ops.
Control Equipment / Emission Source	ACB
Date of Observation	12/31/2012
Start Time	[redacted] 1845
Stop Time	2153
Distance from observer (ft)	~100 ft
Direction from observer	N
Stack height (fr. observer's elev.) (ft)	~10 ft
Stack Diameter (in)	
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	1-8 stack heights
target?	Isolated / Sky
describe background to plume	"
unique features of plume or stack	
Weather:	~@1845
ambient temperature (F)	37°
relative humidity	52%
wind direction	WSW
wind speed	14 mph
barometric pressure	30.00 in Hg
rain? fog? snow? haze?	Clear
Glasses worn:	
corrective? (Y/N)	Y
sunglasses? (Y/N)	N

Observer's name	Joshua Wagner
Observer certification date	
Certifying agency	PSU & Whitlow
Observer affiliation	Avogadro Env

Run Number(s) and Description [redacted]

sec	0	15	30	45
min	Run 1 Time: 1845			
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	10	10	5	5
6	10	10	5	5
6-minute Average: 5.8				
Source Conditions:				
Sun Angle (degrees): —				

	Run 2 Time: [redacted] 1911			
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: 1937			
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: 2003			
1	5	5	5	0
2	0	0	0	0
3	5	0	0	0
4	5	0	5	0
5	0	0	5	5
6	0	5	5	0
6-minute Average: 2.1				
Source Conditions:				
Sun Angle (degrees): —				

sec	0	15	30	45
min	Run 5 Time: 2029			
1	0	0	0	5
2	5	0	0	5
3	0	0	0	5
4	0	5	0	0
5	5	5	5	5
6	0	5	0	5
6-minute Average: 2.3				
Source Conditions:				
Sun Angle (degrees): —				

	Run 6 Time: 2055			
1	0	0	0	0
2	0	0	5	5
3	0	0	5	0
4	5	0	0	5
5	5	5	5	5
6	0	5	0	5
6-minute Average: [redacted] 2.3				
Source Conditions:				
Sun Angle (degrees): —				

	Run 7 Time: 2121			
1	5	5	5	10
2	10	10	5	10
3	5	5	10	5
4	5	5	5	10
5	5	5	10	5
6	5	10	10	[redacted] 5
6-minute Average: 6.9				
Source Conditions:				
Sun Angle (degrees): —				

	Run 8 Time: 2147			
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 _____ % were _____

Observer's Signature

Visible Emissions Evaluation

12/31/2012

Run Number(s) and Description Night Runs 9-13

Facility Name	ECL Floyd Bennett Field
AVOGADRO Project No.	12-9191
Location (city, state)	Brooklyn, NY
Type of Facility	Em. Ops.
Control Equipment / Emission Source	ACB
Date of Observation	12/31/2012
Start Time	2213
Stop Time	2403
Distance from observer (ft)	~100 ft
Direction from observer	N
Stack height (fr. observer's elev.) (ft)	~10 ft
Stack Diameter (in)	
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	1-4 stack heights
target?	ISOs / night sky
describe background to plume	"
unique features of plume or stack	
Weather:	@ 2230
ambient temperature (F)	39°
relative humidity	56%
wind direction	WSW
wind speed	8-10 mph
barometric pressure	29.91 in Hg
rain? fog? snow? haze?	clear
Glasses worn:	
corrective? (Y/N)	Y
sunglasses? (Y/N)	N

Observer's name	Joshua Wagner
Observer certification date	
Certifying agency	PSU & Whittow
Observer affiliation	Avogadro Env.

sec	0	15	30	45
min	Run 9 Time: 2213			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6-minute Average: 0				
Source Conditions:				
Sun Angle (degrees): —				

sec	0	15	30	45
min	Run 13 Time: 2357			
1	0	0	5	0
2	5	0	5	0
3	5	5	0	5
4	5	0	0	0
5	5	5	0	0
6	5	0	5	5
6-minute Average: 2.5				
Source Conditions:				
Sun Angle (degrees): —				

Run 10 Time: 2239				
1	0	0	5	0
2	0	5	0	0
3	5	0	0	0
4	5	0	0	0
5	0	0	5	0
6	0	0	5	0
6-minute Average: 1.3				
Source Conditions:				
Sun Angle (degrees): —				

Run 14 Time:				
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees): —				

Run 11 Time: 2305				
1	5	5	5	0
2	10	5	5	5
3	5	5	0	5
4	5	5	0	5
5	5	5	5	5
6	5	5	5	5
6-minute Average: 4.6				
Source Conditions:				
Sun Angle (degrees): —				

Run 15 Time:				
1				
2				
3				
4				
5				
6				
6-minute Average:				
Source Conditions:				
Sun Angle (degrees): —				

Run 12 Time: 2331				
1	0	5	5	0
2	5	0	0	5
3	0	5	5	0
4	0	0	0	0
5	5	0	0	0
6	5	0	5	0
6-minute Average: 1.9				
Source Conditions:				
Sun Angle (degrees): —				

Run 16 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 _____ % were _____

Observer's Signature