DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR MANAGEMENT

NORTHWEST OFFICE

COKE OVEN DOOR EMISSIONS EVALUATION

Battery Number

5 ☐ 7 ☐

Date: _____

Company: U.S. STEEL, GARY WORKS
Address: 1 North Broadway
Gary, IN
Lake County

Inspector's Name: _____
Sky Condition: _____
Ambient Temperature _____

Push Side Traverse Start Time _____ *Stop Time* _____
Coke Side Traverse Start Time _____ *Stop Time* _____

Oven No.	Push Side	Coke Side	Oven No.	Push Side	Coke Side	Oven No.	Push Side	Coke Side
1			26			52		
2			27			53		
3			28			54		
4			29			55		
5			30			56		
6			31			57		
7			32			58		
8			33			59		
9			34			60		
10			35			61		
11			36			62		
12			37			63		
13			38			64		
14			39			65		
15			40			66		
16			41			67		
17			42			68		
18			43			69		
19			44			70		
20			45			71		
21			46			72		
22			47			73		
23			48			74		
24			49			75		
25			50			76		
			51			77		

Total Number of Ovens: 77
Ovens Out of Service: _____
Number of Doors Not Observed: _____

$\frac{\text{No. Door Leaks}}{\text{No. Doors Observed}}$ X 100 = Percent Leakage

_____ X 100 = _____ % Leakage

LIMIT PER 326 IAC 6-1-10.2 (c)(1)
10% of the Observed Coke Oven Doors

JRS 12/14/93

Compliance Status: ☐ *IN* ☐ *OUT*

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR MANAGEMENT

NORTHWEST OFFICE

COKE OVEN TOPSIDE EMISSIONS EVALUATION

Battery Number

2 ☐ 3 ☐

Ovens Out of Service: _____

Date: _____

Company: U.S. STEEL, GARY WORKS
Address: 1 North Broadway
Gary, IN
Lake County

Inspector's Name: _____
Sky Condition: _____
Ambient Temperature _____

OFF-TAKE PIPING

Oven No.	Off-take Piping		Oven No.	Off-take Piping	
	Push Side	Coke Side		Push Side	Coke Side
1			29		
2			30		
3			31		
4			32		
5			33		
6			34		
7			35		
8			36		
9			37		
10			38		
11			39		
12			40		
13			41		
14			42		
15			43		
16			44		
17			45		
18			46		
19			47		
20			48		
21			49		
22			50		
23			51		
24			52		
25			53		
26			54		
27			55		
28			56		
			57		

$$\frac{\text{No. Leaking Offtakes}}{114} \times 100 = \text{Percent Leakage}$$

$$\frac{\quad}{114} \times 100 = _____ \%\ \text{Leakage}$$

Limit per 326 IAC 6-1-10.2 (c) (5)
5% of Total Off-take Piping

Compliance Status: ☐ *IN* ☐ *OUT*

CHARGING PORT LIDS

Oven No.	Charging Port Lids				Oven No.	Charging Port Lids			
	No.1	No.2	No.3	No.4		No.1	No.2	No.3	No.4
1					29				
2					30				
3					31				
4					32				
5					33				
6					34				
7					35				
8					36				
9					37				
10					38				
11					39				
12					40				
13					41				
14					42				
15					43				
16					44				
17					45				
18					46				
19					47				
20					48				
21					49				
22					50				
23					51				
24					52				
25					53				
26					54				
27					55				
28					56				
					57				

$$\text{No. of Lids Observed} = 228 - (\text{Ovens out of Service} \times 4)$$

$$= 228 - (____ \times 4)$$

$$____ = 228 - ____$$

$$\frac{\text{No. Leaking Lids}}{\text{No. Lids Observed}} \times 100 = \text{Percent Leakage}$$

$$____ \times 100 = ____ \%\ \text{Leakage}$$

Limit per 326 IAC 6-1-10.2 (c) (4)
3% of Lids on Operating Ovens

Compliance Status: ☐ *IN* ☐ *OUT*

JRS 1/3/94

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR MANAGEMENT

NORTHWEST OFFICE

COKE OVEN TOPSIDE EMISSIONS EVALUATION

Battery Number

5 ☐ 7 ☐

Ovens Out of Service: _____

Date: _____

Company: U.S. STEEL, GARY WORKS
Address: 1 North Broadway
Gary, IN
Lake County

Inspector's Name: _____
Sky Condition: _____
Ambient Temperature _____

OFF-TAKE PIPING

Oven No.	Off-take Piping		Oven No.	Off-take Piping		Oven No.	Off-take Piping	
	Push Side	Coke Side		Push Side	Coke Side		Push Side	Coke Side
1			26			52		
2			27			53		
3			28			54		
4			29			55		
5			30			56		
6			31			57		
7			32			58		
8			33			59		
9			34			60		
10			35			61		
11			36			62		
12			37			63		
13			38			64		
14			39			65		
15			40			66		
16			41			67		
17			42			68		
18			43			69		
19			44			70		
20			45			71		
21			46			72		
22			47			73		
23			48			74		
24			49			75		
25			50			76		
			51			77		

$$\frac{\text{No. Leaking Offtakes}}{154} \times 100 = \text{Percent Leakage}$$

$$\frac{\quad}{154} \times 100 = _____ \text{ \% Leakage}$$

Limit per 326 IAC 6-1-10.2 (c) (5)
5% of Total Off-take Piping

Compliance Status: ☐ *IN* ☐ *OUT*

CHARGING PORT LIDS

Oven No.	Charging Port Lids			Oven No.	Charging Port Lids			Oven No.	Charging Port Lids		
	No.1	No.2	No.3		No.1	No.2	No.3		No.1	No.2	No.3
1				26				52			
2				27				53			
3				28				54			
4				29				55			
5				30				56			
6				31				57			
7				32				58			
8				33				59			
9				34				60			
10				35				61			
11				36				62			
12				37				63			
13				38				64			
14				39				65			
15				40				66			
16				41				67			
17				42				68			
18				43				69			
19				44				70			
20				45				71			
21				46				72			
22				47				73			
23				48				74			
24				49				75			
25				50				76			
				51				77			

$$\text{No. of Lids Observered} = 231 - (\text{Ovens out of Service} \times 3)$$

$$= 231 - (____ \times 3)$$

$$____ = 231 - ____$$

$$\frac{\text{No. Leaking Lids}}{\text{No. Lids Observed}} \times 100 = \text{Percent Leakage}$$

$$____ \times 100 = ____ \text{ \% Leakage}$$

Limit per 326 IAC 6-1-10.2 (c) (4)
3% of Lids on Operating Ovens

Compliance Status: ☐ *IN* ☐ *OUT*

JRS 1/3/94

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR MANAGEMENT

NORTHWEST OFFICE

COKE OVEN DOOR EMISSIONS EVALUATION

Battery Number

2 ☐ 3 ☐

Date: _____ *Inspector's Name:* _____

Company: U.S. STEEL, GARY WORKS *Sky Condition:* _____

Address: 1 North Broadway *Ambient Temperature* _____
Gary, IN
Lake County

Push Side Traverse Start Time _____ *Stop Time* _____

Coke Side Traverse Start Time _____ *Stop Time* _____

Oven No.	Push Side	Coke Side	Oven No.	Push Side	Coke Side
1			29		
2			30		
3			31		
4			32		
5			33		
6			34		
7			35		
8			36		
9			37		
10			38		
11			39		
12			40		
13			41		
14			42		
15			43		
16			44		
17			45		
18			46		
19			47		
20			48		
21			49		
22			50		
23			51		
24			52		
25			53		
26			54		
27			55		
28			56		
			57		

Total Number of Ovens: 57

Ovens Out of Service: _____

Number of Doors Not Observed: ____

$\frac{\text{No. Door Leaks}}{\text{No. Doors Observed}}$ X 100 = Percent Leakage

_____ X 100 = _____ % Leakage

LIMIT PER 326 IAC 6-1-10.2 (c)(1)
10% of the Observed Coke Oven Doors

Compliance Status: ☐ *IN* ☐ *OUT*

JRS 12/10/93

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR MANAGEMENT

PUSHING EMISSIONS EVALUATION

Battery Number

2 ☐ 3 ☐ 5 ☐ 7 ☐

Company: U.S. STEEL, GARY WORKS
Address: 1 North Broadway
Gary, IN
Lake County

Date: _____
Observer's Name _____
Certification Date _____

EMISSION POINT INFORMATION

Type: _____
Est. Height: _____
Est. Distance from Observer:
Start: _____ Stop: _____
Emission Color: _____

Oven No: _____
Time Door Removed: _____
Maximum opacity before first movement of coke: _____
COMMENTS: _____

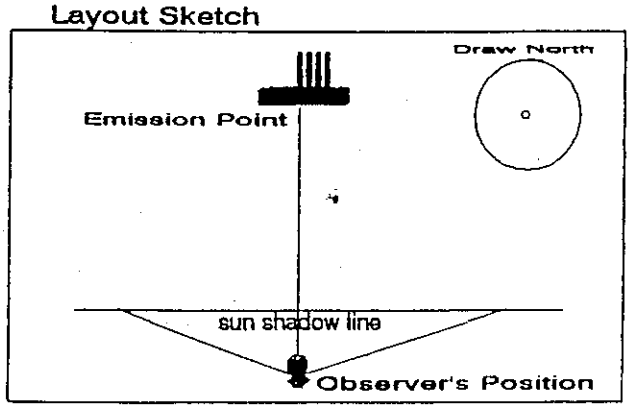
Opacity during pushing operation

SEC / MIN	0	15	30	45
0				
1				
2				
3				
4				
5				

READING CONDITIONS

Approx. Wind Direction
Start: _____ Stop: _____
Est. Wind Speed
Start: _____ Stop: _____
Sky Condition
Start: _____ Stop: _____
Color of Clouds
Start: _____ Stop: _____
Sky Color
Start: _____ Stop: _____
Plume Background/Color
Start: _____ Stop: _____

Layout Sketch



Oven No: _____
Time Door Removed: _____
Maximum opacity before first movement of coke: _____
COMMENTS: _____

Opacity during pushing operation

SEC / MIN	0	15	30	45
0				
1				
2				
3				
4				
5				

Oven No: _____
Time Door Removed: _____
Maximum opacity before first movement of coke: _____
COMMENTS: _____

Opacity during pushing operation

SEC / MIN	0	15	30	45
0				
1				
2				
3				
4				
5				

Oven No: _____
Time Door Removed: _____
Maximum opacity before first movement of coke: _____
COMMENTS: _____

Opacity during pushing operation

SEC / MIN	0	15	30	45
0				
1				
2				
3				
4				
5				

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR MANAGEMENT

NORTHWEST OFFICE

COKE OVEN CHARGING EVALUATION

Battery Number

2 ☐ 3 ☐ 5 ☐ 7 ☐

Date: _____

Company: U.S. STEEL, GARY WORKS
Address: 1 North Broadway
Gary, IN
Lake County

Inspector's Name: _____
Sky Condition: _____
Ambient Temperature _____

Charging Observations		
Oven No.	**Start Time**	**Seconds of Emissions**

Total Seconds for
Five Charges: _____
Oven No. Exempted: _____

LIMIT PER 326 IAC 6-1-10.2 (c)(2)
125 Seconds for 5 Consecutive Charges

Compliance Status: ☐ *IN* ☐ *OUT*

JRS 1/7/94

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR MANAGEMENT

PUSHING EMISSIONS EVALUATION

Battery Number

Company:
Address:

Date: _____
Observer's Name _____
Certification Date _____

EMISSION POINT INFORMATION

Type: _____
Est. Height: _____
Est. Distance from Observer:
Start: _____ Stop: _____
Emission Color: _____

Oven No: _____
Time Door Removed: _____
Maximum opacity before first movement of coke: _____
COMMENTS: _____

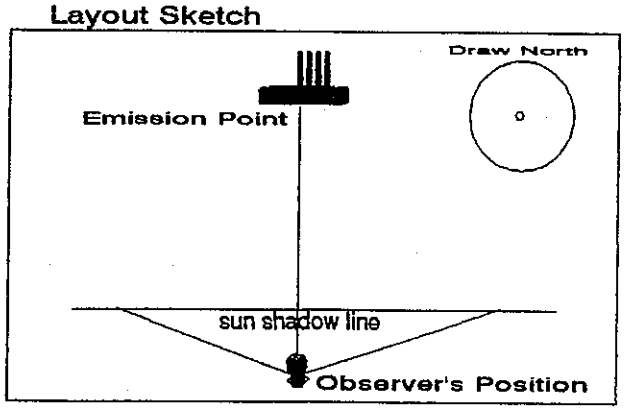
Opacity during pushing operation

SEC / MIN	0	15	30	45
0				
1				
2				
3				
4				
5				

READING CONDITIONS

Approx. Wind Direction
Start: _____ Stop: _____
Est. Wind Speed
Start: _____ Stop: _____
Sky Condition
Start: _____ Stop: _____
Color of Clouds
Start: _____ Stop: _____
Sky Color
Start: _____ Stop: _____
Plume Background/Color
Start: _____ Stop: _____

Layout Sketch



Oven No: _____
Time Door Removed: _____
Maximum opacity before first movement of coke: _____
COMMENTS: _____

Opacity during pushing operation

SEC / MIN	0	15	30	45
0				
1				
2				
3				
4				
5				

Oven No: _____
Time Door Removed: _____
Maximum opacity before first movement of coke: _____
COMMENTS: _____

Opacity during pushing operation

SEC / MIN	0	15	30	45
0				
1				
2				
3				
4				
5				

Oven No: _____
Time Door Removed: _____
Maximum opacity before first movement of coke: _____
COMMENTS: _____

Opacity during pushing operation

SEC / MIN	0	15	30	45
0				
1				
2				
3				
4				
5				

Indiana Department of Environmental Management
Office of Air Quality

CHARGING INSPECTION

DATE _____ **INSPECTOR** _____

☐ MITTAL (Burns Harbor) ☐ US STEEL (Gary)

BATTERY NO.: 1☐ 2☐ 5☐ 7☐

OVEN NUMBER	CHARGE BEGAN	CHARGE ENDED	SECONDS OF EMISSION

CHARGE ON OVEN #_____ EXEMPT FROM TOTAL

TOTAL SECONDS FOR FIVE CHARGES_____

COMMENTS:

_____

_____

_____

_____

_____

Indiana Department of Environmental Management
Office of Air Quality

MITTAL (Burns Harbor)

TOPSIDE INSPECTION (LIDS & OFFTAKES)

DATE _____ **INSPECTOR** _____

BATTERY NO.: 1☐ 2☐

Oven No.	OFFTAKES Push Side	OFFTAKES Coke Side	LIDS 1	LIDS 2	LIDS 3	LIDS 4	LIDS 5	Oven No.	OFFTAKES Push Side	OFFTAKES Coke Side	LIDS 1	LIDS 2	LIDS 3	LIDS 4	LIDS 5	Oven No.	OFFTAKES Push Side	OFFTAKES Coke Side	LIDS 1	LIDS 2	LIDS 3	LIDS 4	LIDS 5
1								32								63							
2								33								64							
3								34								65							
4								35								66							
5								36								67							
6								37								68							
7								38								69							
8								39								71							
9								41								72							
11								42								73							
12								43								74							
13								44								75							
14								45								76							
15								46								77							
16								47								78							
17								48								79							
18								49								81							
19								51								82							
21								52								83							
22								53								84							
23								54								85							
24								55								86							
25								56								87							
26								57								88							
27								58								89							
28								59								91							
29								61															
31								62															

Total Number of Ovens _____

Ovens Out of Service _____

OFFTAKES

Total Number of Offtakes _____

Number of Offtakes Not Observed _____

Total Number of Offtakes Observed _____

$\frac{\text{No. Offtake Leaks}}{\text{No. Offtakes Observed}}$ x 100 = Percent Leakage

_____ x 100 = _____% Leakage

PRELIM. COMPLIANCE STATUS: ☐IN ☐OUT

LIDS

Total Number of Lids _____

Number of Lids Not Observed _____

Total Number of Lids Observed _____

$\frac{\text{No. Lid Leaks}}{\text{No. Lids Observed}}$ x 100 = Percent Leakage

_____ x 100 = _____% Leakage

PRELIM. COMPLIANCE STATUS: ☐IN ☐OUT

Indiana Department of Environmental Management
Office of Air Quality

MITTAL (Burns Harbor)

COKE OVEN DOOR EMISSIONS INSPECTION

DATE _____ **INSPECTOR** _____

BATTERY NO.: 1 ☐ 2 ☐

Oven No.	Push Side	Coke Side	Oven No.	Push Side	Coke Side	Oven No.	Push Side	Coke Side
1			32			63		
2			33			64		
3			34			65		
4			35			66		
5			36			67		
6			37			68		
7			38			69		
8			39			71		
9			41			72		
11			42			73		
12			43			74		
13			44			75		
14			45			76		
15			46			77		
16			47			78		
17			48			79		
18			49			81		
19			51			82		
21			52			83		
22			53			84		
23			54			85		
24			55			86		
25			56			87		
26			57			88		
27			58			89		
28			59			91		
29			61					
31			62					

Push Side Traverse: Start Time _____ Stop Time _____

Coke Side Traverse: Start Time _____ Stop Time _____

Total Number of Ovens _____

Ovens Out of Service _____

Total Number of Doors _____

Number of Doors Not Observed _____

Number Doors Not Available for Observation _____

Total Number of Doors Observed _____

$\frac{\text{No. Door Leaks}}{\text{No. Doors Observed}} \times 100 = \text{Percent Leakage}$

_____ x 100 = _____ % Leakage

Back Pressure: _____

Comments: _____

PRELIMINARY DETERMINATION OF COMPLIANCE STATUS: ☐ IN ☐ OUT