

US EPA ARCHIVE DOCUMENT

APPENDIX E

METHOD 303 DATA SHEETS

CHARGING INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRIAN HAWK

INSPECTOR

5/24/10

DATE

BATTERY #2

* NOTE: SHIFT CHANGE
 8:00 AM

START TIME: 8:33 Hr:Min AM PM

END TIME: 11:10 Hr:Min AM PM

CHARGE NUMBER	OVEN #	START TIME	END TIME	VISIBLE EMISSIONS SECONDS	COMMENTS
1	86	8:33	8:39	14.5	2.7408
2	76	9:23	9:29	5.5	1.8718
3	66	9:57	10:04	9.5	2.3514
4	129	10:33	10:40	16.5	2.8622
5	114	11:03	11:10	6.5	2.0149
					<u>11.8411</u>
Charging LOG Ave. <u>9.68</u> seconds					

COLLECTING MAIN INSPECTION:

WEST MAIN PRESSURE: 6.5 mm

START TIME: 11:11 Hr:Min AM PM

EAST MAIN PRESSURE: 6.0 mm

END TIME: 11:19 Hr:Min AM PM

COMMENTS: * NOTE: DELAY DUE TO GF POURING/CHECKING LEAKS

OF SLURRY... HAD TO WAIT FOR STEAM TO DISSIPATE.

NO LEAKS OBSERVED.

LID INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRIAN HAWK

INSPECTOR

5/24/10
 DATE

BATTERY #2

START TIME: 8:51 Hr:Min AM PM

END TIME: 8:52 Hr:Min AM PM

OVEN #	LIDS						COMMENTS
66	D	1	2	3	4	D/P	
76	D	1	2	3	4	D/P	
104	D	1	2	3	4	D/P	
114	D	1	2	3	4	D/P	
124	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	

D - DECARBONIZING / DAMPERED-OFF
 D/P - DAMPERED OFF PRIOR TO PUSH

TOTAL TRAVERSE TIME (T) 113 SECONDS VALID (YES) NO
 LIDS NOT OBSERVED (Pno) 20
 INOPERABLE OVENS (Ni) 0
 TOTAL LEAKS (PVE) 0

T - TRAVERSE TIME
 PVE - # OF LEAKING LIDS
 Ni - # OF OVENS NOT IN SERVICE
 Pno - # OF LIDS NOT OBSERVED
 PLL - PERCENT LEAKING LIDS

$$T = (4 \text{ sec} \cdot \frac{60}{\text{ovens}}) + (10 \text{ sec} \cdot \frac{0}{\text{leaks}}) = \underline{240} \text{ SECONDS}$$

$$PLL = \frac{PVE \cdot 100}{4 \cdot (60 - Ni) - Pno} = \frac{0 \cdot 100}{4 \cdot (60 - 0) - 20} = \underline{0.00}\%$$

OFFTAKE SYSTEM INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRIAN HAWK

INSPECTOR

5/24/10
DATE

BATTERY #2

START TIME: 4:53 Hr:Min (AM) PM

END TIME: 4:55 Hr:Min (AM) PM

OVEN #	OFFTAKES									COMMENTS
124	D	C	F	B	P	V	G	S	D/P	
114	D	C	F	B	P	V	G	S	D/P	
104	D	C	F	B	P	V	G	S	D/P	
98	D	C	F	B	P	V	G	S	D/P	
76	D	C	F	B	P	V	G	S	D/P	
66	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	

TOTAL TRAVERSE TIME: 120 SECONDS (VALID Y N)

OFFTAKES NOT OBSERVED: 5 (No)

INOPERABLE OVENS: 0 (NI)

TOTAL LEAKS: 1 (TVE)

- D - DECARBONIZING / DAMPERED-OFF
- C - CAP
- F - FLANGE
- B - BASE
- P - STANDPIPE
- V - VALVE BODY
- G - GOOSENECK
- S - SIDE STEAM PORT
- D/P - DAMPERED OFF PRIOR TO PUSH

$$T = (4 \text{ sec} \cdot \frac{60}{\text{ovens}}) + (10 \text{ sec} \cdot \frac{1}{\text{leaks}}) = 250 \text{ seconds}$$

$$FLO = \frac{TVE \cdot 100}{60 - (NI + No)} \Rightarrow \frac{1 \cdot 100}{60 - (0 + 5)} = 1.82\%$$

- T - TRAVERSE TIME
- FLO - PERCENT LEAKING OFFTAKES
- TVE - TOTAL OFFTAKES WITH VISIBLE EMISSIONS
- NI - # OF OVENS NOT IN SERVICE
- No - # OF OVENS NOT OBSERVED

DOOR INSPECTION
GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
TONAWANDA COKE CORPORATION
TONAWANDA, NEW YORK

BRIAN HAWK
 INSPECTOR

5/24/10
 DATE

BATTERY #2

START TIME: 8:58 Hr:Min AM PM

END TIME: 9:04 Hr:Min AM PM

OVEN #	LEAKS			
(P) (C) 126	(D)	(C)	(B)	(F)
(P) (C) 126	(D)	(C)	(B)	(F)
(P) (C) 93	(D)	(C)	(B)	(F)
(P) (C) 86	(D)	(C)	(B)	(F)
(P) (C)	(D)	(C)	(B)	(F)
(P) (C)	(D)	(C)	(B)	(F)
(P) (C)	(D)	(C)	(B)	(F)
(P) (C)	(D)	(C)	(B)	(F)
(P) (C)	(D)	(C)	(B)	(F)
(P) (C)	(D)	(C)	(B)	(F)

OVEN #	NOT OBSERVED		
(P) (C)	BLOCKED	OUT OF SERVICE	DOOR OFF
(P) (C)	BLOCKED	OUT OF SERVICE	DOOR OFF
(P) (C)	BLOCKED	OUT OF SERVICE	DOOR OFF
(P) (C)	BLOCKED	OUT OF SERVICE	DOOR OFF
(P) (C)	BLOCKED	OUT OF SERVICE	DOOR OFF
(P) (C)	BLOCKED	OUT OF SERVICE	DOOR OFF
(P) (C)	BLOCKED	OUT OF SERVICE	DOOR OFF
(P) (C)	BLOCKED	OUT OF SERVICE	DOOR OFF
(P) (C)	BLOCKED	OUT OF SERVICE	DOOR OFF
(P) (C)	BLOCKED	OUT OF SERVICE	DOOR OFF

D - DOOR
 C - CHUCK DOOR
 B - BRICKWORK
 F - FRAMEWORK

TRAVERSE TIME (T) 176 SECONDS
 TOTAL LEAKS: 4 (Ly)
 VALID: (ES) / NO DOORS NOT OBSERVED: 0 (Dno)
 IMPERABLE OVENS: 0 (Di)

T - TRAVERSE TIME

DoB - # OF DOORS OBSERVED ON OPERATING OVENS

Di - # OF DOORS NOT IN SERVICE

Dno - # OF DOORS NOT OBSERVED

Ly - # OF LEAKING DOORS

PLD - PERCENT LEAKING DOORS

$$T = (4 \text{ sec} \cdot 120) + (10 \text{ sec} \cdot 4) = 4,520 \text{ SECONDS}$$

$$DoB = 120 - ((Di) \cdot 2) + Dno = 120 - ((0) \cdot 2) + 0 = 120$$

$$PLD = \frac{Ly \cdot 100}{DoB} = \frac{4 \cdot 100}{120} = 3.33\%$$

DOOR INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRIAN HAWK

INSPECTOR

5/25/10

DATE

BATTERY #2

START TIME: 10:44 Hr. Min. AM PM

END TIME: 10:51 Hr. Min. AM PM

OVEN #	LEAKS			
87	D	C	B	F
113	D	C	B	F
125	D	C	B	F
123	D	C	B	F
93	D	C	B	F
85	D	C	B	F
	D	C	B	F
	D	C	B	F
	D	C	B	F
	D	C	B	F

OVEN #	NOT OBSERVED		
	BLOCKED	OUT OF SERVICE	DOOR OFF
	BLOCKED	OUT OF SERVICE	DOOR OFF
	BLOCKED	OUT OF SERVICE	DOOR OFF
	BLOCKED	OUT OF SERVICE	DOOR OFF
	BLOCKED	OUT OF SERVICE	DOOR OFF
	BLOCKED	OUT OF SERVICE	DOOR OFF
	BLOCKED	OUT OF SERVICE	DOOR OFF
	BLOCKED	OUT OF SERVICE	DOOR OFF
	BLOCKED	OUT OF SERVICE	DOOR OFF
	BLOCKED	OUT OF SERVICE	DOOR OFF

D - DOOR
 C - CHUCK DOOR
 B - BRICKWORK
 F - FRAMEWORK

TRAVERSE TIME (T) 113 VALID YES NO
 SECONDS DOORS NOT OBSERVED 0 (Dno)
 TOTAL LEAKS 6 (Ly) INOPERABLE OVENS 0 (Di)

T - TRAVERSE TIME

Deb - # OF DOORS OBSERVED
 ON OPERATING OVENS

Di - # OF DOORS NOT IN SERVICE

Dno - # OF DOORS NOT OBSERVED

Ly - # OF LEAKING DOORS

PLD - PERCENT LEAKING DOORS

$$T = (4 \text{ sec} \cdot 120) + (10 \text{ sec} \cdot 6) = 540 \text{ SECONDS}$$

doors leaks

$$Deb = 120 - ((Di \cdot 2) + Dno) = 120 - ((0 \cdot 2) + 0) = 120$$

$$PLD = \frac{Ly \cdot 100}{Deb} = \frac{6 \cdot 100}{120} = 5.00\%$$

LID INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRIAN HAWK
 INSPECTOR

5/25/10
 DATE

BATTERY #2

START TIME: 10:56 Hr:Min AM PM

END TIME: 10:58 Hr:Min AM PM

OVEN #	LIDS						COMMENTS.
63	D	1	2	3	4	D/P	
73	D	1	2	3	4	D/P	
83	D	1	2	3	4	D/P	
111	D	1	2	3	4	D/P	
121	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	

D - DECARBONIZING / DAMPERED-OFF
 D/P - DAMPERED OFF PRIOR TO PUSH

TOTAL TRAVERSE TIME (T) 114 SECONDS VALID: YES / NO
 LIDS NOT OBSERVED: (Pno) 20
 INOPERABLE OVENS (Ni) 0
 TOTAL LEAKS: (PVE) 0

T - TRAVERSE TIME
 PVE - # OF LEAKING LIDS
 Ni - # OF OVENS NOT IN SERVICE
 Pno - # OF LIDS NOT OBSERVED
 PLL - PERCENT LEAKING LIDS

$$T = (4 \text{ ovens} \cdot \frac{60}{\text{ovens}}) + (10 \text{ leaks} \cdot \frac{240}{\text{leaks}}) = \text{SECONDS}$$

$$PLL = \frac{PVE \cdot 100}{4 \cdot (60 - Ni) - Pno} = \frac{0 \cdot 100}{4 \cdot (60 - 0) - 20} = \frac{000}{200} \%$$

OFFTAKE SYSTEM INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRIAN HAWK

INSPECTOR

5/25/10

DATE

BATTERY #2

START TIME: 10:59 Hr-Min AM PM

END TIME: 11:01 Hr-Min AM PM

OVEN #	OFFTAKES									COMMENTS
121	D	C	F	B	P	V	G	S	D/P	
111	D	C	F	B	P	V	G	S	D/P	
83	D	C	F	B	P	V	G	S	D/P	
73	D	C	F	B	P	V	G	S	D/P	
63	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	

TOTAL TRAVERSE TIME: 1713 SECONDS (VALID Y N)

$$T = (4 \text{ sec} \cdot \frac{60}{\text{ovens}}) + (10 \text{ sec} \cdot \frac{0}{\text{leaks}}) = \text{seconds}$$

OFFTAKES NOT OBSERVED: 5 (No)

INOPERABLE OVENS: 0 (NI)

$$PLO = \frac{TVE \cdot 100}{60 \cdot (NI + No)} \rightarrow \frac{0 \cdot 100}{60 \cdot (0 + 5)} = 0.00\%$$

TOTAL LEAKS: 0 (TVE)

- D - DECARBONIZING / DAMPERED-OFF
- C - CAP
- F - FLANGE
- B - BASE
- P - STANDPIPE
- V - VALVE BODY
- G - GOOSENECK
- S - SIDE STEAM PORT
- D/P - DAMPERED OFF PRIOR TO PUSH

- T - TRAVERSE TIME
- PLO - PERCENT LEAKING OFFTAKES
- TVE - TOTAL OFFTAKES WITH VISIBLE EMISSIONS
- NI - # OF OVENS NOT IN SERVICE
- No - # OF OVENS NOT OBSERVED

CHARGING INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRIAN HAWK
 INSPECTOR

5 / 25 / 10
 DATE

BATTERY #2

*NOTE: DELAY IN INSPECTION/S
 DUE TO OUTSIDE TESTING
 (EPA/DEC-ETC.)

START TIME: 11:59 Hr:Min (AM) PM

END TIME: 2:46 Hr:Min AM (PM)

CHARGE NUMBER	OVEN #	START TIME	END TIME	VISIBLE EMISSIONS SECONDS	COMMENTS
1	73	11:59	12:05	3.0	1.3863
2	63	12:35	12:41	11.5	2.5257
3	121	1:19	1:25	7.5	2.1401
4	111	1:55	2:02	2.5	1.2528
5	101	2:39	2:46	1.5	0.9163
					8.2211
Charging LOG Ave: <u>4.18</u> seconds					

COLLECTING MAIN INSPECTION:

WEST MAIN PRESSURE: 6.0 mm

START TIME: 2:47 Hr:Min AM (PM)

EAST MAIN PRESSURE: 5.5 mm

END TIME: 2:52 Hr:Min AM (PM)

COMMENTS: NO LEAKS OBSERVED.

DOOR INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRIAN HAWK
 INSPECTOR

5/26/10
 DATE

BATTERY #2

START TIME: 1:02 Hr:Min AM PM
 END TIME: 1:09 Hr:Min AM PM

	OVEN #	LEAKS			
P C	108	D	C	B	F
P C	114	D	C	B	F
P C	72	D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F

	OVEN #	NOT OBSERVED		
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF

D - DOOR
 C - CHUCK DOOR
 B - BRICKWORK
 F - FRAMEWORK

TRAVERSE TIME (T) 111 SECONDS
 TOTAL LEAKS: 3 (Ly)
 VALID: YES NO
 DOORS NOT OBSERVED: 0 (Dno)
 INOPERABLE OVENS: 6 (DI)

T - TRAVERSE TIME

Dob - # OF DOORS OBSERVED
 ON OPERATING OVENS

DI - # OF DOORS NOT IN SERVICE

Dno - # OF DOORS NOT OBSERVED

Ly - # OF LEAKING DOORS

PLD - PERCENT LEAKING DOORS

$$T = (4 \text{ ovens} \cdot 120) + (10 \text{ ovens} \cdot \frac{3}{10}) = 510 \text{ SECONDS}$$

doors leaks

$$Dob = 120 - ((DI \cdot 2) + Dno) = 120 - ((6 \cdot 2) + 0) = 120$$

$$PLD = \frac{Ly \cdot 100}{Dob} = \frac{3 \cdot 100}{120} = 2.50\%$$

LID INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRIAN HAWK
 INSPECTOR

5/26/10
 DATE

BATTERY #2

START TIME: 1:12 Hr:Min AM PM

END TIME: 1:14 Hr:Min AM PM

OVEN #	LIDS						COMMENTS
69	D	1	2	3	4	D/P	
79	D	1	2	3	4	D/P	
99	D	1	2	3	4	D/P	
107	D	1	2	3	4	D/P	
*117	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	

D - DECARBONIZING / DAMPERED-OFF
 D/P - DAMPERED OFF PRIOR TO PUSH

TOTAL TRAVERSE TIME (T) 97 SECONDS VALID YES / NO
 LIDS NOT OBSERVED: (Pno) 20
 INOPERABLE OVENS (NI) 0
 TOTAL LEAKS: (PVE) 0

T - TRAVERSE TIME
 PVE - # OF LEAKING LIDS
 NI - # OF OVENS NOT IN SERVICE
 Pno - # OF LIDS NOT OBSERVED
 PLL - PERCENT LEAKING LIDS

$$T = (4 \text{ ovens} \cdot \frac{60}{\text{ovens}}) + (10 \text{ leaks} \cdot \frac{240}{\text{leaks}}) = \text{SECONDS}$$

$$PLL = \frac{PVE \cdot 100}{4 \cdot (60 - NI) - Pno} = \frac{0 \cdot 100}{4 \cdot (60 - 0) - 20} = \frac{0}{220} = 0.00\%$$

OFFTAKE SYSTEM INSPECTION
GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
TONAWANDA COKE CORPORATION
TONAWANDA, NEW YORK

BRIAN HAWK

5/26/10

INSPECTOR

BATTERY #2

DATE

START TIME: 1:14 Hr:Min AM PM
 END TIME: 1:17 Hr:Min AM PM

OVEN #	OFFTAKES									COMMENTS.
117	(D)	C	F	B	P	V	G	S	D/P	
114	D	C	(F)	B	P	V	G	S	D/P	
107	(D)	C	F	B	P	V	G	S	D/P	
99	D	C	F	B	P	V	G	S	(D/P)	
96	D	C	F	(B)	P	V	G	S	D/P	
79	D	C	F	B	P	V	G	S	(D/P)	
09	D	C	F	B	P	V	G	S	(D/P)	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	

TOTAL TRAVERSE TIME: (T) 117 SECONDS (VALID: (Y) N) $T = (4 \text{ sec} \cdot \frac{60}{\text{ovens}}) + (10 \text{ sec} \cdot \frac{2}{\text{leaks}}) = 260$ seconds

OFFTAKES NOT OBSERVED: 5 (No)

INOPERABLE OVENS: 0 (NI)

TOTAL LEAKS: 2 (TVE)

$PLO = \frac{TVE \cdot 100}{60 - (NI + No)} \rightarrow \frac{2 \cdot 100}{60 - (0 + 5)} = 3.64\%$

- D - DECARBONIZING / DAMPERED-OFF
- C - CAP
- F - FLANGE
- B - BASE
- P - STANDPIPE
- V - VALVE BODY
- G - GOOSENECK
- S - SIDE STEAM PORT
- D/P - DAMPERED OFF PRIOR TO PUSH

- T - TRAVERSE TIME
- PLO - PERCENT LEAKING OFFTAKES
- TVE - TOTAL OFFTAKES WITH VISIBLE EMISSIONS
- NI - # OF OVENS NOT IN SERVICE
- No - # OF OVENS NOT OBSERVED

CHARGING INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRIAN HAWK

INSPECTOR

5/26/10

DATE

BATTERY #2

START TIME: 1:22 Hr:Min AM PM

END TIME: 4:09 Hr:Min AM PM

CHARGE NUMBER	OVEN #	START TIME	END TIME	VISIBLE EMISSIONS SECONDS	COMMENTS
1	99	1:22	1:28	3.5	1.5041
2	89	1:58	2:05	4.5	1.7047
3	79	2:39	2:45	14.5	2.7408
4	69	3:18	3:24	8.0	2.1972
5	117	4:00	4:09	98.5	4.6002 *SHIFT CHANGE 4:00 PM
					12.7470
					Charging LOG Ave: <u>11.80</u> seconds

COLLECTING MAIN INSPECTION:

WEST MAIN PRESSURE: 6.5 mm

EAST MAIN PRESSURE: 6.0 mm

START TIME: 5:05 Hr:Min AM PM

END TIME: 5:09 Hr:Min AM PM

COMMENTS: NO LEAKS OBSERVED.

DOOR INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRAN HAWK
 INSPECTOR

5/27/10
 DATE

BATTERY #2

START TIME: 10:14 Hr:Min AM PM

END TIME: 10:20 Hr:Min AM PM

OVEN #		LEAKS			
P C	01	D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F

OVEN #		NOT OBSERVED		
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF

D - DOOR
 C - CHUCK DOOR
 B - BRICKVORK
 F - FRAMEVORK

TRAVERSE TIME (T) 124 SECONDS VALID: YES NO
 DOORS NOT OBSERVED: 0 (Dno)
 TOTAL LEAKS: 1 (Ly) INOPERABLE OVENS: 0 (Di)

T - TRAVERSE TIME

Dob - # OF DOORS OBSERVED
 ON OPERATING OVENS

Di - # OF DOORS NOT IN SERVICE

Dno - # OF DOORS NOT OBSERVED

Ly - # OF LEAKING DOORS

PLD - PERCENT LEAKING DOORS

$$T = (4 \text{ sec} \cdot 120) + (10 \text{ sec} \cdot 1) = 490 \text{ SECONDS}$$

doors leaks

$$Dob = 120 - ((Di \cdot 2) + Dno) = 120 - ((0 \cdot 2) + 0) = 120$$

$$PLD = \frac{Ly \cdot 100}{Dob} = \frac{1 \cdot 100}{120} = 0.83\%$$

LID INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRIAN HAWK

INSPECTOR

5/27/10
DATE

BATTERY #2

START TIME: 10:23 Hr./Min AM PM

END TIME: 10:25 Hr./Min AM PM

OVEN #	LIDS						COMMENTS.
68	<u>D</u>	1	2	3	4	D/P	
78	<u>D</u>	1	2	3	4	D/P	
88	D	1	2	3	4	<u>D/P</u>	
98	D	1	2	3	4	<u>D/P</u>	
108	D	1	2	3	4	<u>D/P</u>	
116	<u>D</u>	1	2	3	4	 <u>BH</u>	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	

D - DECARBONIZING / DAMPERED-OFF
 D/P - DAMPERED OFF PRIOR TO PUSH

TOTAL TRAVERSE TIME: 117 SECONDS VALID: YES NO
 LIDS NOT OBSERVED: (Pno) 24
 INOPERABLE OVENS (NI) 0
 TOTAL LEAKS: (PVE) 0

T - TRAVERSE TIME
 PVE - # OF LEAKING LIDS
 NI - # OF OVENS NOT IN SERVICE
 Pno - # OF LIDS NOT OBSERVED
 PLL - PERCENT LEAKING LIDS

$$T = (4 \text{ ovens} \cdot \frac{60}{\text{seconds}}) + (10 \text{ leaks} \cdot \frac{0 \cdot 240}{\text{seconds}}) = \text{SECONDS}$$

$$PLL = \frac{PVE \cdot 100}{4 \cdot (60 - NI) - Pno} = \frac{0 \cdot 100}{4 \cdot (60 - 0) - 24} = \frac{0.00}{216} \%$$

OFFTAKE SYSTEM INSPECTION
GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
TONAWANDA COKE CORPORATION
TONAWANDA, NEW YORK

BRIAN HAWK

INSPECTOR

5/27/10

DATE

BATTERY #2

START TIME: 10:25 Hr-Min (A) AM PM

END TIME: 10:27 Hr-Min (A) AM PM

OVEN #	OFFTAKES									COMMENTS
116	(D)	C	F	B	P	V	G	S	D/P	
108	D	C	F	B	P	V	G	S	(D/P)	
98	D	C	F	B	P	V	G	S	(D/P)	
88	D	C	F	B	P	V	G	S	(D/P)	
78	(D)	C	F	B	P	V	G	S	D/P	
68	(D)	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	

TOTAL TRAVERSE TIME (T) 118 SECONDS (VALID Y/N)

OFFTAKES NOT OBSERVED 6 (No)

INOPERABLE OVENS 0 (NI)

TOTAL LEAKS 0 (TVE)

D - DECARBONIZING / DAMPERED-OFF

C - CAP

F - FLANGE

B - BASE

P - STANDPIPE

V - VALVE BODY

G - GOOSENECK

S - SIDE STEAM PORT

D/P - DAMPERED OFF PRIOR TO PUSH

$$T = (4 \text{ sec} \cdot \frac{60}{\text{ovens}}) + (10 \text{ sec} \cdot \frac{0}{\text{leaks}}) = \text{seconds}$$

$$PLO = \frac{TVE \cdot 100}{60 \cdot (NI + No)} \rightarrow \frac{0 \cdot 100}{60 \cdot (0 + 6)} = 0.00\%$$

T - TRAVERSE TIME

PLO - PERCENT LEAKING OFFTAKES

TVE - TOTAL OFFTAKES WITH VISIBLE EMISSIONS

NI - # OF OVENS NOT IN SERVICE

No - # OF OVENS NOT OBSERVED

CHARGING INSPECTION
GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
TONAWANDA COKE CORPORATION
TONAWANDA, NEW YORK

BRIAN HAWK

INSPECTOR

5/27/10
DATE

BATTERY #2

START TIME: 10:33 Hr:Min AM PM

END TIME: 1:07 Hr:Min AM PM

CHARGE NUMBER	OVEN #	START TIME	END TIME	VISIBLE EMISSIONS SECONDS	COMMENTS
1	108	10:33	10:40	3.0	1.3863
2	98	11:04	11:11	3.0	1.3863
3	88	11:44	11:50	2.0	1.0986
4	78	12:25	12:31	3.5	1.5041
5	68	1:01	1:07	7.0	2.0794
					7.4547
Charging LOG Ave. <u>3.44</u> seconds					

COLLECTING MAIN INSPECTION:

WEST MAIN PRESSURE: 6.5 mm

EAST MAIN PRESSURE: 7.0 mm

START TIME: 1:08 Hr:Min AM PM

END TIME: 1:13 Hr:Min AM PM

COMMENTS: NO LEAKS OBSERVED.

DOOR INSPECTION
GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
TONAWANDA COKE CORPORATION
TONAWANDA, NEW YORK

BRIAN HAWK

INSPECTOR

5/28/10
DATE

BATTERY #2

START TIME: 12:09 Hr. Min AM PM

END TIME: 12:15 Hr. Min AM PM

	OVEN #	LEAKS			
P C	125	D	C	B	F
P C	79	D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F
P C		D	C	B	F

BH

	OVEN #	NOT OBSERVED		
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF
P C		BLOCKED	OUT OF SERVICE	DOOR OFF

D - DOOR
 C - CHUCK DOOR
 B - BRICKWORK
 F - FRAMEWORK

TRaverse TIME (T) 127 SECONDS VALID: YES / NO
 TOTAL LEAKS: 2 (Ly) DOORS NOT OBSERVED: 0 (Dno)
 INOPERABLE OVENS: 0 (Di)

T - TRAVERSE TIME

Dob - # OF DOORS OBSERVED
 ON OPERATING OVENS

Di - # OF DOORS NOT IN SERVICE

Dno - # OF DOORS NOT OBSERVED

Ly - # OF LEAKING DOORS

PLD - PERCENT LEAKING DOORS

$$T = (4 \text{ sec} \cdot 120) + (10 \text{ sec} \cdot \frac{2}{500}) = \text{---} \text{ SECONDS}$$

doors leaks

$$Dob = 120 - ((Di \cdot 2) + Dno) = 120 - ((0 \cdot 2) + 0) = 120$$

$$PLD = \frac{Ly \cdot 100}{Dob} = \frac{2 \cdot 100}{120} = 1.67\%$$

LID INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRIAN HAWK
 INSPECTOR

5/28/10
 DATE

BATTERY #2

START TIME: 12:18 Hr:Min AM PM

END TIME: 12:20 Hr:Min AM PM

OVEN #	LIDS						COMMENTS.
75	D	1	2	3	4	D/P	
85	D	1	2	3	4	D/P	
95	D	1	2	3	4	D/P	
105	D	1	2	3	4	D/P	
115	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	
	D	1	2	3	4	D/P	

D - DECARBONIZING / DAMPERED-OFF
 D/P - DAMPERED OFF PRIOR TO PUSH

TOTAL TRAVERSE TIME (T) 123 SECONDS VALID YES NO
 LIDS NOT OBSERVED (Pno) 20
 INOPERABLE OVENS (NI) 0
 TOTAL LEAKS (PVE) 0

T - TRAVERSE TIME
 PVE - # OF LEAKING LIDS
 NI - # OF OVENS NOT IN SERVICE
 Pno - # OF LIDS NOT OBSERVED
 PLL - PERCENT LEAKING LIDS

$$T = (4 \text{ ovens} \cdot \frac{60}{\text{seconds}}) + (10 \text{ leaks} \cdot \frac{240}{\text{seconds}}) = \text{SECONDS}$$

$$PLL = \frac{PVE \cdot 100}{4 \cdot (60 - NI) - Pno} = \frac{0 \cdot 100}{4 \cdot (60 - 0) - 20} = \frac{0}{220} = 0.00\%$$

**OFFTAKE SYSTEM INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK**

BRIAN HAWK

INSPECTOR

5/28/10

DATE

BATTERY #2

START TIME: 12:20 Hr:Min AM PM

END TIME: 12:22 Hr:Min AM PM

OVEN #	OFFTAKES									COMMENTS
115	D	C	F	B	P	V	G	S	<u>D/P</u>	
105	D	C	F	B	P	V	G	S	<u>D/P</u>	
95	D	C	F	B	P	V	G	S	<u>D/P</u>	
85	<u>D</u>	C	F	B	P	V	G	S	D/P	
75	<u>D</u>	C	F	B	P	V	G	S	D/P	
72	D	C	F	B	P	V	<u>G</u>	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	
	D	C	F	B	P	V	G	S	D/P	

TOTAL TRAVERSE TIME: 111 SECONDS (VALID: Y)

OFFTAKES NOT OBSERVED: 5 (No)

INOPERABLE OVENS: 0 (NI)

TOTAL LEAKS: 1 (TVE)

- D - DECARBONIZING / DAMPERED-OFF
- C - CAP
- F - FLANGE
- B - BASE
- P - STANDPIPE
- V - VALVE BODY
- G - GOOSENECK
- S - SIDE STEAM PORT
- D/P - DAMPERED OFF PRIOR TO PUSH

$$T = (4 \text{ sec} \cdot \frac{60}{\text{ovens}}) + (10 \text{ sec} \cdot \frac{1}{\text{leaks}}) = \frac{250}{\text{seconds}}$$

$$PLO = \frac{TVE \cdot 100}{60 \cdot (Ni + No)} \rightarrow \frac{1 \cdot 100}{60 \cdot (0 + 5)} = 1.82\%$$

- T - TRAVERSE TIME
- PLO - PERCENT LEAKING OFFTAKES
- TVE - TOTAL OFFTAKES WITH VISIBLE EMISSIONS
- Ni - # OF OVENS NOT IN SERVICE
- No - # OF OVENS NOT OBSERVED

CHARGING INSPECTION
 GUARDIAN ENVIRONMENTAL ASSOCIATES, INC.
 TONAWANDA COKE CORPORATION
 TONAWANDA, NEW YORK

BRAN - HAWK

5/28/10
DATE

INSPECTOR

BATTERY #2

START TIME, 12:33 Hr:Min AM PM

END TIME, 2:59 Hr:Min AM PM

CHARGE NUMBER	OVEN #	START TIME	END TIME	VISIBLE EMISSIONS SECONDS	COMMENTS
1	115	12:33	12:39	10.0	2.3979
2	105	1:09	1:16	6.0	1.9459
3	95	1:40	1:47	14.5	2.7408 *SPRINKLING OF RAIN
4	85	2:18	2:25	5.0	1.7918
5	75	2:53	2:59	5.0	1.7918
					10.6682
Charging LOG Ave. <u>7.45</u> seconds					

COLLECTING MAIN INSPECTION:

WEST MAIN PRESSURE, 6.0 mm

START TIME, 3:02 Hr:Min AM PM

EAST MAIN PRESSURE, 6.0 mm

END TIME, 3:06 Hr:Min AM PM

COMMENTS, NO LEAKS OBSERVED.

