ATTACHMENT 11

Request No. 11:

Provide a copy of all Title V quarterly deviation reports that U. S. Steel has submitted to IDEM, or its agent as of the date of your receipt of this request.

U. S. Steel Response:

Attached are all Title V quarterly deviation reports that have been submitted to IDEM.

United States Steel Corporation
Gary Works
One North Broadway
Gary, IN 46402-3199

October 27, 2006

Certified Mail
Return Receipt Requested

Dave Cline
Section Chief
Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section
Mail Code 61-50
100 North Senate Avenue
Indianapolis, IN 46204-2251

Subject: **Third (3rd) Quarter 2006 Reports**
Operation Permit No. T089-7663-00121
U.S. Steel – Gary Works

Dear Mr. Cline:

As required, the following reports are enclosed and cover the reporting period of July 1, 2006 through September 30, 2006:

- Source Modification Certification covering the reporting period of July 1, 2006 through August 17, 2006 for EGL Boiler 1, Turboblower Boiler House (TBBH) Nos. 1, 2, 3 and 5 Boilers, TBBH No. 6 Boiler, No. 3 Sinter Plant, No. 2 Precarbon Facility, Coke Battery Nos. 2, 5 and 7 Underfiring Stacks, Coke Plant Boiler House Boilers and Lime Silo Baghouse
- Operating Permit Certification covering the reporting period of August 18, 2006 through September 30, 2006 for Iron Producing Quarterly Deviation and Compliance Monitoring Report, Coke Plant Quarterly Deviation and Compliance Monitoring Report, No. 2 Precarbon Facility, Coke Battery Nos. 2, 5 and 7 Underfiring Stacks, Coke Plant Boiler House Boilers, No. 3 Sinter Plant, South Sheet Mill Hydrogen Annealing Furnaces and TBBH No. 6 Boiler.
- Quarterly Deviation and Compliance Monitoring Reports
- EGL Boiler 1 PM_{10} Emissions
- TBBH - Nos. 1, 2 and 3 Blast Furnace Gas Usage
- TBBH - Nos. 1, 2 and 3 NOx Emissions
- TBBH - Nos. 1, 2, 3 and 5 PM_{10} and SO_2 Emissions
- TBBH - No. 6 Boiler Natural Gas Usage
- TBBH - No. 6 Boiler PM_{10} and SO_2 Emissions
- No. 3 Sinter Plant Reheat Burners Natural Gas and Coke Oven Gas Usage Rates
- No. 3 Sinter Plant Reheat Burners PM_{10} and SO_2 Emissions

- Coke Oven Battery Underfiring NG Injection Jets NG Usage Rates
- Coke Oven Battery Underfiring NG Injection Jets PM_{10} Emissions
- Coke Plant Boiler House Nos. 1 through 10 Boilers NG Usage Rates
- Coke Plant Boiler House Nos. 1 through 10 Boilers NOx Emissions
- Coke Plant Boiler House Nos. 9 and 10 Boilers CO Excess Emissions
- Coke Plant Boiler House Lime Silo Baghouse Compliance Monitoring and Deviation
- South Sheet Mill Hydrogen Annealing Furnaces Natural Gas Usage
- TBBH - No. 4a Boiler NOx Emissions
- TBBH - No. 4a Boiler PM_{10} and SO_2 Emissions
- No. 3 Sinter Plant VOC Excess Emissions
- No. 3 Sinter Plant Cylinder Gas Audit
- No. 2 Precarbon Facility Compliance Monitoring and Deviation
- Nos. 2, 5 and 7 Underfiring Stacks Opacity Exceedances
- Nos. 2, 5 and 7 Underfiring Stacks COMS Excess Emissions (On Diskette)
- Nos. 2, 5 and 7 Underfiring Stacks Opacity Monitor Performance Audit

The Turboblower Boiler House No. 4a Boiler did not operate during the 3rd quarter 2006.

If there are any questions concerning the enclosed, please contact me at 219.888.3387.

Sincerely,

Jim Alexander
Manager, Environmental Air Compliance

cc:

Dave Sampias (w/o diskette data)
IDEM/NWRO
8315 Virginia St, Suite 1
Merrillville, Indiana 46410

Rodney Sommerville (w/o diskette data)
Environmental Affairs Department
839 Broadway, 2nd Floor NE
Gary, Indiana 46402

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name:	U. S. Steel – Gary Works
Source Address:	One North Broadway, Gary, Indiana 46402
Mailing Address:	One North Broadway, Gary, Indiana 46402
Source Modification:	See Below
Reporting Period:	July 1, 2006 to August 17, 2006

This certification shall be included when submitting monitoring, testing report/results or other documents as required by this approval.

Please check what document is being certified:

- Test Result (specify)
- X Reports (specify) Source Modification 089-15694-00121
  - EGL Boiler 1 PM_{10} Emissions
  - Source Modification 089-12137-00121
    - Turboblower Boiler House Boilers 1, 2 & 3 BFG Usage Rate
    - Turboblower Boiler House Boilers 1, 2 & 3 NOx Emissions
    - Turboblower Boiler House Boilers 1, 2, 3 & 5 PM_{10} and SO_2 Emissions
  - Source Modification 089-10160-00121
    - Turboblower Boiler House Boiler 6 NG Usage Rate
    - Turboblower Boiler House Boiler 6 PM_{10} and SO_2 Emissions
  - Source Modification 089-12880-00121
    - No. 3 Sinter Plant Reheat Burners NG and COG Usage Rates
    - No. 3 Sinter Plant Reheat Burners PM_{10} and SO_2 Emissions
    - Coke Oven Battery Underfiring NG Injection Jets NG Usage Rates
    - Coke Oven Battery Underfiring NG Injection Jets PM_{10} Emissions
  - Source Modification 089-19678-00121
    - Coke Plant Boiler House Nos 1 through 10 Boilers NG Usage Rates
    - Coke Plant Boiler House Nos. 1 through 10 Boilers NOx Emissions
  - Source Modification 089-14656-00121
    - Coke Plant Boiler House Lime Silo Baghouse Compliance Monitoring and Deviation
  - No. 2 Precarbon Facility Compliance Monitoring and Deviation
  - Nos. 2, 5 and 7 Underfiring Stacks Opacity Monitor Performance Audit
  - Nos. 2, 5 and 7 Underfiring Stacks COMS Excess Emissions
- Notification (specify)
- Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:	MSWilliams
Printed Name:	Michael S. Williams
Title/Position.	General Manager
Date:	10-27-06

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT CERTIFICATION

Source Name:	U. S. Steel – Gary Works
Source Address:	One North Broadway, Gary, Indiana 46402
Mailing Address:	One North Broadway, Gary, Indiana 46402
Part 70 Permit No.:	T089-7663-00121
Reporting Period:	August 18, 2006 to September 30, 2006

This certification shall be included when submitting monitoring, testing report/results or other documents as required by this approval.

Please check what document is being certified:

- Test Result (specify)
- X Reports (specify) Quarterly Deviation and Compliance Monitoring Report for Iron Producing
  Quarterly Deviation and Compliance Monitoring Report for Coke Plant
  No. 2 Precarbon Facility Compliance Monitoring
  Coke Battery Nos 2, 5 and 7 Opacity Exceedances
  Coke Battery Nos. 2, 5 and 7 Underfiring NG Injection Jets Natural Gas Usage Rates
  Coke Battery Nos. 2, 5 and 7 Underfiring COMS Excess Emissions
  Coke Battery Nos. 2, 5 and 7 Underfiring Opacity Monitor Performance Audit
  Coke Plant Boiler House Nos. 1 through 10 Boilers Natural Gas Usage Rates
  Coke Plant Boiler House Nos. 1 through 10 Boilers NOx Emissions
  No 3 Sinter Plant Reheat Burners Natural Gas Usage Rates
  No 3 Sinter Plant Reheat Burners Coke Oven Gas Usage Rates
  No 3 Sinter Plant CEMS Excess Emissions
  South Sheet Mill Hydrogen Annealing Furnaces Natural Gas Usage Rates
  Turboblower Boiler House Boiler No 6 Natural Gas Usage Rate
- Notification (specify)
- Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature: MS Williams

Printed Name: Michael S. Williams

Title/Position: General Manager

Date: 10-27-06

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: U.S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121

Months: August 18 **to** September 30 **Year:** 2006

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☒ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Permit Requirement (specify permit condition #) C.5(a)(12)

Date of Deviation: 09/26/06	**Duration of Deviation:** 3 minutes/deviation

Number of Deviations: 9

Probable Cause of Deviation: Numerous leaks in the furnace uptakes and the bell seating surfaces are worn to the point that particulate can escape to the atmosphere under pressure.

Response Steps Taken: Remove all coal injection for the furnace and shutdown No. 4 Blast Furnace for top repairs.

Permit Requirement (specify permit condition #) C.5(a)(12)

Date of Deviation: 09/29/06	**Duration of Deviation:** 3 minutes

Number of Deviations: 1

Probable Cause of Deviation: The No. 6 Blast Furnace top and bell seating surface areas are worn. Seating surfaces are scheduled to be replaced.

Response Steps Taken: Reduce the PCI coal injection rate to the minimum sustainable rate and make appropriate burden changes. Monitor furnace top relief valve emissions and make move to zero coal injection.

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document is true, accurate and complete.

Form Completed By: Dale Baker

Title/Position: Division Manager, Iron Producing

Date: October 24, 2006

Phone: 219.888.4688

Attach a signed certification to complete this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

3rd 2006

EGL Boiler 1

Contents

EGL Boiler 1 - PM_{10} Emissions Report

EPA-R5-2012-0005960000321

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
and
City of Gary Division of Air Pollution Control

QUARTERLY REPORT

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Permit No.: CP-089-15694-00121
Facility: EGL Boiler 1
Parameter: (a) Daily Natural Gas
(b) Daily Average Heat Content of Natural Gas
(c) Calculated PM-10 Emission Rate in lbs/hr and lbs/MMBtu
Limit: (a) PM-10 Limit = 0.0033 lbs/MMBtu (0.13 lbs/hr)

Quarter Period: 3rd Year: 2006

Date	Natural Gas			PM-10 Emissions	
	Usage	Heat Content	PM-10 Emission Factor		
Jul	(scf)	(Btu/cf)	(lbs/MMcf)	(lbs/hr)	(Lbs/MMBtu)
1	426550	1026	1.9	0.0338	0.0019
2	96550	1026	1.9	0.0076	0.0019
3	105160	1026	1.9	0.0083	0.0019
4	133870	1026	1.9	0.0106	0.0019
5	482070	1026	1.9	0.0382	0.0019
6	533100	1026	1.9	0.0422	0.0019
7	557200	1026	1.9	0.0441	0.0019
8	398900	1026	1.9	0.0316	0.0019
9	108370	1026	1.9	0.0086	0.0019
10	275000	1026	1.9	0.0218	0.0019
11	470000	1026	1.9	0.0372	0.0019
12	667000	1026	1.9	0.0528	0.0019
13	455000	1026	1.9	0.0360	0.0019
14	629000	1026	1.9	0.0498	0.0019
15	341260	1026	1.9	0.0270	0.0019
16	130520	1026	1.9	0.0103	0.0019
17	314660	1026	1.9	0.0249	0.0019
18	108910	1026	1.9	0.0086	0.0019
19	0	1026	1.9	0.0000	0.0000
20	0	1026	1.9	0.0000	0.0000
21	154360	1026	1.9	0.0122	0.0019
22	201850	1026	1.9	0.0160	0.0019
23	261220	1026	1.9	0.0207	0.0019
24	275000	1026	1.9	0.0218	0.0019
25	551000	1026	1.9	0.0436	0.0019
26	547000	1026	1.9	0.0433	0.0019
27	497000	1026	1.9	0.0393	0.0019
28	600290	1026	1.9	0.0475	0.0019
29	614430	1026	1.9	0.0486	0.0019
30	641000	1026	1.9	0.0507	0.0019
31	360000	1026	1.9	0.0285	0.0019

Date	Natural Gas			PM-10 Emissions	
	Usage	Heat Content	PM-10 Emission Factor		
Aug	(scf)	(Btu/cf)	(lbs/MMcf)	(lbs/hr)	(Lbs/MMBtu)
1	96000	1026	1.9	0.0076	0.0019
2	306000	1026	1.9	0.0242	0.0019
3	447000	1026	1.9	0.0354	0.0019
4	581700	1026	1.9	0.0461	0.0019
5	303540	1026	1.9	0.0240	0.0019
6	123000	1026	1.9	0.0097	0.0019
7	689650	1026	1.9	0.0546	0.0019
8	0	1026	1.9	0.0000	0.0000
9	771320	1026	1.9	0.0611	0.0019
10	485230	1026	1.9	0.0384	0.0019
11	455000	1026	1.9	0.0360	0.0019
12	408410	1026	1.9	0.0323	0.0019
13	112830	1026	1.9	0.0089	0.0019
14	177380	1026	1.9	0.0140	0.0019
15	451030	1026	1.9	0.0357	0.0019
16	565000	1026	1.9	0.0447	0.0019
17	585110	1026	1.9	0.0463	0.0019
18	410330	1026	1.9	0.0325	0.0019
19	252020	1026	1.9	0.0200	0.0019
20	318740	1026	1.9	0.0252	0.0019
21	0	1026	1.9	0.0000	0.0000
22	405000	1026	1.9	0.0321	0.0019
23	584000	1026	1.9	0.0462	0.0019
24	399110	1026	1.9	0.0316	0.0019
25	402940	1026	1.9	0.0319	0.0019
26	406180	1026	1.9	0.0322	0.0019
27	490470	1026	1.9	0.0388	0.0019
28	526500	1026	1.9	0.0417	0.0019
29	496800	1026	1.9	0.0393	0.0019
30	264460	1026	1.9	0.0209	0.0019
31	133320	1026	1.9	0.0106	0.0019

Date	Natural Gas			PM-10 Emissions	
	Usage	Heat Content	PM-10 Emission Factor		
Sep	(scf)	(Btu/cf)	(lbs/MMcf)	(lbs/hr)	(Lbs/MMBtu)
1	99410	1026	1.9	0.0079	0.0019
2	120000	1026	1.9	0.0095	0.0019
3	98990	1026	1.9	0.0078	0.0019
4	101000	1026	1.9	0.0080	0.0019
5	272340	1026	1.9	0.0216	0.0019
6	348550	1026	1.9	0.0276	0.0019
7	484400	1026	1.9	0.0383	0.0019
8	563910	1026	1.9	0.0446	0.0019
9	406390	1026	1.9	0.0322	0.0019
10	505610	1026	1.9	0.0400	0.0019
11	370770	1026	1.9	0.0294	0.0019
12	516400	1026	1.9	0.0409	0.0019
13	508000	1026	1.9	0.0402	0.0019
14	549070	1026	1.9	0.0435	0.0019
15	258900	1026	1.9	0.0205	0.0019
16	133520	1026	1.9	0.0106	0.0019
17	141860	1026	1.9	0.0112	0.0019
18	122000	1026	1.9	0.0097	0.0019
19	351180	1026	1.9	0.0278	0.0019
20	410000	1026	1.9	0.0325	0.0019
21	416190	1026	1.9	0.0329	0.0019
22	474670	1026	1.9	0.0376	0.0019
23	412890	1026	1.9	0.0327	0.0019
24	652860	1026	1.9	0.0517	0.0019
25	385730	1026	1.9	0.0305	0.0019
26	543900	1026	1.9	0.0431	0.0019
27	480280	1026	1.9	0.0380	0.0019
28	437000	1026	1.9	0.0346	0.0019
29	503910	1026	1.9	0.0399	0.0019
30	280150	1026	1.9	0.0222	0.0019

EPA-USS-0325638

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

3rd 2006

Turboblower House (TBBH) - Nos. 1, 2 & 3 Boilers

Contents

TBBH - Nos. 1, 2 & 3 Boilers BFG Usage Report
TBBH - Nos. 1, 2 & 3 Boilers NOx Emissions Report
TBBH - No. 1, 2, 3 & 5 Boilers PM_{10} & SO_2 Emissions Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Quarterly Report

Source Name: U. S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Source Modification: CP 089-12137-00121
Facility: Turboblower Boiler House (TBBH) Boilers No. 1, 2 & 3
Parameter: Blast Furnace Gas (BFG) Usage
Limits: 123,670.6 million cubic feet (MMCF) per 12-consecutive month period rolled on a monthly basis.

Quarter: 3rd Year: 2006

Month	Blast Furnace Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
July	6,468.7	60,782.5	67,251.1
August	5,956.7	62,817.8	68,774.4
September	5,635.5	63,220.3	68,855.9

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Quarterly Report

Source Name: U. S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Source Modification No.: CP 089-12137-00121
Facility: Turboblower Boiler House (TBBH) Boiler No. 1,2,3
Parameter: NOx Emissions
Limits: 135.1 tons per 12 consecutive month period rolled on a monthly basis for fuel oil and natural gas combustion.

Quarter: 3rd Year: 2006

Month	Natural Gas (NG) Usage (MMCF)	**NOx Emissions Combustion NG (tons)**	Fuel Oil (FO) Usage (Kgal)	**NOx Emissions Combustion FO (tons)**	Total NOx Emissions Combustion NG & FO (tons)	Total NOx Emissions Previous 11 months (tons)	Total NOx Emissions 12 month period (tons)
July	27.14	**3.80**	226.10	**5.31**	9.11	90.85	99.96
August	35.55	**4.98**	190.47	**4.48**	9.45	94.60	104.05
September	23.88	**3.34**	129.15	**3.04**	6.38	92.65	99.03

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

EPA-R5-2012-0005960000321

U.S. Steel Corporation - Gary Works

PM10 Emissions Report

July 2006

TURBOBLOWER BLOWER HOUSE BOILER NOS. 1, 2, 3, & 5

	Blast Furnace Gas			Natural Gas			Fuel Oil			Desulfurized COG			Sulfurized COG			PM10 Emissions	
	Usage	Heat Content	Emission Factor	Usage	Heat Content	Emission Factor	Usage	Heat Content	Emission Factor	Usage	Heat Content	Emission Factor	Usage	Heat Content	Emission Factor	Rate	Conc.
Date	MMcf	Btu/cf	lbs/MMcf	MMcf	Btu/cf	lbs/MMcf	Mgal	MMBtu/Mgals	lbs/Mgals	MMcf	Btu/cf	lbs/MMcf	MMcf	Btu/cf	lbs/MMcf	lbs/hr	lbs/MMBtu
1-Jul	314.81	91.88	1.5	4.01	1026	3.0	2.48	150	10.8	5.739	515.50	4.35	0.00	0.00	4.35	22.33	0.015
2-Jul	266.47	91.88	1.5	3.62	1026	3.0	4.92	150	10.8	6.874	521.21	4.35	0.00	0.00	4.35	20.57	0.015
3-Jul	231.44	91.88	1.5	4.09	1026	3.0	9.78	150	10.8	5.423	518.35	4.35	0.00	0.00	4.35	20.36	0.016
4-Jul	236.18	91.88	1.5	3.48	1026	3.0	6.00	150	10.8	6.534	523.27	4.35	0.00	0.00	4.35	19.08	0.015
5-Jul	234.45	91.88	1.5	1.95	1026	3.0	7.08	150	10.8	12.045	513.82	4.35	1.74	491.30	4.35	20.58	0.016
6-Jul	253.79	91.88	1.5	3.26	1026	3.0	12.91	150	10.8	7.922	515.63	4.35	0.00	0.00	4.35	23.51	0.017
7-Jul	237.18	91.88	1.5	3.38	1026	3.0	15.51	150	10.8	7.256	518.01	4.35	0.00	0.00	4.35	23.54	0.018
8-Jul	286.80	91.88	1.5	2.54	1026	3.0	6.28	150	10.8	6.045	510.42	4.35	0.00	0.00	4.35	22.16	0.016
9-Jul	273.74	91.88	1.5	2.47	1026	3.0	8.51	150	10.8	5.578	531.39	4.35	0.00	0.00	4.35	22.26	0.017
10-Jul	207.93	91.88	1.5	3.38	1026	3.0	11.31	150	10.8	5.945	540.14	4.35	0.00	0.00	4.35	19.59	0.017
11-Jul	203.73	91.88	1.5	2.68	1026	3.0	11.78	150	10.8	11.767	538.80	4.35	0.00	0.00	4.35	20.50	0.017
12-Jul	277.79	91.88	1.5	2.47	1026	3.0	11.46	150	10.8	6.629	541.80	4.35	0.00	0.00	4.35	24.03	0.017
13-Jul	255.40	91.88	1.5	3.14	1026	3.0	7.99	150	10.8	7.996	527.88	4.35	0.00	0.00	4.35	21.40	0.016
14-Jul	244.52	91.88	1.5	3.61	1026	3.0	11.06	150	10.8	7.011	538.93	4.35	0.00	0.00	4.35	21.98	0.017
15-Jul	221.51	91.88	1.5	2.05	1026	3.0	5.55	150	10.8	14.149	543.83	4.35	0.00	0.00	4.35	19.17	0.015
16-Jul	284.79	91.88	1.5	3.43	1026	3.0	13.36	150	10.8	5.972	516.68	4.35	0.00	0.00	4.35	25.32	0.017
17-Jul	308.38	91.88	1.5	3.65	1026	3.0	10.37	150	10.8	6.397	520.39	4.35	0.00	0.00	4.35	25.56	0.017
18-Jul	303.49	91.88	1.5	1.92	1026	3.0	3.77	150	10.8	15.205	519.94	4.35	0.00	0.00	4.35	23.66	0.015
19-Jul	318.92	91.88	1.5	2.68	1026	3.0	4.80	150	10.8	6.141	517.29	4.35	0.00	0.00	4.35	23.54	0.016
20-Jul	313.23	91.88	1.5	4.57	1026	3.0	10.13	150	10.8	0.691	509.20	4.35	0.00	0.00	4.35	24.83	0.017
21-Jul	310.84	91.88	1.5	3.01	1026	3.0	5.63	150	10.8	2.767	508.86	4.35	0.00	0.00	4.35	22.84	0.016
22-Jul	326.99	91.88	1.5	2.87	1026	3.0	2.53	150	10.8	3.631	509.78	4.35	0.00	0.00	4.35	22.59	0.015
23-Jul	302.17	91.88	1.5	2.63	1026	3.0	8.98	150	10.8	6.785	513.18	4.35	0.00	0.00	4.35	24.49	0.017
24-Jul	303.91	91.88	1.5	4.33	1026	3.0	6.54	150	10.8	0.642	504.30	4.35	0.00	0.00	4.35	22.59	0.016
25-Jul	287.38	91.88	1.5	1.90	1026	3.0	3.58	150	10.8	13.836	514.80	4.35	0.00	0.00	4.35	22.32	0.015
26-Jul	274.40	91.88	1.5	2.78	1026	3.0	2.83	150	10.8	3.258	511.03	4.35	0.00	0.00	4.35	19.36	0.015
27-Jul	297.22	91.88	1.5	5.30	1026	3.0	6.23	150	10.8	1.686	498.62	4.35	0.00	0.00	4.35	22.35	0.016
28-Jul	283.38	91.88	1.5	4.11	1026	3.0	7.27	150	10.8	1.468	509.64	4.35	0.00	0.00	4.35	21.76	0.016
29-Jul	293.04	91.88	1.5	4.84	1026	3.0	4.42	150	10.8	0.259	523.59	4.35	0.00	0.00	4.35	20.95	0.015
30-Jul	287.18	91.88	1.5	2.83	1026	3.0	5.87	150	10.8	4.292	507.56	4.35	0.00	0.00	4.35	21.72	0.016
31-Jul	277.06	91.88	1.5	2.72	1026	3.0	4.86	150	10.8	4.573	502.47	4.35	0.00	0.00	4.35	20.67	0.016

EPA-USS-0325642

U.S. Steel Corporation - Gary Works

PM10 Emissions Report

August 2006

TURBOBLOWER BLOWER HOUSE BOILER NOS. 1, 2, 3, & 5

	Blast Furnace Gas			Natural Gas			Fuel Oil			Desulfurized COG			Sulfurized COG			PM10 Emissions	
	Usage	Heat Content	Emission Factor	Usage	Heat Content	Emission Factor	Usage	Heat Content	Emission Factor	Usage	Heat Content	Emission Factor	Usage	Heat Content	Emission Factor	Rate	Conc.
Date	MMcf	Btu/cf	lbs/MMcf	MMcf	Btu/cf	lbs/MMcf	Mgal	MMBtu/Mgals	lbs/Mgals	MMcf	Btu/cf	lbs/MMcf	MMcf	Btu/cf	lbs/MMcf	lbs/hr	lbs/MMBtu
1-Aug	275.14	91.88	1.5	2.23	1026	3.0	6.94	150	10.8	7.614	503.48	4.35	0.00	0.00	4.35	21.98	0.016
2-Aug	290.08	91.88	1.5	2.27	1026	3.0	5.14	150	10.8	3.881	504.95	4.35	0.00	0.00	4.35	21.43	0.016
3-Aug	255.16	91.88	1.5	2.45	1026	3.0	10.38	150	10.8	6.678	505.61	4.35	0.00	0.00	4.35	22.14	0.017
4-Aug	194.00	91.88	1.5	2.55	1026	3.0	16.89	150	10.8	10.174	496.18	4.35	0.00	0.00	4.35	21.89	0.019
5-Aug	240.94	91.88	1.5	2.44	1026	3.0	3.50	150	10.8	10.117	516.78	4.35	0.00	0.00	4.35	18.77	0.015
6-Aug	279.02	91.88	1.5	1.84	1026	3.0	3.09	150	10.8	9.580	528.66	4.35	0.00	0.00	4.35	20.80	0.015
7-Aug	233.49	91.88	1.5	2.18	1026	3.0	5.24	150	10.8	12.836	528.63	4.35	0.00	0.00	4.35	19.55	0.015
8-Aug	284.54	91.88	1.5	1.97	1026	3.0	5.63	150	10.8	7.945	522.86	4.35	0.00	0.00	4.35	22.01	0.016
9-Aug	224.34	91.88	1.5	2.27	1026	3.0	3.31	150	10.8	10.370	531.62	4.35	0.00	0.00	4.35	17.67	0.015
10-Aug	197.36	91.88	1.5	2.84	1026	3.0	3.09	150	10.8	8.296	524.71	4.35	0.00	0.00	4.35	15.58	0.014
11-Aug	201.16	91.88	1.5	3.25	1026	3.0	7.35	150	10.8	6.975	523.79	4.35	0.00	0.00	4.35	17.55	0.016
12-Aug	222.76	91.88	1.5	2.64	1026	3.0	3.52	150	10.8	6.746	528.37	4.35	0.00	0.00	4.35	17.06	0.015
13-Aug	260.49	91.88	1.5	2.35	1026	3.0	3.39	150	10.8	9.781	533.68	4.35	0.00	0.00	4.35	19.87	0.015
14-Aug	278.59	91.88	1.5	2.84	1026	3.0	3.56	150	10.8	8.403	518.86	4.35	0.00	0.00	4.35	20.89	0.015
15-Aug	200.49	91.88	1.5	1.53	1026	3.0	2.86	150	10.8	13.816	540.74	4.35	0.00	0.00	4.35	16.51	0.014
16-Aug	206.22	91.88	1.5	1.68	1026	3.0	5.03	150	10.8	9.787	533.64	4.35	0.00	0.00	4.35	17.14	0.015
17-Aug	203.54	91.88	1.5	1.70	1026	3.0	5.00	150	10.8	11.578	528.79	4.35	0.00	0.00	4.35	17.28	0.015
18-Aug	205.80	91.88	1.5	2.83	1026	3.0	2.03	150	10.8	6.990	524.69	4.35	0.00	0.00	4.35	15.40	0.014
19-Aug	214.74	91.88	1.5	3.47	1026	3.0	1.43	150	10.8	3.931	527.11	4.35	0.00	0.00	4.35	15.21	0.014
20-Aug	178.88	91.88	1.5	3.57	1026	3.0	11.91	150	10.8	7.629	539.01	4.35	0.00	0.00	4.35	18.37	0.017
21-Aug	207.12	91.88	1.5	3.30	1026	3.0	8.81	150	10.8	5.390	533.18	4.35	0.00	0.00	4.35	18.30	0.017
22-Aug	192.70	91.88	1.5	2.10	1026	3.0	5.27	150	10.8	12.313	529.22	4.35	0.00	0.00	4.35	16.91	0.015
23-Aug	181.16	91.88	1.5	4.02	1026	3.0	21.75	150	10.8	3.031	526.06	4.35	0.00	0.00	4.35	22.16	0.021
24-Aug	206.83	91.88	1.5	2.88	1026	3.0	4.74	150	10.8	7.677	523.82	4.35	0.00	0.00	4.35	16.81	0.015
25-Aug	176.71	91.88	1.5	2.00	1026	3.0	2.90	150	10.8	14.556	528.35	4.35	0.00	0.00	4.35	15.24	0.014
26-Aug	206.11	91.88	1.5	1.91	1026	3.0	4.07	150	10.8	9.808	532.79	4.35	0.00	0.00	4.35	16.73	0.015
27-Aug	208.19	91.88	1.5	2.14	1026	3.0	2.59	150	10.8	9.240	528.83	4.35	0.00	0.00	4.35	16.12	0.015
28-Aug	181.23	91.88	1.5	1.88	1026	3.0	1.16	150	10.8	15.461	529.28	4.35	0.00	0.00	4.35	14.89	0.013
29-Aug	199.82	91.88	1.5	3.82	1026	3.0	5.31	150	10.8	5.252	530.67	4.35	0.00	0.00	4.35	16.31	0.015
30-Aug	237.90	91.88	1.5	5.11	1026	3.0	13.94	150	10.8	0.030	501.10	4.35	0.00	0.00	4.35	21.79	0.018
31-Aug	255.64	91.88	1.5	7.96	1026	3.0	11.96	150	10.8	0.201	478.64	4.35	0.20	417.00	4.35	22.43	0.016

EPA-R5-2012-0005960000321

U.S. Steel Corporation - Gary Works

PM10 Emissions Report

September 2006

TURBOBLOWER BLOWER HOUSE BOILER NOS. 1, 2, 3, & 5

	Blast Furnace Gas			Natural Gas			Fuel Oil			Desulfurized COG			Sulfurized COG			PM10 Emissions	
	Usage	Heat Content	Emission Factor	Usage	Heat Content	Emission Factor	Usage	Heat Content	Emission Factor	Usage	Heat Content	Emission Factor	Usage	Heat Content	Emission Factor	Rate	Conc.
Date	MMcf	Btu/cf	lbs/MMcf	MMcf	Btu/cf	lbs/MMcf	Mgal	MMBtu/Mgals	lbs/Mgals	MMcf	Btu/cf	lbs/MMcf	MMcf	Btu/cf	lbs/MMcf	lbs/hr	lbs/MMBtu
1-Sep	257.34	91.88	1.5	3.88	1026	3.0	9.82	150	10.8	2.012	529.27	4.35	0.00	0.00	4.35	21.35	0.017
2-Sep	282.18	91.88	1.5	2.95	1026	3.0	9.66	150	10.8	5.600	520.04	4.35	0.00	0.00	4.35	23.37	0.017
3-Sep	173.02	91.88	1.5	3.54	1026	3.0	12.42	150	10.8	7.864	517.10	4.35	0.00	0.00	4.35	18.27	0.017
4-Sep	232.25	91.88	1.5	2.74	1026	3.0	5.47	150	10.8	5.953	525.17	4.35	0.00	0.00	4.35	18.40	0.016
5-Sep	241.68	91.88	1.5	2.52	1026	3.0	5.80	150	10.8	10.689	510.91	4.35	0.00	0.00	4.35	19.97	0.015
6-Sep	246.64	91.88	1.5	2.24	1026	3.0	5.27	150	10.8	12.258	542.02	4.35	0.00	0.00	4.35	20.29	0.015
7-Sep	286.17	91.88	1.5	2.63	1026	3.0	5.90	150	10.8	5.476	524.24	4.35	0.00	0.00	4.35	21.86	0.016
8-Sep	268.65	91.88	1.5	2.88	1026	3.0	12.35	150	10.8	7.611	514.87	4.35	0.00	0.00	4.35	24.09	0.017
9-Sep	272.40	91.88	1.5	2.58	1026	3.0	5.63	150	10.8	7.736	515.05	4.35	0.00	0.00	4.35	21.28	0.016
10-Sep	285.13	91.88	1.5	2.45	1026	3.0	5.12	150	10.8	7.907	509.74	4.35	0.00	0.00	4.35	21.87	0.016
11-Sep	221.66	91.88	1.5	2.16	1026	3.0	4.10	150	10.8	16.401	509.39	4.35	0.00	0.00	4.35	18.94	0.014
12-Sep	225.65	91.88	1.5	1.98	1026	3.0	4.05	150	10.8	5.557	543.60	4.35	11.96	516.50	4.35	19.35	0.014
13-Sep	235.49	91.88	1.5	2.75	1026	3.0	7.98	150	10.8	5.925	503.00	4.35	4.44	543.80	4.35	20.53	0.016
14-Sep	219.88	91.88	1.5	3.00	1026	3.0	2.65	150	10.8	5.479	513.89	4.35	0.73	510.70	4.35	16.43	0.015
15-Sep	186.32	91.88	1.5	2.52	1026	3.0	2.64	150	10.8	10.196	537.38	4.35	0.00	0.00	4.35	15.00	0.014
16-Sep	203.60	91.88	1.5	2.67	1026	3.0	2.13	150	10.8	7.644	530.53	4.35	0.00	0.00	4.35	15.40	0.014
17-Sep	197.91	91.88	1.5	3.62	1026	3.0	0.91	150	10.8	9.032	518.95	4.35	0.00	0.00	4.35	14.87	0.013
18-Sep	277.12	91.88	1.5	4.71	1026	3.0	4.94	150	10.8	1.960	515.46	4.35	0.00	0.00	4.35	20.49	0.015
19-Sep	264.72	91.88	1.5	2.56	1026	3.0	1.51	150	10.8	10.318	519.53	4.35	0.00	0.00	4.35	19.41	0.014
20-Sep	278.82	91.88	1.5	2.35	1026	3.0	1.96	150	10.8	8.648	519.99	4.35	0.00	0.00	4.35	20.17	0.015
21-Sep	264.81	91.88	1.5	2.54	1026	3.0	1.85	150	10.8	8.546	521.54	4.35	0.00	0.00	4.35	19.25	0.015
22-Sep	291.75	91.88	1.5	2.42	1026	3.0	1.25	150	10.8	7.589	521.41	4.35	0.00	0.00	4.35	20.48	0.015
23-Sep	255.49	91.88	1.5	2.59	1026	3.0	2.42	150	10.8	10.838	522.53	4.35	0.00	0.00	4.35	19.34	0.014
24-Sep	280.41	91.88	1.5	2.17	1026	3.0	4.31	150	10.8	9.627	521.97	4.35	0.00	0.00	4.35	21.48	0.015
25-Sep	315.67	91.88	1.5	2.98	1026	3.0	2.59	150	10.8	3.922	516.70	4.35	0.00	0.00	4.35	21.98	0.015
26-Sep	319.88	91.88	1.5	1.87	1026	3.0	3.68	150	10.8	0.893	520.50	4.35	0.00	0.00	4.35	22.05	0.016
27-Sep	261.76	91.88	1.5	2.52	1026	3.0	8.33	150	10.8	5.790	519.74	4.35	0.00	0.00	4.35	21.47	0.017
28-Sep	235.37	91.88	1.5	2.73	1026	3.0	0.88	150	10.8	2.201	502.10	4.35	0.00	579.60	4.35	15.85	0.015
29-Sep	246.24	91.88	1.5	2.59	1026	3.0	1.29	150	10.8	2.264	522.36	4.35	0.00	0.00	4.35	16.70	0.015
30-Sep	234.98	91.88	1.5	2.27	1026	3.0	2.40	150	10.8	3.433	517.17	4.35	0.00	0.00	4.35	16.67	0.015

EPA-USS-0325644

EIMS
Version 1.0

U. S. Steel Group - Gary Works
Environmental Control Division

Printed
10/11/06
12:29:39

IDEM SO2 Report

July 2006

TURBOBLOWER BOILERS 1,2,3,5

Date	Blast Furnace Gas			Desulfurized COG			Undesulfurized COG			Natural Gas			Fuel Oil			Emissions	
	Consum-ption	Heat Content	Emission Factor	Consum-ption	Heat Content	Emission Factor	Consum-ption	Heat Content	Emission Factor	Consum-ption	Heat Content	Emission Factor	Consum-ption	Heat Content	Emission Factor	Rate	Conc.
	MMSCF	BTU/SCF	LBS/ MMSCF	MMSCF	BTU/SCF	LBS/ MMSCF	MMSCF	BTU/SCF	LBS/ MMSCF	MMSCF	BTU/SCF	LBS/ MMSCF	MGAL	MMBTU/ MGAL	LBS/ MGAL	LBS/HR	LBS/ MMBTU
07/01/06	314.809	92	7.920	5.739	515	89.644				4.008	1,026	0.600	2.479	150	158.000	141.74	0.1064
07/02/06	266.472	92	7.920	6.874	521	98.597				3.622	1,026	0.600	4.915	150	158.000	148.63	0.1180
07/03/06	231.439	92	7.920	5.423	518	93.090				4.088	1,026	0.600	9.780	150	158.000	161.90	0.1442
07/04/06	236.181	92	7.920	6.534	523	106.852				3.480	1,026	0.600	5.997	150	158.000	146.59	0.1274
07/05/06	234.446	92	7.920	12.045	514	101.280	1.737	491	388.240	1.955	1,026	0.600	7.084	150	158.000	202.99	0.1584
07/06/06	253.792	92	7.920	7.922	516	76.008				3.262	1,026	0.600	12.907	150	158.000	193.90	0.1566
07/07/06	237.179	92	7.920	7.256	518	96.313				3.384	1,026	0.600	15.507	150	158.000	209.56	0.1647
07/08/06	286.802	92	7.920	6.045	510	88.638				2.540	1,026	0.600	6.278	150	158.000	158.36	0.1109
07/09/06	273.742	92	7.920	5.578	531	97.288				2.465	1,026	0.600	8.510	150	158.000	169.03	0.1214
07/10/06	207.927	92	7.920	5.945	540	92.677				3.384	1,026	0.600	11.310	150	158.000	166.11	0.1447
07/11/06	203.729	92	7.920	11.767	539	85.805				2.683	1,026	0.600	11.782	150	158.000	186.93	0.1518
07/12/06	277.793	92	7.920	6.629	542	113.251				2.467	1,026	0.600	11.459	150	158.000	198.45	0.1380
07/13/06	255.403	92	7.920	7.996	528	115.149				3.143	1,026	0.600	7.985	150	158.000	175.30	0.1273
07/14/06	244.517	92	7.920	7.011	539	106.909				3.607	1,026	0.600	11.057	150	158.000	184.80	0.1397
07/15/06	221.514	92	7.920	14.149	544	112.133				2.050	1,026	0.600	5.555	150	158.000	175.83	0.1256
07/16/06	284.793	92	7.920	5.972	517	81.632				3.430	1,026	0.600	13.355	150	158.000	202.30	0.1421
07/17/06	308.377	92	7.920	6.397	520	83.956				3.647	1,026	0.600	10.369	150	158.000	192.50	0.1281
07/18/06	303.488	92	7.920	15.205	520	99.770				1.918	1,026	0.600	3.771	150	158.000	188.23	0.1158
07/19/06	318.925	92	7.920	6.141	517	85.956				2.681	1,026	0.600	4.801	150	158.000	158.91	0.1053
07/20/06	313.230	92	7.920	0.691	509	61.057				4.572	1,026	0.600	10.130	150	158.000	171.92	0.1242
07/21/06	310.845	92	7.920	2.767	509	97.857				3.012	1,026	0.600	5.634	150	158.000	151.03	0.1050
07/22/06	326.986	92	7.920	3.631	510	101.208				2.872	1,026	0.600	2.534	150	158.000	139.97	0.0921
07/23/06	302.174	92	7.920	6.785	513	106.490				2.629	1,026	0.600	8.980	150	158.000	189.01	0.1257
07/24/06	303.909	92	7.920	0.642	504	71.913				4.326	1,026	0.600	6.537	150	158.000	145.36	0.1082
07/25/06	287.379	92	7.920	13.836	515	111.427				1.900	1,026	0.600	3.579	150	158.000	182.68	0.1179
07/26/06	274.401	92	7.920	3.258	511	108.580				2.775	1,026	0.600	2.830	150	158.000	123.99	0.0941
07/27/06	297.217	92	7.920	1.686	499	54.988				5.302	1,026	0.600	6.227	150	158.000	143.07	0.1086
07/28/06	283.378	92	7.920	1.468	510	23.567				4.106	1,026	0.600	7.269	150	158.000	142.91	0.1133
07/29/06	293.037	92	7.920	0.259	524	36.575				4.842	1,026	0.600	4.417	150	158.000	126.29	0.0979
07/30/06	287.178	92	7.920	4.292	508	78.483				2.829	1,026	0.600	5.867	150	158.000	147.50	0.1071
07/31/06	277.062	92	7.920	4.573	502	77.204				2.722	1,026	0.600	4.857	150	158.000	138.19	0.1040

EIMS
Version 1.0

U. S. Steel Group - Gary Works
Environmental Control Division

Printed
10/11/06
12:31:48

IDEM SO2 Report

August 2006

TURBOBLOWER BOILERS 1,2,3,5

Date	Blast Furnace Gas			Desulfurized COG			Undesulfurized COG			Natural Gas			Fuel Oil			Emissions	
	Consum - ption	Heat Content	Emission Factor	Consum - ption	Heat Content	Emission Factor	Consum - ption	Heat Content	Emission Factor	Consum - ption	Heat Content	Emission Factor	Consum - ption	Heat Content	Emission Factor	Rate	Conc.
	MMSCF	BTU/SCF	LBS/ MMSCF	MMSCF	BTU/SCF	LBS/ MMSCF	MMSCF	BTU/SCF	LBS/ MMSCF	MMSCF	BTU/SCF	LBS/ MMSCF	MGAL	MMBTU/ MGAL	LBS/ MGAL	LBS/HR	LBS/ MMBTU
08/01/06	275.138	92	7.920	7.614	503	71.535				2.227	1.026	0.600	6.941	158.3505	112.345	146.04	0.1135
08/02/06	290.075	92	7.920	3.881	505	61.672				2.270	1.026	0.600	5.135	158.3505	112.345	129.79	0.1037
08/03/06	255.161	92	7.920	6.678	506	85.940				2.448	1.026	0.600	10.382	158.3505	112.345	156.78	0.1361
08/04/06	194.002	92	7.920	10.174	496	106.660				2.552	1.026	0.600	16.888	158.3505	112.345	188.36	0.1906
08/05/06	240.942	92	7.920	10.117	517	107.953				2.437	1.026	0.600	3.500	158.3505	112.345	141.47	0.1081
08/06/06	279.015	92	7.920	9.580	529	85.956				1.842	1.026	0.600	3.089	158.3505	112.345	140.89	0.0992
08/07/06	233.494	92	7.920	12.836	529	83.934				2.175	1.026	0.600	5.236	158.3505	112.345	146.51	0.1178
08/08/06	284.541	92	7.920	7.945	523	111.076				1.970	1.026	0.600	5.634	158.3505	112.345	157.09	0.1120
08/09/06	224.339	92	7.920	10.370	532	87.096				2.272	1.026	0.600	3.307	158.3505	112.345	127.20	0.1023
08/10/06	197.357	92	7.920	8.296	525	81.872				2.837	1.026	0.600	3.087	158.3505	112.345	107.95	0.1005
08/11/06	201.157	92	7.920	6.975	524	94.217				3.254	1.026	0.600	7.352	158.3505	112.345	128.26	0.1256
08/12/06	222.764	92	7.920	6.746	528	111.020				2.638	1.026	0.600	3.518	158.3505	112.345	121.25	0.1023
08/13/06	260.489	92	7.920	9.781	534	98.048				2.354	1.026	0.600	3.390	158.3505	112.345	141.85	0.1028
08/14/06	278.585	92	7.920	8.403	519	69.069				2.839	1.026	0.600	3.560	158.3505	112.345	132.85	0.1034
08/15/06	200.493	92	7.920	13.816	541	90.473				1.526	1.026	0.600	2.857	158.3505	112.345	131.66	0.1196
08/16/06	206.224	92	7.920	9.787	534	117.671				1.676	1.026	0.600	5.030	158.3505	112.345	139.63	0.1238
08/17/06	203.537	92	7.920	11.578	529	108.140				1.696	1.026	0.600	4.997	158.3505	112.345	142.77	0.1254
08/18/06	205.799	92	7.920	6.990	525	109.273				2.834	1.026	0.600	2.035	158.3505	112.345	109.33	0.0968
08/19/06	214.739	92	7.920	3.931	527	94.223				3.465	1.026	0.600	1.430	158.3505	112.345	93.08	0.0907
08/20/06	178.881	92	7.920	7.629	539	104.854				3.565	1.026	0.600	11.914	158.3505	112.345	148.22	0.1558
08/21/06	207.121	92	7.920	5.390	533	78.550				3.297	1.026	0.600	8.814	158.3505	112.345	127.33	0.1295
08/22/06	192.701	92	7.920	12.313	529	108.567				2.104	1.026	0.600	5.267	158.3505	112.345	144.00	0.1260
08/23/06	181.156	92	7.920	3.031	526	98.894				4.024	1.026	0.600	21.747	158.3505	112.345	174.17	0.2074
08/24/06	206.833	92	7.920	7.677	524	86.053				2.883	1.026	0.600	4.740	158.3505	112.345	118.04	0.1120
08/25/06	176.711	92	7.920	14.556	528	77.409				2.002	1.026	0.600	2.905	158.3505	112.345	118.91	0.1080
08/26/06	206.110	92	7.920	9.808	533	83.307				1.912	1.026	0.600	4.067	158.3505	112.345	121.15	0.1134
08/27/06	208.193	92	7.920	9.240	529	89.680				2.142	1.026	0.600	2.593	158.3505	112.345	115.42	0.1016
08/28/06	181.234	92	7.920	15.461	529	84.548				1.876	1.026	0.600	1.165	158.3505	112.345	119.77	0.1034
08/29/06	199.825	92	7.920	5.252	531	76.464				3.820	1.026	0.600	5.311	158.3505	112.345	107.63	0.1103
08/30/06	237.898	92	7.920	0.030	501	51.282				5.110	1.026	0.600	13.944	158.3505	112.345	143.97	0.1531
08/31/06	255.637	92	7.920	0.201	479	33.760	0.200	417	16.880	7.960	1.026	0.600	11.961	158.3505	112.345	140.97	0.1373

EIMS
Version 1.0

U. S. Steel Group - Gary Works
Environmental Control Division

Printed
10/11/06
12:33:41

IDEM SO2 Report

September 2006

TURBOBLOWER BOILERS 1,2,3,5

Date	Blast Furnace Gas			Desulfurized COG			Undesulfurized COG			Natural Gas			Fuel Oil			Emissions	
	Consum - ption	Heat Content	Emission Factor	Consum - ption	Heat Content	Emission Factor	Consum - ption	Heat Content	Emission Factor	Consum - ption	Heat Content	Emission Factor	Consum - ption	Heat Content	Emission Factor	Rate	Conc.
	MMSCF	BTU/SCF	LBS/ MMSCF	MMSCF	BTU/SCF	LBS/ MMSCF	MMSCF	BTU/SCF	LBS/ MMSCF	MMSCF	BTU/SCF	LBS/ MMSCF	MGAL	MMBTU/ MGAL	LBS/ MGAL	LBS/HR	LBS/ MMBTU
09/01/06	257.335	92	7.920	2.012	529	60.388				3.879	1.026	0.600	9.820	150	158.000	154.73	0.1289
09/02/06	282.183	92	7.920	5.600	520	84.392				2.948	1.026	0.600	9.662	150	158.000	176.49	0.1241
09/03/06	173.017	92	7.920	7.864	517	82.512				3.539	1.026	0.600	12.417	150	158.000	165.97	0.1558
09/04/06	232.253	92	7.920	5.953	525	82.553				2.735	1.026	0.600	5.467	150	158.000	133.18	0.1087
09/05/06	241.684	92	7.920	10.689	511	85.386				2.523	1.026	0.600	5.801	150	158.000	156.04	0.1148
09/06/06	246.637	92	7.920	12.258	542	90.331				2.238	1.026	0.600	5.274	150	158.000	162.30	0.1158
09/07/06	286.166	92	7.920	5.476	524	83.026				2.630	1.026	0.600	5.902	150	158.000	152.30	0.1077
09/08/06	268.647	92	7.920	7.611	515	95.294				2.879	1.026	0.600	12.353	150	158.000	200.27	0.1426
09/09/06	272.401	92	7.920	7.736	515	97.211				2.579	1.026	0.600	5.627	150	158.000	158.34	0.1110
09/10/06	285.131	92	7.920	7.907	510	103.735				2.446	1.026	0.600	5.124	150	158.000	162.06	0.1095
09/11/06	221.656	92	7.920	16.401	509	101.477				2.162	1.026	0.600	4.105	150	158.000	169.57	0.1225
09/12/06	225.648	92	7.920	5.557	544	118.160	11.962	517	626.437	1.976	1.026	0.600	4.052	150	158.000	440.77	0.3423
09/13/06	235.485	92	7.920	5.925	503	94.528	4.440	544	720.776	2.750	1.026	0.600	7.983	150	158.000	287.00	0.2121
09/14/06	219.875	92	7.920	5.479	514	101.280	0.727	511	405.120	3.004	1.026	0.600	2.646	150	158.000	125.43	0.1116
09/15/06	186.325	92	7.920	10.196	537	100.665				2.521	1.026	0.600	2.639	150	158.000	121.69	0.1065
09/16/06	203.597	92	7.920	7.644	531	92.027				2.674	1.026	0.600	2.134	150	158.000	110.61	0.0973
09/17/06	197.906	92	7.920	9.032	519	81.805				3.621	1.026	0.600	0.907	150	158.000	102.16	0.0864
09/18/06	277.125	92	7.920	1.960	515	77.825				4.712	1.026	0.600	4.944	150	158.000	130.47	0.0983
09/19/06	264.724	92	7.920	10.318	520	73.739				2.558	1.026	0.600	1.507	150	158.000	129.05	0.0899
09/20/06	278.819	92	7.920	8.648	520	121.464				2.354	1.026	0.600	1.958	150	158.000	148.72	0.0999
09/21/06	264.811	92	7.920	8.546	522	96.626				2.537	1.026	0.600	1.848	150	158.000	134.02	0.0978
09/22/06	291.751	92	7.920	7.589	521	103.359				2.417	1.026	0.600	1.252	150	158.000	137.27	0.0935
09/23/06	255.486	92	7.920	10.838	523	115.289				2.588	1.026	0.600	2.419	150	158.000	152.36	0.1059
09/24/06	280.407	92	7.920	9.627	522	115.448				2.167	1.026	0.600	4.309	150	158.000	167.27	0.1122
09/25/06	315.674	92	7.920	3.922	517	110.900				2.978	1.026	0.600	2.586	150	158.000	139.40	0.0923
09/26/06	319.881	92	7.920	0.893	520	116.634				1.870	1.026	0.600	3.685	150	158.000	134.20	0.0941
09/27/06	261.757	92	7.920	5.790	520	113.302				2.521	1.026	0.600	8.332	150	158.000	168.63	0.1286
09/28/06	235.366	92	7.920	2.201	502	84.400	0.001	580	653.256	2.730	1.026	0.600	0.883	150	158.000	91.31	0.0896
09/29/06	246.239	92	7.920	2.264	522	74.473				2.591	1.026	0.600	1.288	150	158.000	96.83	0.0869
09/30/06	234.977	92	7.920	3.433	517	82.801				2.271	1.026	0.600	2.402	150	158.000	105.25	0.0939

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

3rd 2006

Turboblower House - No. 6 Boiler

Contents

Turboblower House - No. 6 Boiler Natural Gas Usage Report
Turboblower House - No. 6 Boiler PM_{10} and SO_2 Emissions Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U. S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No. T089-7663-00121
Facility: Turboblower Boiler House (TBBH) Boiler No. 6
Parameter: Natural Gas Usage
Limits: 1,059.7 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Quarter: 3rd Year: 2006

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
July	48.9	366.6	415.6
August	67.5	375.2	442.7
September	48.7	414.5	463.2

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Permit No.: CP-089-10160-00121
Facility: Turboblower Boiler House (TBBH) Boiler No. 6
Parameter: a) daily natural gas and blast furnace gas usage
b) daily average heat content of natural gas and blast furnace gas
c) daily PM-10 and SO2 emission rate per unit weight or volume for natural gas and blast furnace gas
d) calculate PM-10 and SO2 emission rate in lbs/hr and lbs/MMBtu
Limit: a) PM-10 Limit = 0.037 lbs/MMBtu (27.8 lbs/hr)
b) SO2 Limit = 0.12 lbs/MMBtu (81.65 lbs/hr) without COG desulfurization
c) SO2 Limit = 0.12 lbs/MMBtu (81.65 lbs/hr) with COG desulfurization

Quarter Period: 3rd Month: Jul-06

Date	Natural Gas				COG	Blast Furnace Gas				PM-10 Emissions		SO2 Emissions	
	Usage	Heat Cont	PM-10 Emission Factor	SO2 Emission Factor	Desulfurization Facility Status	Usage	Heat Cont	PM-10 Emission Factor	SO2 Emission Factor				
	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/MMcf)	(lb/hr)	(lb/MMBtu)	(lb/hr)	(lb/MMBtu)
1	1.1	1026	5	0.6	up	145.1	91.88	1.5	7.92	9.31	0.02	47.93	0.08
2	1.4	1026	5	0.6	up	112.7	91.88	1.5	7.92	7.34	0.01	37.23	0.08
3	2.4	1026	5	0.6	up	90.7	91.88	1.5	7.92	6.17	0.01	30.00	0.07
4	1.2	1026	5	0.6	up	116.2	91.88	1.5	7.92	7.52	0.02	38.36	0.08
5	1.6	1026	5	0.6	up	110.3	91.88	1.5	7.92	7.23	0.01	36.43	0.07
6	3.6	1026	5	0.6	up	93.4	91.88	1.5	7.92	6.58	0.01	30.90	0.06
7	3.3	1026	5	0.6	up	96.9	91.88	1.5	7.92	6.75	0.01	32.07	0.06
8	1.5	1026	5	0.6	up	117.3	91.88	1.5	7.92	7.63	0.01	38.73	0.08
9	1.7	1026	5	0.6	up	96.7	91.88	1.5	7.92	6.40	0.01	31.96	0.07
10	3.2	1026	5	0.6	up	86.2	91.88	1.5	7.92	6.06	0.01	28.52	0.06
11	2.4	1026	5	0.6	up	94.8	91.88	1.5	7.92	6.42	0.01	31.35	0.07
12	1.7	1026	5	0.6	up	110.5	91.88	1.5	7.92	7.26	0.01	36.52	0.07
13	1.8	1026	5	0.6	up	117.9	91.88	1.5	7.92	7.75	0.01	38.97	0.07
14	3.2	1026	5	0.6	up	97.3	91.88	1.5	7.92	6.75	0.01	32.19	0.06
15	1.5	1026	5	0.6	up	102.6	91.88	1.5	7.92	6.73	0.01	33.91	0.07
16	0.5	1026	5	0.6	up	30.5	91.88	1.5	7.92	2.02	0.01	10.08	0.07
17	0.0	1026	5	0.6	up	0.0	91.88	1.5	7.92	0.00	0.00	0.00	0.00
18	0.0	1026	5	0.6	up	0.0	91.88	1.5	7.92	0.00	0.00	0.00	0.00
19	0.0	1026	5	0.6	up	0.0	91.88	1.5	7.92	0.00	0.00	0.00	0.00
20	0.0	1026	5	0.6	up	0.0	91.88	1.5	7.92	0.00	0.00	0.00	0.00
21	0.9	1026	5	0.6	up	59.8	91.88	1.5	7.92	3.93	0.01	19.74	0.07
22	1.0	1026	5	0.6	up	135.6	91.88	1.5	7.92	8.69	0.02	44.77	0.08
23	1.8	1026	5	0.6	up	109.5	91.88	1.5	7.92	7.21	0.01	36.18	0.07
24	1.2	1026	5	0.6	up	113.9	91.88	1.5	7.92	7.38	0.02	37.61	0.08
25	1.2	1026	5	0.6	up	129.4	91.88	1.5	7.92	8.34	0.02	42.73	0.08
26	3.4	1026	5	0.6	up	94.6	91.88	1.5	7.92	6.62	0.01	31.32	0.06
27	1.4	1026	5	0.6	up	116.7	91.88	1.5	7.92	7.57	0.02	38.53	0.08
28	1.4	1026	5	0.6	up	102.2	91.88	1.5	7.92	6.68	0.01	33.75	0.07
29	1.2	1026	5	0.6	up	101.3	91.88	1.5	7.92	6.58	0.02	33.47	0.08
30	1.4	1026	5	0.6	up	102.0	91.88	1.5	7.92	6.66	0.01	33.68	0.08
31	1.9	1026	5	0.6	up	94.5	91.88	1.5	7.92	6.29	0.01	31.23	0.07

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Permit No.: CP-089-10160-00121
Facility: Turboblower Boiler House (TBBH) Boiler No. 6
Parameter: a) daily natural gas and blast furnace gas usage
b) daily average heat content of natural gas and blast furnace gas
c) daily PM-10 and SO2 emission rate per unit weight or volume for natural gas and blast furnace gas
d) calculate PM-10 and SO2 emission rate in lbs/hr and lbs/MMBtu
Limit: a) PM-10 Limit = 0.037 lbs/MMBtu (27.8 lbs/hr)
b) SO2 Limit = 0.12 lbs/MMBtu (81.65 lbs/hr) without COG desulfurization
c) SO2 Limit = 0.12 lbs/MMBtu (81.65 lbs/hr) with COG desulfurization

Quarter Period: 3rd Month: Aug-06

Date	Natural Gas				COG	Blast Furnace Gas				PM-10 Emissions		SO2 Emissions	
	Usage	Heat Cont	PM-10 Emission Factor	SO2 Emission Factor	Desulfurization Facility Status	Usage	Heat Cont	PM-10 Emission Factor	SO2 Emission Factor				
	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/MMcf)	(lb/hr)	(lb/MMBtu)	(lb/hr)	(lb/MMBtu)
1	2.8	1026	5	0.6	up	96.5	91.88	1.5	7.92	6.61	0.01	31.92	0.07
2	1.3	1026	5	0.6	up	102.3	91.88	1.5	7.92	6.66	0.01	33.78	0.08
3	3.0	1026	5	0.6	up	82.4	91.88	1.5	7.92	5.78	0.01	27.26	0.06
4	3.6	1026	5	0.6	up	73.4	91.88	1.5	7.92	5.33	0.01	24.30	0.06
5	1.5	1026	5	0.6	up	98.2	91.88	1.5	7.92	6.44	0.01	32.45	0.07
6	1.4	1026	5	0.6	up	106.9	91.88	1.5	7.92	6.97	0.01	35.33	0.08
7	2.7	1026	5	0.6	up	86.7	91.88	1.5	7.92	5.97	0.01	28.66	0.06
8	1.8	1026	5	0.6	up	100.4	91.88	1.5	7.92	6.66	0.01	33.18	0.07
9	2.6	1026	5	0.6	up	85.4	91.88	1.5	7.92	5.88	0.01	28.26	0.06
10	2.3	1026	5	0.6	up	92.8	91.88	1.5	7.92	6.29	0.01	30.69	0.07
11	2.8	1026	5	0.6	up	92.7	91.88	1.5	7.92	6.37	0.01	30.66	0.06
12	1.6	1026	5	0.6	up	102.2	91.88	1.5	7.92	6.72	0.01	33.77	0.07
13	1.4	1026	5	0.6	up	102.3	91.88	1.5	7.92	6.69	0.01	33.79	0.07
14	1.5	1026	5	0.6	up	97.3	91.88	1.5	7.92	6.39	0.01	32.14	0.07
15	1.5	1026	5	0.6	up	100.0	91.88	1.5	7.92	6.56	0.01	33.03	0.07
16	2.3	1026	5	0.6	up	93.2	91.88	1.5	7.92	6.32	0.01	30.83	0.07
17	2.1	1026	5	0.6	up	94.9	91.88	1.5	7.92	6.36	0.01	31.36	0.07
18	3.1	1026	5	0.6	up	86.4	91.88	1.5	7.92	6.05	0.01	28.61	0.06
19	1.9	1026	5	0.6	up	88.9	91.88	1.5	7.92	5.94	0.01	29.38	0.07
20	3.2	1026	5	0.6	up	76.2	91.88	1.5	7.92	5.42	0.01	25.21	0.06
21	2.4	1026	5	0.6	up	81.7	91.88	1.5	7.92	5.60	0.01	27.01	0.07
22	2.1	1026	5	0.6	up	89.2	91.88	1.5	7.92	6.02	0.01	29.49	0.07
23	3.5	1026	5	0.6	up	66.4	91.88	1.5	7.92	4.88	0.01	22.00	0.05
24	1.5	1026	5	0.6	up	98.2	91.88	1.5	7.92	6.45	0.01	32.46	0.07
25	1.6	1026	5	0.6	up	104.0	91.88	1.5	7.92	6.83	0.01	34.37	0.07
26	1.6	1026	5	0.6	up	100.6	91.88	1.5	7.92	6.62	0.01	33.25	0.07
27	1.4	1026	5	0.6	up	100.2	91.88	1.5	7.92	6.55	0.01	33.10	0.07
28	1.3	1026	5	0.6	up	103.1	91.88	1.5	7.92	6.71	0.01	34.04	0.08
29	2.0	1026	5	0.6	up	86.4	91.88	1.5	7.92	5.82	0.01	28.56	0.07
30	3.0	1026	5	0.6	up	82.0	91.88	1.5	7.92	5.75	0.01	27.13	0.06
31	2.9	1026	5	0.6	down	74.7	91.88	1.5	7.92	5.26	0.01	24.71	0.06

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Permit No.: CP-089-10160-00121
Facility: Turboblower Boiler House (TBBH) Boiler No. 6
Parameter: a) daily natural gas and blast furnace gas usage
b) daily average heat content of natural gas and blast furnace gas
c) daily PM-10 and SO2 emission rate per unit weight or volume for natural gas and blast furnace gas
d) calculate PM-10 and SO2 emission rate in lbs/hr and lbs/MMBtu
Limit: a) PM-10 Limit = 0.037 lbs/MMBtu (27.8 lbs/hr)
b) SO2 Limit = 0.12 lbs/MMBtu (81.65 lbs/hr) without COG desulfurization
c) SO2 Limit = 0.12 lbs/MMBtu (81.65 lbs/hr) with COG desulfurization

Quarter Period: 3rd Month: Sep-06

Date	Natural Gas				COG	Blast Furnace Gas				PM-10 Emissions		SO2 Emissions	
	Usage	Heat Cont	PM-10 Emission Factor	SO2 Emission Factor	Desulfurization Facility Status	Usage	Heat Cont	PM-10 Emission Factor	SO2 Emission Factor				
	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/MMcf)	(lb/hr)	(lb/MMBtu)	(lb/hr)	(lb/MMBtu)
1	1.8	1026	5	0.6	up	83.0	91.88	1.5	7.92	5.55	0.01	27.42	0.07
2	1.3	1026	5	0.6	up	87.0	91.88	1.5	7.92	5.70	0.01	28.74	0.07
3	3.2	1026	5	0.6	up	67.7	91.88	1.5	7.92	4.89	0.01	22.41	0.06
4	1.3	1026	5	0.6	up	89.0	91.88	1.5	7.92	5.83	0.01	29.39	0.07
5	1.3	1026	5	0.6	up	87.3	91.88	1.5	7.92	5.73	0.01	28.85	0.07
6	1.3	1026	5	0.6	up	76.9	91.88	1.5	7.92	5.07	0.01	25.41	0.07
7	2.4	1026	5	0.6	up	73.5	91.88	1.5	7.92	5.10	0.01	24.31	0.06
8	2.3	1026	5	0.6	up	72.9	91.88	1.5	7.92	5.05	0.01	24.13	0.06
9	1.2	1026	5	0.6	up	82.6	91.88	1.5	7.92	5.42	0.01	27.29	0.07
10	1.1	1026	5	0.6	up	90.3	91.88	1.5	7.92	5.86	0.01	29.82	0.08
11	1.1	1026	5	0.6	up	91.5	91.88	1.5	7.92	5.96	0.01	30.22	0.08
12	1.3	1026	5	0.6	down	91.7	91.88	1.5	7.92	6.00	0.01	30.30	0.07
13	3.6	1026	5	0.6	down	46.9	91.88	1.5	7.92	3.67	0.01	15.58	0.05
14	3.0	1026	5	0.6	down	68.8	91.88	1.5	7.92	4.93	0.01	22.78	0.06
15	2.6	1026	5	0.6	up	70.3	91.88	1.5	7.92	4.94	0.01	23.27	0.06
16	1.8	1026	5	0.6	up	78.8	91.88	1.5	7.92	5.30	0.01	26.04	0.07
17	1.7	1026	5	0.6	up	87.5	91.88	1.5	7.92	5.82	0.01	28.93	0.07
18	1.1	1026	5	0.6	up	89.8	91.88	1.5	7.92	5.85	0.01	29.65	0.08
19	1.1	1026	5	0.6	up	87.8	91.88	1.5	7.92	5.72	0.01	29.00	0.08
20	1.3	1026	5	0.6	up	78.8	91.88	1.5	7.92	5.19	0.01	26.02	0.07
21	1.6	1026	5	0.6	up	83.7	91.88	1.5	7.92	5.56	0.01	27.67	0.07
22	1.4	1026	5	0.6	up	85.7	91.88	1.5	7.92	5.64	0.01	28.31	0.07
23	1.1	1026	5	0.6	up	97.3	91.88	1.5	7.92	6.32	0.02	32.15	0.08
24	1.1	1026	5	0.6	up	92.4	91.88	1.5	7.92	6.00	0.00	30.50	0.00
25	1.1	1026	5	0.6	up	89.1	91.88	1.5	7.92	5.81	0.00	29.44	0.00
26	1.1	1026	5	0.6	up	83.1	91.88	1.5	7.92	5.41	0.00	27.43	0.00
27	2.0	1026	5	0.6	up	82.0	91.88	1.5	7.92	5.54	0.00	27.12	0.00
28	1.1	1026	5	0.6	down	87.3	91.88	1.5	7.92	5.68	0.00	28.83	0.00
29	1.4	1026	5	0.6	up	88.5	91.88	1.5	7.92	5.82	0.00	29.22	0.00
30	1.1	1026	5	0.6	up	97.0	91.88	1.5	7.92	6.29	0.00	32.05	0.00

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

3rd 2006

No. 3 Sinter Plant

Contents

No. 3 Sinter Plant – Reheat Burners NG and COG Usage Report
No. 3 Sinter Plant – Reheat Burners PM_{10} and SO_2 Emissions Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility Nos. 1 and 3 Sinter Strand, Recirculating Burners (ISB001 and ISB003)
Parameter: Natural Gas Usage
Limit: 95.5 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2006

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
July	0.084	1.138	1.222
August	0.000	1.222	1.222
September	0.000	1.222	1.222

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility Nos. 1 and 3 Sinter Strand, Recirculating Burners (ISB001 and ISB003)
Parameter: Coke Oven Gas Usage
Limit: 1,637.4 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2006

Month	Coke Oven Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
July	22.420	277.349	299.770
August	13.810	276.069	289.879
September	8.340	269.320	277.660

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

U.S. STEEL - GARY WORKS
NOS. 1 AND 3 SINTER STRANDS NATURAL GAS REHEAT BURNERS (ISB001 AND ISB003)
SOURCE MODIFICATION No. 089-12880-00121
PM10 AND SO2 EMISSION RATES

July 2006

Day	Natural Gas				COG Desulfurization Facility Status	Desulfurized Coke Oven Gas				Undesulfurized Coke Oven Gas				Emission Rates (lbs/hr)		Emission Rates (lbs/MMBTU)	
	Usage (MMcf)	Heat Content (BTU/cf)	Emission Factor (lbs/MMcf) PM10	Emission Factor (lbs/MMcf) SO2	(up or down)	Usage (MMcf)	Heat Content (BTU/cf)	Emission Factor (lbs/MMcf) PM10	Emission Factor (lbs/MMcf) SO2	Usage (MMcf)	Heat Content (BTU/cf)	Emission Factor (lbs/MMcf) PM10	Emission Factor (lbs/MMcf) SO2	PM10	SO2	PM10	SO2
1	0.000	1026	3	0.6	up	0.553	515.5	4.35	89.64	0.000	0.0	4.35	0.00	0.10	2.06	0.0084	0.174
2	0.000	1026	3	0.6	up	0.341	521.2	4.35	98.60	0.000	0.0	4.35	0.00	0.06	1.40	0.0083	0.189
3	0.000	1026	3	0.6	up	0.705	518.4	4.35	93.09	0.000	0.0	4.35	0.00	0.13	2.73	0.0084	0.180
4	0.000	1026	3	0.6	up	0.557	523.3	4.35	106.85	0.000	0.0	4.35	0.00	0.10	2.48	0.0083	0.204
5	0.000	1026	3	0.6	up	0.504	513.8	4.35	101.28	0.000	491.3	4.35	388.24	0.09	2.12	0.0085	0.197
6	0.000	1026	3	0.6	up	0.657	515.6	4.35	76.01	0.000	0.0	4.35	0.00	0.12	2.08	0.0084	0.147
7	0.000	1026	3	0.6	up	0.469	518.0	4.35	96.31	0.000	0.0	4.35	0.00	0.08	1.88	0.0084	0.186
8	0.000	1026	3	0.6	up	0.263	510.4	4.35	88.64	0.000	0.0	4.35	0.00	0.05	0.97	0.0085	0.174
9	0.000	1026	3	0.6	up	0.799	531.4	4.35	97.29	0.000	0.0	4.35	0.00	0.14	3.24	0.0082	0.183
10	0.000	1026	3	0.6	up	0.945	540.1	4.35	92.68	0.000	0.0	4.35	0.00	0.17	3.65	0.0081	0.172
11	0.000	1026	3	0.6	up	1.406	538.8	4.35	85.81	0.000	0.0	4.35	0.00	0.25	5.03	0.0081	0.159
12	0.000	1026	3	0.6	up	0.371	541.8	4.35	113.25	0.000	0.0	4.35	0.00	0.07	1.75	0.0080	0.209
13	0.000	1026	3	0.6	up	0.647	527.9	4.35	115.15	0.000	0.0	4.35	0.00	0.12	3.10	0.0082	0.218
14	0.000	1026	3	0.6	up	1.218	538.9	4.35	106.91	0.000	0.0	4.35	0.00	0.22	5.43	0.0081	0.198
15	0.000	1026	3	0.6	up	0.649	543.8	4.35	112.13	0.000	0.0	4.35	0.00	0.12	3.03	0.0080	0.206
16	0.000	1026	3	0.6	up	0.771	516.7	4.35	81.63	0.000	0.0	4.35	0.00	0.14	2.62	0.0084	0.158
17	0.023	1026	3	0.6	up	0.985	520.4	4.35	83.96	0.000	0.0	4.35	0.00	0.18	3.45	0.0081	0.154
18	0.002	1026	3	0.6	up	1.044	519.9	4.35	99.77	0.000	0.0	4.35	0.00	0.19	4.34	0.0083	0.191
19	0.004	1026	3	0.6	up	0.461	517.3	4.35	85.96	0.000	0.0	4.35	0.00	0.08	1.65	0.0083	0.164
20	0.009	1026	3	0.6	up	0.697	509.2	4.35	61.06	0.000	0.0	4.35	0.00	0.13	1.77	0.0084	0.117
21	0.011	1026	3	0.6	up	0.738	508.9	4.35	97.86	0.000	0.0	4.35	0.00	0.14	3.01	0.0084	0.187
22	0.002	1026	3	0.6	up	1.101	509.8	4.35	101.21	0.000	0.0	4.35	0.00	0.20	4.64	0.0085	0.198
23	0.002	1026	3	0.6	up	0.879	513.2	4.35	106.49	0.000	0.0	4.35	0.00	0.16	3.90	0.0085	0.207
24	0.002	1026	3	0.6	up	1.055	504.3	4.35	71.91	0.000	0.0	4.35	0.00	0.19	3.16	0.0086	0.142
25	0.002	1026	3	0.6	up	1.046	514.8	4.35	111.43	0.000	0.0	4.35	0.00	0.19	4.86	0.0084	0.216
26	0.003	1026	3	0.6	up	0.552	511.0	4.35	108.58	0.000	0.0	4.35	0.00	0.10	2.50	0.0084	0.210
27	0.007	1026	3	0.6	up	0.663	498.6	4.35	54.99	0.000	0.0	4.35	0.00	0.12	1.52	0.0086	0.108
28	0.008	1026	3	0.6	up	0.669	509.6	4.35	23.57	0.000	0.0	4.35	0.00	0.12	0.66	0.0084	0.045
29	0.006	1026	3	0.6	up	0.399	523.6	4.35	36.57	0.000	0.0	4.35	0.00	0.07	0.61	0.0082	0.068
30	0.003	1026	3	0.6	up	0.573	507.6	4.35	78.48	0.000	0.0	4.35	0.00	0.10	1.87	0.0085	0.153
31	0.001	1026	3	0.6	up	0.706	502.5	4.35	77.20	0.000	0.0	4.35	0.00	0.13	2.27	0.0086	0.153

EPA-R5-2012-0005960000321

U.S. STEEL - GARY WORKS
NOS. 1 AND 3 SINTER STRANDS NATURAL GAS REHEAT BURNERS (ISB001 AND ISB003)
SOURCE MODIFICATION No. 089-12880-00121
PM10 AND SO2 EMISSION RATES

August 2006

	Natural Gas				COG Desulfurization Facility Status	Desulfurized Coke Oven Gas				Undesulfurized Coke Oven Gas				Emission Rates (lbs/hr)		Emission Rates (lbs/MMBTU)	
	Usage	Heat Content	Emission Factor (lbs/MMcf)			Usage	Heat Content	Emission Factor (lbs/MMcf)		Usage	Heat Content	Emission Factor (lbs/MMcf)					
Day	(MMcf)	(BTU/cf)	PM10	SO2	(up or down)	(MMcf)	(BTU/cf)	PM10	SO2	(MMcf)	(BTU/cf)	PM10	SO2	PM10	SO2	PM10	SO2
1	0.000	1026	3	0.6	up	0.559	503.5	4.35	71.53	0.000	0.0	4.35	0.00	0.10	1.67	0.0086	0.142
2	0.000	1026	3	0.6	up	0.717	505.0	4.35	61.67	0.000	0.0	4.35	0.00	0.13	1.84	0.0086	0.122
3	0.000	1026	3	0.6	up	0.637	505.6	4.35	85.94	0.000	0.0	4.35	0.00	0.12	2.28	0.0086	0.170
4	0.000	1026	3	0.6	up	1.165	496.2	4.35	106.66	0.000	0.0	4.35	0.00	0.21	5.18	0.0088	0.215
5	0.000	1026	3	0.6	up	0.399	516.8	4.35	107.95	0.000	0.0	4.35	0.00	0.07	1.79	0.0084	0.209
6	0.000	1026	3	0.6	up	0.621	528.7	4.35	85.96	0.000	0.0	4.35	0.00	0.11	2.23	0.0082	0.163
7	0.000	1026	3	0.6	up	0.400	528.6	4.35	83.93	0.000	0.0	4.35	0.00	0.07	1.40	0.0082	0.159
8	0.000	1026	3	0.6	up	0.299	522.9	4.35	111.08	0.000	0.0	4.35	0.00	0.05	1.38	0.0083	0.212
9	0.000	1026	3	0.6	up	0.356	531.6	4.35	87.10	0.000	0.0	4.35	0.00	0.06	1.29	0.0082	0.164
10	0.000	1026	3	0.6	up	0.317	524.7	4.35	81.87	0.000	0.0	4.35	0.00	0.06	1.08	0.0083	0.156
11	0.000	1026	3	0.6	up	0.637	523.8	4.35	94.22	0.000	0.0	4.35	0.00	0.12	2.50	0.0083	0.180
12	0.000	1026	3	0.6	up	0.272	528.4	4.35	111.02	0.000	0.0	4.35	0.00	0.05	1.26	0.0082	0.210
13	0.000	1026	3	0.6	up	0.283	533.7	4.35	98.05	0.000	0.0	4.35	0.00	0.05	1.15	0.0082	0.184
14	0.000	1026	3	0.6	up	0.791	518.9	4.35	69.07	0.000	0.0	4.35	0.00	0.14	2.28	0.0084	0.133
15	0.000	1026	3	0.6	up	0.809	540.7	4.35	90.47	0.000	0.0	4.35	0.00	0.15	3.05	0.0080	0.167
16	0.000	1026	3	0.6	up	0.429	533.6	4.35	117.67	0.000	0.0	4.35	0.00	0.08	2.10	0.0082	0.221
17	0.000	1026	3	0.6	up	0.255	528.8	4.35	108.14	0.000	0.0	4.35	0.00	0.05	1.15	0.0082	0.205
18	0.000	1026	3	0.6	up	0.264	524.7	4.35	109.27	0.000	0.0	4.35	0.00	0.05	1.20	0.0083	0.208
19	0.000	1026	3	0.6	up	0.635	527.1	4.35	94.22	0.000	0.0	4.35	0.00	0.12	2.49	0.0083	0.179
20	0.000	1026	3	0.6	up	0.462	539.0	4.35	104.85	0.000	0.0	4.35	0.00	0.08	2.02	0.0081	0.195
21	0.000	1026	3	0.6	up	0.466	533.2	4.35	78.55	0.000	0.0	4.35	0.00	0.08	1.52	0.0082	0.147
22	0.000	1026	3	0.6	up	0.670	529.2	4.35	108.57	0.000	0.0	4.35	0.00	0.12	3.03	0.0082	0.205
23	0.000	1026	3	0.6	up	0.381	526.1	4.35	98.89	0.000	0.0	4.35	0.00	0.07	1.57	0.0083	0.188
24	0.000	1026	3	0.6	up	0.294	523.8	4.35	86.05	0.000	0.0	4.35	0.00	0.05	1.05	0.0083	0.164
25	0.000	1026	3	0.6	up	0.354	528.4	4.35	77.41	0.000	0.0	4.35	0.00	0.06	1.14	0.0082	0.147
26	0.000	1026	3	0.6	up	0.208	532.8	4.35	83.31	0.000	0.0	4.35	0.00	0.04	0.72	0.0082	0.156
27	0.000	1026	3	0.6	up	0.130	528.8	4.35	89.68	0.000	0.0	4.35	0.00	0.02	0.48	0.0082	0.170
28	0.000	1026	3	0.6	up	0.314	529.3	4.35	84.55	0.000	0.0	4.35	0.00	0.06	1.11	0.0082	0.160
29	0.000	1026	3	0.6	up	0.398	530.7	4.35	76.46	0.000	0.0	4.35	0.00	0.07	1.27	0.0082	0.144
30	0.000	1026	3	0.6	up	0.247	501.1	4.35	51.28	0.000	0.0	4.35	0.00	0.04	0.53	0.0087	0.102
31	0.000	1026	3	0.6	down	0.041	478.6	4.35	33.76	0.000	417.0	4.35	16.88	0.01	0.06	0.0091	0.070

EPA-USS-0325657

U.S. STEEL - GARY WORKS
NOS. 1 AND 3 SINTER STRANDS NATURAL GAS REHEAT BURNERS (ISB001 AND ISB003)
SOURCE MODIFICATION No. 089-12880-00121
PM10 AND SO2 EMISSION RATES

September 2006

	Natural Gas				COG Desulfurization Facility Status	Desulfurized Coke Oven Gas				Undesulfurized Coke Oven Gas				Emission Rates (lbs/hr)		Emission Rates (lbs/MMBTU)	
	Usage	Heat Content	Emission Factor (lbs/MMcf)			Usage	Heat Content	Emission Factor (lbs/MMcf)		Usage	Heat Content	Emission Factor (lbs/MMcf)					
Day	(MMcf)	(BTU/cf)	PM10	SO2	(up or down)	(MMcf)	(BTU/cf)	PM10	SO2	(MMcf)	(BTU/cf)	PM10	SO2	PM10	SO2	PM10	SO2
1	0	1026	3	0.6	up	0.349	529.3	4.35	60.39	0.000	0.0	4.35	0.00	0.06	0.88	0.0082	0.114
2	0	1026	3	0.6	up	0.464	520.0	4.35	84.39	0.000	0.0	4.35	0.00	0.08	1.63	0.0084	0.162
3	0	1026	3	0.6	up	0.461	517.1	4.35	82.51	0.000	0.0	4.35	0.00	0.08	1.58	0.0084	0.160
4	0	1026	3	0.6	up	0.461	525.2	4.35	82.55	0.000	0.0	4.35	0.00	0.08	1.59	0.0083	0.157
5	0	1026	3	0.6	up	0.735	510.9	4.35	85.39	0.000	0.0	4.35	0.00	0.13	2.62	0.0085	0.167
6	0	1026	3	0.6	up	0.481	542.0	4.35	90.33	0.000	0.0	4.35	0.00	0.09	1.81	0.0080	0.167
7	0	1026	3	0.6	up	0.154	524.2	4.35	83.03	0.000	0.0	4.35	0.00	0.03	0.53	0.0083	0.158
8	0	1026	3	0.6	up	0.229	514.9	4.35	95.29	0.000	0.0	4.35	0.00	0.04	0.91	0.0084	0.185
9	0	1026	3	0.6	up	0.371	515.0	4.35	97.21	0.000	0.0	4.35	0.00	0.07	1.50	0.0084	0.189
10	0	1026	3	0.6	up	0.312	509.7	4.35	103.74	0.000	0.0	4.35	0.00	0.06	1.35	0.0085	0.204
11	0	1026	3	0.6	up	0.398	509.4	4.35	101.48	0.000	0.0	4.35	0.00	0.07	1.68	0.0085	0.199
12	0	1026	3	0.6	down	0.271	543.6	4.35	118.16	0.062	516.5	4.35	626.44	0.06	2.96	0.0081	0.396
13	0	1026	3	0.6	down	0.324	503.0	4.35	94.53	0.001	543.8	4.35	720.78	0.06	1.30	0.0086	0.191
14	0	1026	3	0.6	down	0.353	513.9	4.35	101.28	0.016	510.7	4.35	405.12	0.07	1.77	0.0085	0.223
15	0	1026	3	0.6	up	0.455	537.4	4.35	100.67	0.000	0.0	4.35	0.00	0.08	1.91	0.0081	0.187
16	0	1026	3	0.6	up	0.288	530.5	4.35	92.03	0.000	0.0	4.35	0.00	0.05	1.11	0.0082	0.173
17	0	1026	3	0.6	up	0.313	519.0	4.35	81.80	0.000	0.0	4.35	0.00	0.06	1.07	0.0084	0.158
18	0	1026	3	0.6	up	0.387	515.5	4.35	77.82	0.000	0.0	4.35	0.00	0.07	1.25	0.0084	0.151
19	0	1026	3	0.6	up	0.307	519.5	4.35	73.74	0.000	0.0	4.35	0.00	0.06	0.94	0.0084	0.142
20	0	1026	3	0.6	up	0.249	520.0	4.35	121.46	0.000	0.0	4.35	0.00	0.05	1.26	0.0084	0.234
21	0	1026	3	0.6	up	0.196	521.5	4.35	96.63	0.000	0.0	4.35	0.00	0.04	0.79	0.0083	0.185
22	0	1026	3	0.6	up	0.075	521.4	4.35	103.36	0.000	0.0	4.35	0.00	0.01	0.32	0.0083	0.198
23	0	1026	3	0.6	up	0.006	522.5	4.35	115.29	0.000	0.0	4.35	0.00	0.00	0.03	0.0083	0.221
24	0	1026	3	0.6	up	0.049	522.0	4.35	115.45	0.000	0.0	4.35	0.00	0.01	0.24	0.0083	0.221
25	0	1026	3	0.6	up	0.245	516.7	4.35	110.90	0.000	0.0	4.35	0.00	0.04	1.13	0.0084	0.215
26	0	1026	3	0.6	up	0.092	520.5	4.35	116.63	0.000	0.0	4.35	0.00	0.02	0.45	0.0084	0.224
27	0	1026	3	0.6	up	0.027	519.7	4.35	113.30	0.000	0.0	4.35	0.00	0.00	0.13	0.0084	0.218
28	0	1026	3	0.6	down	0.018	502.1	4.35	84.40	0.001	579.6	4.35	653.26	0.00	0.08	0.0086	0.206
29	0	1026	3	0.6	up	0.161	522.4	4.35	74.47	0.000	0.0	4.35	0.00	0.03	0.50	0.0083	0.143
30	0	1026	3	0.6	up	0.031	517.2	4.35	82.80	0.000	0.0	4.35	0.00	0.01	0.11	0.0084	0.160

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

3rd 2006

Coke Plant

Contents

Coke Oven Battery Underfiring Natural Gas Injection Jets NG Usage Report
Coke Oven Battery Underfiring Natural Gas Injection Jets PM_{10} Emissions Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002 and CPNG003)
Parameter: Natural Gas Usage
Limit: 178.7 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2006

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
July	0.829	0.000	0.829
August	0.000	0.829	0.829
September	2.618	0.829	3.447

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Robert H. Lange
Title/Position: Division Manager, Coke
Phone: 219.888.4028

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, IN 46402
Source Identification No.: 089-12880-00121
Facility: Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002, and CPNG003)
Parameter:
a) daily natural gas (NG) and coke oven gas (COG) usage
b) daily average heat content of natural gas and coke oven gas
c) daily PM10 emission rate per unit weight or volume for NG & COG
d) calculated PM10 emission rate in lbs/hr and lbs/MMBtu
Limits:
a) Battery Underfire Stack PM10 emissions shall not exceed:
No. 2 = 0.03 gr/dscf & 32.3 lb/hr
No. 5 = 0.05 gr/dscf & 24.7 lb/hr No. 7 = 0.05 gr/dscf & 21.3 lb/hr

Battery: **No. 2** Month: **Jul-06**

Date	Natural Gas			COG	Coke Oven Gas			PM10 Emissions	
	Usage	Heat Content	PM10 Emission Factor	Dusulfurization Facility Status	Usage	Heat Content	PM10 Emission Factor		
	(MMcf)	(Btu/cf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/hr)	(lb/MMbtu)
1	0.00	1026	5.0	up	6.00	515.5	4.35	1.0873	0.0084
2	0.00	1026	5.0	up	6.32	521.2	4.35	1.1457	0.0083
3	0.00	1026	5.0	up	6.42	518.4	4.35	1.1634	0.0084
4	0.00	1026	5.0	up	6.41	523.3	4.35	1.1613	0.0083
5	0.03	1026	5.0	up	6.59	513.8	4.35	1.2016	0.0084
6	0.00	1026	5.0	up	6.32	515.6	4.35	1.1458	0.0084
7	0.00	1026	5.0	up	6.18	518.0	4.35	1.1197	0.0084
8	0.00	1026	5.0	up	6.33	510.4	4.35	1.1481	0.0085
9	0.00	1026	5.0	up	6.64	531.4	4.35	1.2026	0.0082
10	0.00	1026	5.0	up	6.52	540.1	4.35	1.1814	0.0081
11	0.00	1026	5.0	up	6.46	538.8	4.35	1.1703	0.0081
12	0.00	1026	5.0	up	6.24	541.8	4.35	1.1303	0.0080
13	0.00	1026	5.0	up	6.43	527.9	4.35	1.1662	0.0082
14	0.00	1026	5.0	up	6.30	538.9	4.35	1.1426	0.0081
15	0.00	1026	5.0	up	6.61	543.8	4.35	1.1974	0.0080
16	0.00	1026	5.0	up	6.48	516.7	4.35	1.1747	0.0084
17	0.00	1026	5.0	up	5.22	520.4	4.35	0.9454	0.0084
18	0.00	1026	5.0	up	6.66	519.9	4.35	1.2067	0.0084
19	0.00	1026	5.0	up	6.50	517.3	4.35	1.1780	0.0084
20	0.00	1026	5.0	up	6.60	509.2	4.35	1.1960	0.0085
21	0.00	1026	5.0	up	6.47	508.9	4.35	1.1729	0.0085
22	0.00	1026	5.0	up	6.42	509.8	4.35	1.1643	0.0085
23	0.00	1026	5.0	up	6.36	513.2	4.35	1.1520	0.0085
24	0.00	1026	5.0	up	6.57	504.3	4.35	1.1899	0.0086
25	0.00	1026	5.0	up	5.71	514.8	4.35	1.0358	0.0084
26	0.00	1026	5.0	up	6.67	511.0	4.35	1.2082	0.0085
27	0.00	1026	5.0	up	6.58	498.6	4.35	1.1931	0.0087
28	0.00	1026	5.0	up	4.94	509.6	4.35	0.8947	0.0085
29	0.00	1026	5.0	up	6.96	523.6	4.35	1.2608	0.0083
30	0.00	1026	5.0	up	6.67	507.6	4.35	1.2086	0.0086
31	0.00	1026	5.0	up	6.33	502.5	4.35	1.1481	0.0087

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, IN 46402
Source Identification No.: 089-12880-00121
Facility: Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002, and CPNG003)
Parameter:
a) daily natural gas (NG) and coke oven gas (COG) usage
b) daily average heat content of natural gas and coke oven gas
c) daily PM10 emission rate per unit weight or volume for NG & COG
d) calculated PM10 emission rate in lbs/hr and lbs/MMBtu
Limits:
a) Battery Underfire Stack PM10 emissions shall not exceed:
No. 2 = 0.03 gr/dscf & 32.3 lb/hr
No. 5 = 0.05 gr/dscf & 24.7 lb/hr No. 7 = 0.05 gr/dscf & 21.3 lb/hr

Battery: No. 2 Month: Aug-06

Date	Natural Gas			COG	Coke Oven Gas			PM10 Emissions	
	Usage	Heat Content	PM10 Emission Factor	Dusulfurization Facility Status	Usage	Heat Content	PM10 Emission Factor		
	(MMcf)	(Btu/cf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/hr)	(lb/MMbtu)
1	0.00	1026	5.0	up	6.78	503.5	4.35	1.2289	0.0086
2	0.00	1026	5.0	up	6.58	505.0	4.35	1.1918	0.0086
3	0.00	1026	5.0	up	6.71	505.6	4.35	1.2170	0.0086
4	0.00	1026	5.0	up	6.68	496.2	4.35	1.2102	0.0088
5	0.00	1026	5.0	up	6.54	516.8	4.35	1.1853	0.0084
6	0.00	1026	5.0	up	6.59	528.7	4.35	1.1939	0.0082
7	0.00	1026	5.0	up	6.77	528.6	4.35	1.2267	0.0082
8	0.00	1026	5.0	up	6.82	522.9	4.35	1.2367	0.0083
9	0.00	1026	5.0	up	6.80	531.6	4.35	1.2325	0.0082
10	0.00	1026	5.0	up	6.53	524.7	4.35	1.1829	0.0083
11	0.00	1026	5.0	up	6.49	523.8	4.35	1.1764	0.0083
12	0.00	1026	5.0	up	6.54	528.4	4.35	1.1853	0.0082
13	0.00	1026	5.0	up	6.39	533.7	4.35	1.1583	0.0082
14	0.00	1026	5.0	up	6.56	518.9	4.35	1.1897	0.0084
15	0.00	1026	5.0	up	3.03	540.7	4.35	0.5484	0.0080
16	0.00	1026	5.0	up	6.74	533.6	4.35	1.2211	0.0082
17	0.00	1026	5.0	up	6.69	528.8	4.35	1.2123	0.0082
18	0.00	1026	5.0	up	6.59	524.7	4.35	1.1952	0.0083
19	0.00	1026	5.0	up	6.72	527.1	4.35	1.2171	0.0083
20	0.00	1026	5.0	up	6.10	539.0	4.35	1.1062	0.0081
21	0.00	1026	5.0	up	6.70	533.2	4.35	1.2152	0.0082
22	0.00	1026	5.0	up	6.38	529.2	4.35	1.1555	0.0082
23	0.00	1026	5.0	up	6.38	526.1	4.35	1.1560	0.0083
24	0.00	1026	5.0	up	6.32	523.8	4.35	1.1462	0.0083
25	0.00	1026	5.0	up	6.69	528.4	4.35	1.2133	0.0082
26	0.00	1026	5.0	up	6.66	532.8	4.35	1.2067	0.0082
27	0.00	1026	5.0	up	6.61	528.8	4.35	1.1983	0.0082
28	0.00	1026	5.0	up	6.57	529.3	4.35	1.1902	0.0082
29	0.00	1026	5.0	up	6.71	530.7	4.35	1.2155	0.0082
30	0.00	1026	5.0	up	6.52	501.1	4.35	1.1825	0.0087
31	0.00	1026	5.0	down	2.74	478.6	4.35	0.4961	0.0092

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, IN 46402
Source Identification No.: 089-12880-00121
Facility: Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002, and CPNG003)
Parameter:
a) daily natural gas (NG) and coke oven gas (COG) usage
b) daily average heat content of natural gas and coke oven gas
c) daily PM10 emission rate per unit weight or volume for NG & COG
d) calculated PM10 emission rate in lbs/hr and lbs/MMBtu
Limits:
a) Battery Underfire Stack PM10 emissions shall not exceed:
No. 2 = 0.03 gr/dscf & 32.3 lb/hr
No. 5 = 0.05 gr/dscf & 24.7 lb/hr No. 7 = 0.05 gr/dscf & 21.3 lb/hr

Battery: **No. 2** Month: **Sep-06**

Date	Natural Gas			COG	Coke Oven Gas			PM10 Emissions	
	Usage	Heat Content	PM10 Emission Factor	Dusulfurization Facility Status	Usage	Heat Content	PM10 Emission Factor		
	(MMcf)	(Btu/cf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/hr)	(lb/MMbtu)
1	0.00	1026	5.0	up	6.73	529.3	4.35	1.2207	0.0082
2	0.00	1026	5.0	up	6.62	520.0	4.35	1.1999	0.0084
3	0.00	1026	5.0	up	6.76	517.1	4.35	1.2246	0.0084
4	0.00	1026	5.0	up	6.51	525.2	4.35	1.1800	0.0083
5	0.00	1026	5.0	up	6.39	510.9	4.35	1.1587	0.0085
6	0.00	1026	5.0	up	6.18	542.0	4.35	1.1205	0.0080
7	0.00	1026	5.0	up	6.44	524.2	4.35	1.1678	0.0083
8	0.00	1026	5.0	up	6.54	514.9	4.35	1.1860	0.0084
9	0.00	1026	5.0	up	6.60	515.0	4.35	1.1960	0.0084
10	0.00	1026	5.0	up	6.51	509.7	4.35	1.1807	0.0085
11	0.00	1026	5.0	up	6.44	509.4	4.35	1.1667	0.0085
12	0.00	1026	5.0	down	6.34	543.6	4.35	1.1488	0.0083
13	0.01	1026	5.0	down	6.30	503.0	4.35	1.1431	0.0085
14	0.04	1026	5.0	down	6.48	513.9	4.35	1.1829	0.0084
15	0.00	1026	5.0	up	6.53	537.4	4.35	1.1834	0.0081
16	0.00	1026	5.0	up	6.45	530.5	4.35	1.1689	0.0082
17	0.00	1026	5.0	up	6.50	519.0	4.35	1.1783	0.0084
18	0.00	1026	5.0	up	6.45	515.5	4.35	1.1689	0.0084
19	0.00	1026	5.0	up	6.18	519.5	4.35	1.1205	0.0084
20	0.06	1026	5.0	up	6.09	520.0	4.35	1.1168	0.0083
21	0.00	1026	5.0	up	6.43	521.5	4.35	1.1661	0.0083
22	0.00	1026	5.0	up	6.38	521.4	4.35	1.1567	0.0083
23	0.00	1026	5.0	up	6.23	522.5	4.35	1.1298	0.0083
24	0.00	1026	5.0	up	6.49	522.0	4.35	1.1762	0.0083
25	0.00	1026	5.0	up	6.32	516.7	4.35	1.1453	0.0084
26	0.00	1026	5.0	up	6.40	520.5	4.35	1.1592	0.0084
27	0.00	1026	5.0	up	6.59	519.7	4.35	1.1946	0.0084
28	0.00	1026	5.0	down	6.44	502.1	4.35	1.1675	0.0086
29	0.00	1026	5.0	up	6.44	522.4	4.35	1.1674	0.0083
30	0.00	1026	5.0	up	6.43	517.2	4.35	1.1655	0.0084

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, IN 46402
Source Identification No.: 089-12880-00121
Facility: Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002, and CPNG003)
Parameter:
a) daily natural gas (NG) and coke oven gas (COG) usage
b) daily average heat content of natural gas and coke oven gas
c) daily PM10 emission rate per unit weight or volume for NG & COG
d) calculated PM10 emission rate in lbs/hr and lbs/MMBtu
Limits:
a) Battery Underfire Stack PM10 emissions shall not exceed:
No. 2 = 0.03 gr/dscf & 32.3 lb/hr
No. 5 = 0.05 gr/dscf & 24.7 lb/hr No. 7 = 0.05 gr/dscf & 21.3 lb/hr

Battery: No. 5 Month: Jul-06

Date	Natural Gas			COG	Coke Oven Gas			PM10 Emissions	
	Usage	Heat Content	PM10 Emission Factor	Dusulfurization Facility Status	Usage	Heat Content	PM10 Emission Factor		
	(MMcf)	(Btu/cf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/hr)	(lb/MMbtu)
1	0.00	1026	5.0	up	4.14	515.5	4.35	0.7497	0.0084
2	0.00	1026	5.0	up	4.24	521.2	4.35	0.7688	0.0083
3	0.00	1026	5.0	up	4.20	518.4	4.35	0.7604	0.0084
4	0.00	1026	5.0	up	3.85	523.3	4.35	0.6983	0.0083
5	0.02	1026	5.0	up	4.10	513.8	4.35	0.7474	0.0084
6	0.00	1026	5.0	up	3.90	515.6	4.35	0.7069	0.0084
7	0.00	1026	5.0	up	4.04	518.0	4.35	0.7324	0.0084
8	0.00	1026	5.0	up	3.98	510.4	4.35	0.7216	0.0085
9	0.00	1026	5.0	up	3.99	531.4	4.35	0.7241	0.0082
10	0.00	1026	5.0	up	3.92	540.1	4.35	0.7104	0.0081
11	0.00	1026	5.0	up	3.96	538.8	4.35	0.7173	0.0081
12	0.00	1026	5.0	up	4.03	541.8	4.35	0.7313	0.0080
13	0.00	1026	5.0	up	4.03	527.9	4.35	0.7309	0.0082
14	0.00	1026	5.0	up	4.07	538.9	4.35	0.7369	0.0081
15	0.00	1026	5.0	up	4.09	543.8	4.35	0.7415	0.0080
16	0.00	1026	5.0	up	4.07	516.7	4.35	0.7381	0.0084
17	0.00	1026	5.0	up	4.04	520.4	4.35	0.7328	0.0084
18	0.00	1026	5.0	up	4.08	519.9	4.35	0.7396	0.0084
19	0.00	1026	5.0	up	3.96	517.3	4.35	0.7176	0.0084
20	0.00	1026	5.0	up	3.95	509.2	4.35	0.7154	0.0085
21	0.00	1026	5.0	up	3.96	508.9	4.35	0.7170	0.0085
22	0.00	1026	5.0	up	3.92	509.8	4.35	0.7098	0.0085
23	0.00	1026	5.0	up	3.95	513.2	4.35	0.7164	0.0085
24	0.00	1026	5.0	up	3.98	504.3	4.35	0.7209	0.0086
25	0.00	1026	5.0	up	3.97	514.8	4.35	0.7199	0.0084
26	0.00	1026	5.0	up	3.96	511.0	4.35	0.7174	0.0085
27	0.00	1026	5.0	up	4.03	498.6	4.35	0.7296	0.0087
28	0.00	1026	5.0	up	4.08	509.6	4.35	0.7386	0.0085
29	0.00	1026	5.0	up	4.17	523.6	4.35	0.7566	0.0083
30	0.00	1026	5.0	up	4.16	507.6	4.35	0.7547	0.0086
31	0.00	1026	5.0	up	4.03	502.5	4.35	0.7309	0.0087

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, IN 46402
Source Identification No.: 089-12880-00121
Facility: Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002, and CPNG003)
Parameter:
a) daily natural gas (NG) and coke oven gas (COG) usage
b) daily average heat content of natural gas and coke oven gas
c) daily PM10 emission rate per unit weight or volume for NG & COG
d) calculated PM10 emission rate in lbs/hr and lbs/MMBtu
Limits:
a) Battery Underfire Stack PM10 emissions shall not exceed:
No. 2 = 0.03 gr/dscf & 32.3 lb/hr
No. 5 = 0.05 gr/dscf & 24.7 lb/hr No. 7 = 0.05 gr/dscf & 21.3 lb/hr

Battery: **No. 5** Month: **Aug-06**

Date	Natural Gas			COG	Coke Oven Gas			PM10 Emissions	
	Usage	Heat Content	PM10 Emission Factor	Dusulfurization Facility Status	Usage	Heat Content	PM10 Emission Factor		
	(MMcf)	(Btu/cf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/hr)	(lb/MMbtu)
1	0.00	1026	5.0	up	4.16	503.5	4.35	0.7548	0.0086
2	0.00	1026	5.0	up	4.18	505.0	4.35	0.7583	0.0086
3	0.00	1026	5.0	up	4.20	505.6	4.35	0.7604	0.0086
4	0.00	1026	5.0	up	4.19	496.2	4.35	0.7588	0.0088
5	0.00	1026	5.0	up	4.17	516.8	4.35	0.7549	0.0084
6	0.00	1026	5.0	up	4.13	528.7	4.35	0.7483	0.0082
7	0.00	1026	5.0	up	4.02	528.6	4.35	0.7285	0.0082
8	0.00	1026	5.0	up	4.00	522.9	4.35	0.7248	0.0083
9	0.00	1026	5.0	up	4.09	531.6	4.35	0.7411	0.0082
10	0.00	1026	5.0	up	4.11	524.7	4.35	0.7450	0.0083
11	0.00	1026	5.0	up	4.10	523.8	4.35	0.7426	0.0083
12	0.00	1026	5.0	up	4.00	528.4	4.35	0.7250	0.0082
13	0.00	1026	5.0	up	4.02	533.7	4.35	0.7279	0.0082
14	0.00	1026	5.0	up	4.01	518.9	4.35	0.7267	0.0084
15	0.00	1026	5.0	up	4.08	540.7	4.35	0.7399	0.0080
16	0.00	1026	5.0	up	4.10	533.6	4.35	0.7429	0.0082
17	0.00	1026	5.0	up	4.09	528.8	4.35	0.7409	0.0082
18	0.00	1026	5.0	up	4.10	524.7	4.35	0.7424	0.0083
19	0.00	1026	5.0	up	4.06	527.1	4.35	0.7353	0.0083
20	0.00	1026	5.0	up	4.14	539.0	4.35	0.7503	0.0081
21	0.00	1026	5.0	up	4.08	533.2	4.35	0.7400	0.0082
22	0.00	1026	5.0	up	3.99	529.2	4.35	0.7226	0.0082
23	0.00	1026	5.0	up	3.93	526.1	4.35	0.7117	0.0083
24	0.00	1026	5.0	up	3.98	523.8	4.35	0.7216	0.0083
25	0.00	1026	5.0	up	4.01	528.4	4.35	0.7264	0.0082
26	0.00	1026	5.0	up	4.03	532.8	4.35	0.7296	0.0082
27	0.00	1026	5.0	up	3.98	528.8	4.35	0.7216	0.0082
28	0.00	1026	5.0	up	3.95	529.3	4.35	0.7161	0.0082
29	0.00	1026	5.0	up	3.99	530.7	4.35	0.7231	0.0082
30	0.00	1026	5.0	up	4.10	501.1	4.35	0.7436	0.0087
31	0.00	1026	5.0	down	4.07	478.6	4.35	0.7371	0.0092

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, IN 46402
Source Identification No.: 089-12880-00121
Facility: Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002, and CPNG003)
Parameter:
a) daily natural gas (NG) and coke oven gas (COG) usage
b) daily average heat content of natural gas and coke oven gas
c) daily PM10 emission rate per unit weight or volume for NG & COG
d) calculated PM10 emission rate in lbs/hr and lbs/MMBtu
Limits:
a) Battery Underfire Stack PM10 emissions shall not exceed:
No. 2 = 0.03 gr/dscf & 32.3 lb/hr
No. 5 = 0.05 gr/dscf & 24.7 lb/hr No. 7 = 0.05 gr/dscf & 21.3 lb/hr

Battery: No. 5 Month: Sep-06

Date	Natural Gas			COG	Coke Oven Gas			PM10 Emissions	
	Usage	Heat Content	PM10 Emission Factor	Dusulfurization Facility Status	Usage	Heat Content	PM10 Emission Factor		
	(MMcf)	(Btu/cf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/hr)	(lb/MMbtu)
1	0.00	1026	5.0	up	4.12	529.3	4.35	0.7472	0.0082
2	0.00	1026	5.0	up	4.16	520.0	4.35	0.7532	0.0084
3	0.00	1026	5.0	up	4.17	517.1	4.35	0.7565	0.0084
4	0.00	1026	5.0	up	4.17	525.2	4.35	0.7562	0.0083
5	0.00	1026	5.0	up	4.02	510.9	4.35	0.7283	0.0085
6	0.00	1026	5.0	up	4.01	542.0	4.35	0.7269	0.0080
7	0.00	1026	5.0	up	4.22	524.2	4.35	0.7657	0.0083
8	0.00	1026	5.0	up	3.98	514.9	4.35	0.7222	0.0084
9	0.00	1026	5.0	up	4.16	515.0	4.35	0.7541	0.0084
10	0.00	1026	5.0	up	4.15	509.7	4.35	0.7521	0.0085
11	0.00	1026	5.0	up	4.22	509.4	4.35	0.7648	0.0085
12	0.00	1026	5.0	down	4.25	543.6	4.35	0.7698	0.0083
13	0.01	1026	5.0	down	4.15	503.0	4.35	0.7540	0.0085
14	0.02	1026	5.0	down	3.98	513.9	4.35	0.7266	0.0084
15	0.00	1026	5.0	up	4.04	537.4	4.35	0.7318	0.0081
16	0.00	1026	5.0	up	4.00	530.5	4.35	0.7256	0.0082
17	0.00	1026	5.0	up	3.93	519.0	4.35	0.7125	0.0084
18	0.00	1026	5.0	up	3.88	515.5	4.35	0.7040	0.0084
19	0.00	1026	5.0	up	3.92	519.5	4.35	0.7105	0.0084
20	0.04	1026	5.0	up	3.92	520.0	4.35	0.7180	0.0083
21	0.00	1026	5.0	up	3.88	521.5	4.35	0.7029	0.0083
22	0.00	1026	5.0	up	3.79	521.4	4.35	0.6864	0.0083
23	0.00	1026	5.0	up	3.92	522.5	4.35	0.7101	0.0083
24	0.00	1026	5.0	up	3.96	522.0	4.35	0.7186	0.0083
25	0.00	1026	5.0	up	3.97	516.7	4.35	0.7193	0.0084
26	0.00	1026	5.0	up	3.95	520.5	4.35	0.7164	0.0084
27	0.00	1026	5.0	up	3.94	519.7	4.35	0.7144	0.0084
28	0.00	1026	5.0	down	3.96	502.1	4.35	0.7183	0.0086
29	0.00	1026	5.0	up	3.77	522.4	4.35	0.6841	0.0083
30	0.00	1026	5.0	up	4.02	517.2	4.35	0.7288	0.0084

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, IN 46402
Source Identification No.: 089-12880-00121
Facility: Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002, and CPNG003)
Parameter:
a) daily natural gas (NG) and coke oven gas (COG) usage
b) daily average heat content of natural gas and coke oven gas
c) daily PM10 emission rate per unit weight or volume for NG & COG
d) calculated PM10 emission rate in lbs/hr and lbs/MMBtu
Limits:
a) Battery Underfire Stack PM10 emissions shall not exceed:
No. 2 = 0.03 gr/dscf & 32.3 lb/hr
No. 5 = 0.05 gr/dscf & 24.7 lb/hr No. 7 = 0.05 gr/dscf & 21.3 lb/hr

Battery: No. 7 Month: Jul-06

Date	Natural Gas			COG	Coke Oven Gas			PM10 Emissions	
	Usage	Heat Content	PM10 Emission Factor	Dusulfurization Facility Status	Usage	Heat Content	PM10 Emission Factor		
	(MMcf)	(Btu/cf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/hr)	(lb/MMbtu)
1	0.00	1026	5.0	up	5.07	515.5	4.35	0.9184	0.0084
2	0.00	1026	5.0	up	5.06	521.2	4.35	0.9171	0.0083
3	0.00	1026	5.0	up	5.07	518.4	4.35	0.9188	0.0084
4	0.00	1026	5.0	up	4.93	523.3	4.35	0.8929	0.0083
5	0.03	1026	5.0	up	4.97	513.8	4.35	0.9072	0.0084
6	0.00	1026	5.0	up	5.02	515.6	4.35	0.9091	0.0084
7	0.00	1026	5.0	up	5.03	518.0	4.35	0.9118	0.0084
8	0.00	1026	5.0	up	5.01	510.4	4.35	0.9081	0.0085
9	0.00	1026	5.0	up	5.01	531.4	4.35	0.9090	0.0082
10	0.00	1026	5.0	up	4.96	540.1	4.35	0.8989	0.0081
11	0.00	1026	5.0	up	4.86	538.8	4.35	0.8817	0.0081
12	0.00	1026	5.0	up	4.88	541.8	4.35	0.8841	0.0080
13	0.00	1026	5.0	up	4.92	527.9	4.35	0.8917	0.0082
14	0.00	1026	5.0	up	5.00	538.9	4.35	0.9071	0.0081
15	0.00	1026	5.0	up	5.12	543.8	4.35	0.9272	0.0080
16	0.00	1026	5.0	up	5.18	516.7	4.35	0.9381	0.0084
17	0.00	1026	5.0	up	5.14	520.4	4.35	0.9322	0.0084
18	0.00	1026	5.0	up	5.08	519.9	4.35	0.9206	0.0084
19	0.00	1026	5.0	up	4.90	517.3	4.35	0.8880	0.0084
20	0.00	1026	5.0	up	5.25	509.2	4.35	0.9522	0.0085
21	0.00	1026	5.0	up	5.09	508.9	4.35	0.9226	0.0085
22	0.00	1026	5.0	up	4.95	509.8	4.35	0.8970	0.0085
23	0.00	1026	5.0	up	5.06	513.2	4.35	0.9169	0.0085
24	0.00	1026	5.0	up	5.08	504.3	4.35	0.9213	0.0086
25	0.00	1026	5.0	up	5.08	514.8	4.35	0.9213	0.0084
26	0.00	1026	5.0	up	4.95	511.0	4.35	0.8974	0.0085
27	0.00	1026	5.0	up	4.90	498.6	4.35	0.8877	0.0087
28	0.00	1026	5.0	up	4.68	509.6	4.35	0.8477	0.0085
29	0.00	1026	5.0	up	5.00	523.6	4.35	0.9057	0.0083
30	0.00	1026	5.0	up	4.99	507.6	4.35	0.9044	0.0086
31	0.00	1026	5.0	up	5.00	502.5	4.35	0.9071	0.0087

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, IN 46402
Source Identification No.: 089-12880-00121
Facility: Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002, and CPNG003)
Parameter:
a) daily natural gas (NG) and coke oven gas (COG) usage
b) daily average heat content of natural gas and coke oven gas
c) daily PM10 emission rate per unit weight or volume for NG & COG
d) calculated PM10 emission rate in lbs/hr and lbs/MMBtu
Limits:
a) Battery Underfire Stack PM10 emissions shall not exceed:
No. 2 = 0.03 gr/dscf & 32.3 lb/hr
No. 5 = 0.05 gr/dscf & 24.7 lb/hr No. 7 = 0.05 gr/dscf & 21.3 lb/hr

Battery: No. 7 Month: Aug-06

Date	Natural Gas			COG	Coke Oven Gas			PM10 Emissions	
	Usage	Heat Content	PM10 Emission Factor	Dusulfurization Facility Status	Usage	Heat Content	PM10 Emission Factor		
	(MMcf)	(Btu/cf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/hr)	(lb/MMbtu)
1	0.00	1026	5.0	up	5.06	503.5	4.35	0.9164	0.0086
2	0.00	1026	5.0	up	5.08	505.0	4.35	0.9203	0.0086
3	0.00	1026	5.0	up	5.07	505.6	4.35	0.9185	0.0086
4	0.00	1026	5.0	up	4.99	496.2	4.35	0.9048	0.0088
5	0.00	1026	5.0	up	4.91	516.8	4.35	0.8905	0.0084
6	0.00	1026	5.0	up	4.91	528.7	4.35	0.8905	0.0082
7	0.00	1026	5.0	up	4.89	528.6	4.35	0.8854	0.0082
8	0.00	1026	5.0	up	5.10	522.9	4.35	0.9247	0.0083
9	0.00	1026	5.0	up	5.16	531.6	4.35	0.9355	0.0082
10	0.00	1026	5.0	up	5.14	524.7	4.35	0.9316	0.0083
11	0.00	1026	5.0	up	5.20	523.8	4.35	0.9428	0.0083
12	0.00	1026	5.0	up	5.21	528.4	4.35	0.9451	0.0082
13	0.00	1026	5.0	up	5.32	533.7	4.35	0.9649	0.0082
14	0.00	1026	5.0	up	5.23	518.9	4.35	0.9483	0.0084
15	0.00	1026	5.0	up	5.27	540.7	4.35	0.9549	0.0080
16	0.00	1026	5.0	up	5.30	533.6	4.35	0.9601	0.0082
17	0.00	1026	5.0	up	5.22	528.8	4.35	0.9466	0.0082
18	0.00	1026	5.0	up	5.14	524.7	4.35	0.9325	0.0083
19	0.00	1026	5.0	up	5.03	527.1	4.35	0.9111	0.0083
20	0.00	1026	5.0	up	5.07	539.0	4.35	0.9180	0.0081
21	0.00	1026	5.0	up	5.04	533.2	4.35	0.9140	0.0082
22	0.00	1026	5.0	up	5.09	529.2	4.35	0.9223	0.0082
23	0.00	1026	5.0	up	5.07	526.1	4.35	0.9186	0.0083
24	0.00	1026	5.0	up	5.03	523.8	4.35	0.9122	0.0083
25	0.00	1026	5.0	up	4.93	528.4	4.35	0.8933	0.0082
26	0.00	1026	5.0	up	4.98	532.8	4.35	0.9018	0.0082
27	0.00	1026	5.0	up	4.81	528.8	4.35	0.8713	0.0082
28	0.00	1026	5.0	up	4.91	529.3	4.35	0.8907	0.0082
29	0.00	1026	5.0	up	4.98	530.7	5.35	1.1099	0.0101
30	0.00	1026	5.0	up	5.08	501.1	6.35	1.3450	0.0127
31	0.00	1026	5.0	down	5.08	478.6	7.35	1.5545	0.0155

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, IN 46402
Source Identification No.: 089-12880-00121
Facility: Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002, and CPNG003)
Parameter:
a) daily natural gas (NG) and coke oven gas (COG) usage
b) daily average heat content of natural gas and coke oven gas
c) daily PM10 emission rate per unit weight or volume for NG & COG
d) calculated PM10 emission rate in lbs/hr and lbs/MMBtu
Limits:
a) Battery Underfire Stack PM10 emissions shall not exceed:
No. 2 = 0.03 gr/dscf & 32.3 lb/hr
No. 5 = 0.05 gr/dscf & 24.7 lb/hr No. 7 = 0.05 gr/dscf & 21.3 lb/hr

Battery: No. 7 Month: Sep-06

Date	Natural Gas			COG	Coke Oven Gas			PM10 Emissions	
	Usage	Heat Content	PM10 Emission Factor	Dusulfurization Facility Status	Usage	Heat Content	PM10 Emission Factor		
	(MMcf)	(Btu/cf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/hr)	(lb/MMbtu)
1	0.00	1026	5.0	up	5.23	529.3	4.35	0.9483	0.0082
2	0.00	1026	5.0	up	5.31	520.0	4.35	0.9620	0.0084
3	0.00	1026	5.0	up	5.26	517.1	4.35	0.9533	0.0084
4	0.00	1026	5.0	up	5.21	525.2	4.35	0.9436	0.0083
5	0.00	1026	5.0	up	5.26	510.9	4.35	0.9532	0.0085
6	0.00	1026	5.0	up	5.20	542.0	4.35	0.9424	0.0080
7	0.00	1026	5.0	up	5.18	524.2	4.35	0.9393	0.0083
8	0.00	1026	5.0	up	5.23	514.9	4.35	0.9479	0.0084
9	0.00	1026	5.0	up	5.24	515.0	4.35	0.9505	0.0084
10	0.00	1026	5.0	up	5.11	509.7	4.35	0.9262	0.0085
11	0.00	1026	5.0	up	5.14	509.4	4.35	0.9314	0.0085
12	0.00	1026	5.0	down	5.19	543.6	4.35	0.9409	0.0083
13	0.01	1026	5.0	down	5.12	503.0	4.35	0.9289	0.0085
14	0.03	1026	5.0	down	4.96	513.9	4.35	0.9052	0.0084
15	0.00	1026	5.0	up	4.92	537.4	4.35	0.8918	0.0081
16	0.00	1026	5.0	up	4.93	530.5	4.35	0.8940	0.0082
17	0.00	1026	5.0	up	4.84	519.0	4.35	0.8774	0.0084
18	0.00	1026	5.0	up	4.84	515.5	4.35	0.8764	0.0084
19	0.00	1026	5.0	up	4.85	519.5	4.35	0.8790	0.0084
20	0.05	1026	5.0	up	5.01	520.0	4.35	0.9178	0.0083
21	0.00	1026	5.0	up	4.92	521.5	4.35	0.8915	0.0083
22	0.00	1026	5.0	up	4.93	521.4	4.35	0.8929	0.0083
23	0.00	1026	5.0	up	4.94	522.5	4.35	0.8961	0.0083
24	0.00	1026	5.0	up	5.02	522.0	4.35	0.9096	0.0083
25	0.00	1026	5.0	up	4.99	516.7	4.35	0.9050	0.0084
26	0.00	1026	5.0	up	4.96	520.5	4.35	0.8995	0.0084
27	0.00	1026	5.0	up	5.02	519.7	4.35	0.9103	0.0084
28	0.00	1026	5.0	down	5.05	502.1	4.35	0.9145	0.0086
29	0.00	1026	5.0	up	5.12	522.4	4.35	0.9276	0.0083
30	0.00	1026	5.0	up	5.07	517.2	4.35	0.9186	0.0084

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

3rd 2006

Coke Plant Boiler House

Contents

Coke Plant Boiler House – Nos. 1 through 10 Boilers Natural Gas Usage Report
Coke Plant Boiler House – Nos. 1 through 10 Boilers NOx Emissions Report
Coke Plant Boiler House – Nos. 9 and 10 Boilers CO Excess Emissions Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary Indiana 46402
Mailing Address: One North Broadway, Gary Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Boilers No. 1 through No. 10 at the Coke Plant Boiler House
Parameter: Total Natural Gas Usage
Limit: Less than 2,550 million cubic feet (MMCF) per 12-consecutive month period with compliance determined at the end of each month.

Quarter: 3rd Year: 2006

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
July	2.95	194.97	197.92
August	5.17	138.04	143.21
September	7.44	131.10	138.54

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Kevin F. McGuire
Title/Position: Area Manager, Utilities
Phone: 219.888.2719

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary Indiana 46402
Mailing Address: One North Broadway, Gary Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Boilers No. 1 through No. 10 at the Coke Plant Boiler House
Parameter: Total NOx Emissions
Limit: Less than 64.6 tons per twelve (12) consecutive month period period with compliance determined at the end of each month

NOx Emissions (tons/month) = (280 X + 36 Y + 129 Z) / 2000
Where X=total monthly natural gas usage in Boilers Nos. 1 through 8 (MMcf/month)
Y=monthly natural gas usage rate in temporary rental bolier (MMcf/month)
Z=total monthly natural gas usage in Boilers Nos. 9 and 10 (MMcf/month)

Quarter: 3rd Year: 2006

Month	Boiler Nos. 1 through 8		Boiler Nos. 9 and 10		NOx Emissions (tons)	NOx Emissions Previous 11 Months	NOx Emissions 12-month Period
	Natural Gas Usage Rate (MMcf)	NOx Emissions (tons)	Natural Gas Usage Rate (MMcf)	NOx Emissions (tons)			
July	2.55	0.36	0.40	0.03	0.38	21.69	22.07
August	4.34	0.61	0.83	0.05	0.66	14.47	15.13
September	4.63	0.65	2.80	0.18	0.83	13.94	14.77

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Kevin F. McGuire
Title/Position: Area Manager, Utilities
Phone: 219.888.2719

Attach a signed certification to complete this report.

U.S. Steel Corporation – Gary Works
Coke Plant Boiler House No. 9 Boiler
Third (3rd) Quarter 2006 Excess Emissions Report
Part 70 Permit No. T089-7663-00121

Plant Operations Downtime Summary

Date of facility downtime:	Various times during the quarter, does not affect CEMS operation
Time of commencement and completion of downtime:	Various times during the quarter, does not affect CEMS operation
Reason(s) for the downtime:	Regularly scheduled outages and unscheduled boiler stoppages
Total facility downtime for this quarter:	Approximately 1 day

Excess Emissions Summary

Date of excess emissions:	No excess emissions this quarter
Time of commencement and completion:	
Magnitude:	
Reason(s) for excess emissions:	

CEMS Instrument Downtime Summary

Date of downtime:	No CEMS downtime during boiler operation
Time of commencement:	
Duration of downtime:	
Nature of system repairs and adjustments:	

U.S. Steel Corporation – Gary Works
Coke Plant Boiler House No. 10 Boiler
Third (3rd) Quarter 2006 Excess Emissions Report
Part 70 Permit No. T089-7663-00121

Plant Operations Downtime Summary

Date of facility downtime:	Various times during the quarter, does not affect CEMS operation
Time of commencement and completion of downtime:	Various times during the quarter, does not affect CEMS operation
Reason(s) for the downtime:	Regularly scheduled outages and unscheduled boiler stoppages
Total facility downtime for this quarter:	Approximately 11 days

Excess Emissions Summary

Date of excess emissions:	No excess emissions this quarter
Time of commencement and completion:	
Magnitude:	
Reason(s) for excess emissions:	

CEMS Instrument Downtime Summary

Date of downtime:	No CEMS downtime during boiler operation
Time of commencement:	
Duration of downtime:	
Nature of system repairs and adjustments:	

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

3rd 2006

Coke Plant Boiler House

Contents

CPBH – Lime Silo Baghouse Compliance Monitoring and Deviation Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Modification Quarterly Report

Source Name:	U.S. Steel - Gary Works
Source Address:	One North Broadway Ave., Gary, Indiana 46402
Mailing Address:	One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.:	089-14658-00121
Facility	Coke Plant Boiler House Lime Storage Silo Baghouse
Parameter:	Differential Pressure
Normal Range:	Less than 6 inches of water

Quarter: 3rd Year: 2006

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by:	Kevin McGuire
Title/Position:	Area Manager Utilities
Phone:	219.888.2719

Attach a signed certification to complete this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

3rd 2006

South Sheet Mill Hydrogen Annealing Furnaces

Contents

South Sheet Mill Hydrogen Annealing Furnaces - Natural Gas Usage Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: South Sheet Mill Hydrogen Atmosphere Batch Annealing Furnaces
Parameter: NOx
Limit: 37.2 million cubic feet of natural gas per 12 consecutive month period with compliance demonstrated at the end of each month

Year: 2006

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
July	1.04	7.03	8.07
August	0.91	7.94	8.85
September	0.71	8.42	9.14

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

3nd 2006

Turboblower Boiler House - No. 4a Boiler

Contents

Turboblower House - No. 4a Boiler NOx Emissions Report
Turboblower House - No. 4a Boiler PM_{10} and SO_2 Emissions Report

U.S. Gary Works
Turboblower Boiler House Boiler 4A
Permit No. 089-9568-00121
NOx Predictive Emissions Monitoring System (PEMS)
Quarterly Excess Emissions Report

2006 – 3rd Quarter

Turboblower Boiler House Boiler 4A did **NOT** operate during the 3rd Quarter 2006

DATE	NOx (#lbs/MMBtu)	% UPTIME	DOWN (MINS)	COG FLOW
July	0	N/A	N/A	N/A
August	0	N/A	N/A	N/A
September	0	N/A	N/A	N/A

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
AND
City of Gary Division of Air Pollution Control

Quarterly Report

>>>> Turboblower Boiler House (TBBH) Boiler No. 4a did NOT Operate during the 3rd Quarter 2006 <<<<

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Permit No.: CP-089-9568-00121
Facility: Turboblower Boiler House (TBBH) Boiler No. 4a
Parameter:
a) daily natural gas and coke oven gas usage
b) daily average heat content of natural gas and coke oven gas
c) daily PM-10 and SO2 emission rate per unit weight or volume for natural gas and coke oven gas
d) calculate PM-10 and SO2 emission rate in lbs/hr and lbs/MMBtu
Limit:
a) PM-10 Limit = 0.012 lbs/MMBtu (2.9 lbs/hr)
b) SO2 Limit = 1.02 lbs/MMBtu (248.9 lbs/hr) without COG desulfurization
c) SO2 Limit = 0.260 lbs/MMBtu (63.5 lbs/hr) with COG desulfurization

Quarter Period: 3rd Month: July Year: 2006

Date	Natural Gas				COG Desulfurization Facility Status	Coke Oven Gas				PM-10 Emissions		SO2 Emissions	
	Usage	Heat Cont	PM-10 Emission Factor	SO2 Emission Factor		Usage	Heat Cont	PM-10 Emission Factor	SO2 Emission Factor				
	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/MMcf)	(lb/hr)	(lb/MMBtu)	(lb/hr)	(lb/MMBtu)
1	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
2	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
3	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
4	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
5	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
6	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
7	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
8	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
9	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
10	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
11	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
12	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
13	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
14	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
15	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
16	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
17	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
18	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
19	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
20	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
21	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
22	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
23	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
24	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
25	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
26	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
27	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
28	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
29	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
30	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
31	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
AND
City of Gary Division of Air Pollution Control
Quarterly Report
>>>> Turboblower Boiler House (TBBH) Boiler No. 4a did NOT Operate during the 3rd Quarter 2006 <<<<

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Permit No.: CP-089-9568-00121
Facility: Turboblower Boiler House (TBBH) Boiler No. 4a
Parameter:
a) daily natural gas and coke oven gas usage
b) daily average heat content of natural gas and coke oven gas
c) daily PM-10 and SO2 emission rate per unit weight or volume for natural gas and coke oven gas
d) calculate PM-10 and SO2 emission rate in lbs/hr and lbs/MMBtu

Limit:
a) PM-10 Limit = 0.012 lbs/MMBtu (2.9 lbs/hr)
b) SO2 Limit = 1.02 lbs/MMBtu (248.9 lbs/hr) without COG desulfurization
c) SO2 Limit = 0.260 lbs/MMBtu (63.5 lbs/hr) with COG desulfurization

Quarter Period: 3rd Month: August Year: 2006

Date	Natural Gas				COG Desulfurization Facility Status	Coke Oven Gas				PM-10 Emissions		SO2 Emissions	
	Usage	Heat Cont	PM-10 Emission Factor	SO2 Emission Factor		Usage	Heat Cont	PM-10 Emission Factor	SO2 Emission Factor				
	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/MMcf)	(lb/hr)	(lb/MMBtu)	(lb/hr)	(lb/MMBtu)
1	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
2	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
3	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
4	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
5	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
6	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
7	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
8	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
9	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
10	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
11	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
12	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
13	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
14	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
15	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
16	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
17	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
18	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
19	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
20	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
21	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
22	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
23	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
24	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
25	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
26	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
27	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
28	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
29	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
30	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
31	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
AND
City of Gary Division of Air Pollution Control

Quarterly Report

>>>> Turboblower Boiler House (TBBH) Boiler No. 4a did NOT Operate during the 3rd Quarter 2006 <<<<

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Permit No.: CP-089-9568-00121
Facility: Turboblower Boiler House (TBBH) Boiler No. 4a
Parameter:
a) daily natural gas and coke oven gas usage
b) daily average heat content of natural gas and coke oven gas
c) daily PM-10 and SO2 emission rate per unit weight or volume for natural gas and coke oven gas
d) calculate PM-10 and SO2 emission rate in lbs/hr and lbs/MMBtu
Limit:
a) PM-10 Limit = 0.012 lbs/MMBtu (2.9 lbs/hr)
b) SO2 Limit = 1.02 lbs/MMBtu (248.9 lbs/hr) without COG desulfurization
c) SO2 Limit = 0.260 lbs/MMBtu (63.5 lbs/hr) with COG desulfurization

Quarter Period: 3rd Month: September Year: 2006

Date	Natural Gas				COG Desulfurization Facility Status	Coke Oven Gas				PM-10 Emissions		SO2 Emissions	
	Usage	Heat Cont	PM-10 Emission Factor	SO2 Emission Factor		Usage	Heat Cont	PM-10 Emission Factor	SO2 Emission Factor				
	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/MMcf)	(up or down)	(MMcf)	(Btu/cf)	(lb/MMcf)	(lb/MMcf)	(lb/hr)	(lb/MMBtu)	(lb/hr)	(lb/MMBtu)
1	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
2	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
3	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
4	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
5	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
6	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
7	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
8	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
9	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
10	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
11	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
12	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
13	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
14	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
15	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
16	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
17	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
18	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
19	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
20	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
21	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
22	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
23	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
24	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
25	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
26	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
27	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
28	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
29	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0
30	0.0	N/A	N/A	N/A	N/A	0.0	N/A	N/A	N/A	0.0	0.0	0.0	0.0

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

3rd 2006

No. 3 Sinter Plant

Per 326 IAC 8-13-8 and 326 IAC 3-5

Contents

No. 3 Sinter Plant – VOC Emissions Report
No. 3 Sinter Plant – VOC CEM Cylinder Gas Audit

U. S. Steel Sinter Plant CEMS - Monthly Summary

July 2006

Date	Total VOC Emissions (pounds)	Total Sinter Production (tons)	Total VOC Emissions (lb/tn)	System Uptime (percent)	Ozone Status
1	856.8	6049	0.14	100%	Normal
2	845.5	6110	0.14	100%	Normal
3	802.6	5480	0.15	100%	Normal
4	864.0	5928	0.15	100%	Normal
5	331.6	4489	0.07	83%	Normal
6	612.8	4135	0.15	100%	Normal
7	833.6	5429	0.15	100%	Normal
8	870.2	6042	0.14	100%	Normal
9	784.2	6075	0.13	100%	Normal
10	676.9	4855	0.14	100%	Normal
11	827.7	5608	0.15	100%	Normal
12	263.2	2044	0.13	100%	Normal
13	549.4	2784	0.20	100%	Normal
14	973.1	5746	0.17	100%	Normal
15	815.6	5895	0.14	100%	Normal
16	782.5	5053	0.15	100%	Action
17	897.4	6006	0.15	100%	Action
18	842.1	5798	0.15	100%	Normal
19	741.8	4675	0.16	100%	Normal
20	668.1	4580	0.15	100%	Normal
21	754.7	5542	0.14	100%	Normal
22	913.4	6197	0.15	100%	Normal
23	897.4	5755	0.16	100%	Normal
24	845.3	5383	0.16	100%	Normal
25	955.5	6035	0.16	100%	Normal
26	302.2	4326	0.07	29%	Normal
27	744.5	4476	0.17	63%	Normal
28	594.3	6013	0.10	67%	Normal
29	674.7	6277	0.11	100%	Normal
30	765.1	5472	0.14	100%	Action
31	793.0	5785	0.14	100%	Action

Hours of Sinter Plant Operations: 739

Hours of CEMS Downtime: 38

Monthly System Uptime Percent: 95%

Exceedances: 0

Monthly Total VOC Emissions: 11.54 tons

Notes:

U. S. Steel Sinter Plant CEMS - Monthly Summary

August 2006

Date	Total VOC Emissions (pounds)	Total Sinter Production (tons)	Total VOC Emissions (lb/tn)	System Uptime (percent)	Ozone Status
1	794.4	5509	0.14	100%	Action
2	597.3	4126	0.14	100%	Normal
3	822.5	4308	0.19	100%	Normal
4	1173.1	5565	0.21	100%	Normal
5	1200.1	5869	0.20	100%	Normal
6	953.8	4689	0.20	100%	Normal
7	1157.2	5868	0.20	100%	Normal
8	1258.6	5901	0.21	100%	Normal
9	989.7	4652	0.21	100%	Normal
10	549.5	3654	0.15	100%	Normal
11	1201.7	6131	0.20	100%	Normal
12	1133.4	5051	0.22	100%	Normal
13	1324.6	5876	0.23	100%	Normal
14	1327.2	6068	0.22	100%	Normal
15	1223.4	6171	0.20	100%	Normal
16	798.6	4423	0.18	100%	Normal
17	380.1	1709	0.22	100%	Normal
18	1344.7	5686	0.24	100%	Normal
19	1265.1	5845	0.22	100%	Normal
20	1367.6	6332	0.22	100%	Normal
21	1406.8	6198	0.23	100%	Normal
22	1350.4	6426	0.21	100%	Normal
23	971.1	4308	0.23	100%	Normal
24	803.1	4074	0.20	79%	Normal
25	1342.7	6089	0.22	100%	Normal
26	1337.7	5604	0.24	100%	Normal
27	1473.2	6288	0.23	100%	Normal
28	1350.6	5733	0.24	100%	Normal
29	1310.8	6055	0.22	100%	Normal
30	765.8	3725	0.21	100%	Normal
31	265.2	873	0.30	100%	Normal

Hours of Sinter Plant Operations: 721

Hours of CEMS Downtime: 5

Monthly System Uptime Percent: 99%

Exceedances: 0

Monthly Total VOC Emissions: 16.62 tons

Notes:

U. S. Steel Sinter Plant CEMS - Monthly Summary

September 2006

Date	Total VOC Emissions (pounds)	Total Sinter Production (tons)	Total VOC Emissions (lb/tn)	System Uptime (percent)	Ozone Status
1	1380.3	5935	0.23	100%	Normal
2	1457.9	6269	0.23	100%	Normal
3	1335.7	5815	0.23	100%	Normal
4	1465.8	6300	0.23	100%	Normal
5	1551.1	6414	0.24	100%	Normal
6	1170.1	4742	0.25	100%	Normal
7	965.8	4080	0.24	100%	Normal
8	1492.4	5833	0.26	100%	Normal
9	1377.0	5652	0.24	100%	Normal
10	1535.9	6410	0.24	100%	Normal
11	1524.9	6473	0.24	100%	Normal
12	1475.4	5959	0.25	100%	Normal
13	1207.6	4264	0.28	100%	Normal
14	958.5	4314	0.22	100%	Normal
15	1342.2	5895	0.23	100%	Normal
16	1448.5	6193	0.23	100%	Normal
17	1474.4	6491	0.23	100%	Normal
18	1473.5	6380	0.23	100%	Normal
19	1231.5	4681	0.26	100%	Normal
20	920.3	4278	0.22	100%	Normal
21	1045.1	4210	0.25	100%	Normal
22	1572.1	5942	0.26	100%	Normal
23	1572.3	5792	0.27	100%	Normal
24	1527.0	5517	0.28	100%	Normal
25	1539.2	5680	0.27	100%	Normal
26	1120.3	4431	0.25	100%	Normal
27	837.1	3731	0.22	100%	Normal
28	111.8	1034	0.11	100%	Normal
29	1124.4	3845	0.29	100%	Normal
30	1513.3	5901	0.26	100%	Normal

Hours of Sinter Plant Operations: 709

Hours of CEMS Downtime: 0

Monthly System Uptime Percent: 100%

Exceedances: 0

Monthly Total VOC Emissions: 19.38 tons

Notes:

EPA-R5-2012-0005960000321

U. S. Steel Sinter Plant CEMS - Quarterly Excess Emissions Summary

Third Quarter 2006

Date	Limit Exceeded	Emission Rate	Cause/Reason	Corrective Action

No Excess Emissions This Quarter

47.54 tons	Quarterly VOC Emissions
0	Quarterly VOC Exceedances

EPA-USS-0325688

EPA-R5-2012-0005960000321

U. S. Steel Sinter Plant CEMS - Quarterly System Downtime Summary

Third Quarter 2006

	Date	Time	Hours Lost	System Component	Cause/Reason	Corrective Action
Start	5-Jul-06	9:00	4	Stack 1 VOC Stack 2 VOC	Time file error in DAHS	Download program into ICIS
Stop	5-Jul-06	14:00				
Start	26-Jul-06	7:00	26	Stack 1 NMHC Stack 2 CH4	Broken Air conditioner caused instrument drift	USS fixed airconditoner. Recalibrated analyzers
Stop	27-Jul-06	9:00				
Start	28-Jul-06	7:00	8	Stack 1 NMHC Satck 2 CH4	Broken Air conditioner caused instrument drift	USS fixed airconditoner. Recalibrated analyzers
Stop	28-Jul-06	15:00				
Start	24-Aug-06	7:00	5	Stack 1 Temperature	Failed Calibration	Recalibrated input to ICIS Recalibrated system
Stop	24-Aug-06	12:00				

43.0 Total Hours Invalid

2169.0 Total Hours of Operation

98% Total System Availability

EPA-USS-0325689

U.S. STEEL SINTER STACK 1 CGA

CYLINDER GAS AUDIT FORM

U. S. STEEL GROUP

PLANT: Gary Works
LOCATION: Gary Indiana

PROJECT NUMBER:
DATE: 9/28/2006

PERIOD ENDING: THIRD QUARTER 2006

GAS TYPE: Methane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111004-109
Response Factor: 1.2670

UNIT: #3 Sinter Plant Stack #1
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

	LOW	HIGH
CYLINDER NUMBER	CC68108	XC031801B
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	2/15/2009
CERTIFIED VALUE	22.95	58.82
RUN 1	22.49	55.88
RUN 2	22.26	55.88
RUN 3	22.26	56.12
MEAN	22.34	55.96
ERROR RATE	-2.67%	-4.86%

Methane Raw Data

Low	High
9.5	23.6
9.4	23.6
9.4	23.7

GAS TYPE: Propane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111004-109

UNIT: #3 Sinter Plant Stack #1
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

	LOW	HIGH
CYLINDER NUMBER	CC68108	XC031801B
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	2/15/2009
CERTIFIED VALUE	24.52	59.01
RUN 1	23.60	60.20
RUN 2	23.40	60.60
RUN 3	23.40	60.90
MEAN	23.47	60.57
ERROR RATE	-4.30%	2.64%

U.S. STEEL SINTER STACK 2 CGA

CYLINDER GAS AUDIT FORM

U. S. STEEL GROUP

PLANT: Gary Works
LOCATION: Gary Indiana

PROJECT NUMBER:
DATE: 9/28/2006

PERIOD ENDING: THIRD QUARTER 2006

GAS TYPE: Methane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111005-109
Response Factor: 1.2750

UNIT: #3 Sinter Plant Stack #2
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

	LOW	HIGH
CYLINDER NUMBER	CC68108	XC031801B
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	2/15/2009
CERTIFIED VALUE	22.95	58.82
RUN 1	23.06	57.18
RUN 2	23.06	56.94
RUN 3	23.06	57.18
MEAN	23.06	57.10
ERROR RATE	0.47%	-2.93%

Methane Raw Data

Low	High
9.8	24.3
9.8	24.2
9.8	24.3

GAS TYPE: Propane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111005-109

UNIT: #3 Sinter Plant Stack #2
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

	LOW	HIGH
CYLINDER NUMBER	CC68108	XC031801B
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	2/15/2009
CERTIFIED VALUE	24.52	59.01
RUN 1	23.40	60.30
RUN 2	23.40	60.50
RUN 3	23.30	60.70
MEAN	23.37	60.50
ERROR RATE	-4.70%	2.52%

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG	
9/28/2006 15:12:00	0.8	0.1	0.9	0.0	
9/28/2006 15:13:00	0.8	0.1	0.9	0.0	
9/28/2006 15:14:00	0.8	13.7	1.5	10.2	
9/28/2006 15:15:00	9.5	23.5	9.6	23.5	
9/28/2006 15:16:00	9.5	23.5	9.8	23.3	
9/28/2006 15:17:00	9.5	23.6	9.8	23.4	1 low
9/28/2006 15:18:00	9.6	23.6	10.0	40.2	
9/28/2006 15:19:00	16.9	66.7	22.5	62.1	
9/28/2006 15:20:00	23.7	60.5	24.1	60.4	
9/28/2006 15:21:00	23.7	60.3	24.2	60.3	
9/28/2006 15:22:00	23.6	60.2	24.3	60.3	1 high
9/28/2006 15:23:00	23.5	59.9	24.3	60.3	
9/28/2006 15:24:00	20.5	29.6	16.4	17.1	
9/28/2006 15:25:00	9.7	23.2	9.8	23.3	
9/28/2006 15:26:00	9.4	23.3	9.8	23.3	
9/28/2006 15:27:00	9.4	23.4	9.8	23.4	2 low
9/28/2006 15:28:00	9.5	23.5	10.0	40.2	
9/28/2006 15:29:00	16.9	66.4	22.7	62.1	
9/28/2006 15:30:00	23.7	60.7	24.3	60.7	
9/28/2006 15:31:00	23.8	60.9	24.2	60.8	
9/28/2006 15:32:00	23.8	60.8	24.1	60.7	
9/28/2006 15:33:00	23.7	60.8	24.1	60.6	
9/28/2006 15:34:00	23.6	60.6	24.2	60.5	2 high
9/28/2006 15:35:00	23.0	38.9	19.3	23.0	
9/28/2006 15:36:00	10.6	22.5	9.8	23.4	
9/28/2006 15:37:00	9.4	23.4	9.7	23.4	
9/28/2006 15:38:00	9.4	23.4	9.8	23.3	3 low
9/28/2006 15:39:00	9.4	23.4	9.8	31.5	
9/28/2006 15:40:00	13.4	59.9	19.3	65.2	
9/28/2006 15:41:00	23.3	60.4	24.4	60.5	
9/28/2006 15:42:00	23.5	60.7	24.4	60.6	
9/28/2006 15:43:00	23.7	60.9	24.3	60.7	3 high
9/28/2006 15:44:00	19.2	16.5	15.9	6.2	
9/28/2006 15:45:00	1.3	0.4	1.2	0.7	
9/28/2006 15:46:00	1.0	0.7	1.2	0.7	

Airgas

Certificate of Analysis: EPA Protocol Gas Mixture

Cylinder Number:	XC031801B	Reference Number:	54-124057812-6
Cylinder Pressure:	2000.6 PSIG	Expiration Date:	2/15/2009
Certification Date:	2/15/2006	Laboratory:	ASG - Chicago - IL

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
METHANE	58.82 PPM	+/- 1%	FID	G1
PROPANE	59.01 PPM	+/- 1%	FID	G1
Air	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig.

Signature on file

Approval Signature

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
NTRM 51715		PROPANE	SG9101987ALB	103.6 PPM
GMIS 60104		METHANE	CC146254	249.6 PPM

Analytical Results

1st Component — METHANE

1st Analysis Date: 02/15/2006

R 249.1	S 59.23	Z 0	Conc 59.34 PPM
S 58.64	Z 0	R 249.3	Conc 58.71 PPM
Z 0	R 249.3	S 58.36	Conc 58.43 PPM
			AVG: 58.827 PPM

2nd Component — PROPANE

1st Analysis Date: 02/15/2006

R 103.7	S 58.76	Z 0	Conc 58.7 PPM
S 59.15	Z 0	R 104	Conc 58.92 PPM
Z 0	R 103.9	S 59.59	Conc 59.42 PPM
			AVG: 59.013 PPM

Airgas

Certificate of Analysis: EPA Protocol Gas Mixture

Cylinder Number:	CC68108	Reference Number:	46-124075723-1
Cylinder Pressure:	2000.6 PSIG	Expiration Date:	9/21/2009
Certification Date:	9/21/2006	Laboratory:	ASG - Cheshire - CT

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
METHANE	22.95 PPM	+/- 1%	FTIR	G1
PROPANE	24.52 PPM	+/- 1%	FTIR	G1
Air	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig.

Signature on file

Approval Signature

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
GMIS 11220	AIR	METHANE	SG9154509	24.54 PPM
NTRM 52007	NITROGEN	PROPANE	SG902367ALB	50.5 PPM

Analytical Results

1st Component — METHANE

1st Analysis Date: 09/21/2006

R 24.21	S 22.65	Z 0.016	Conc 22.95 PPM
S 22.66	Z -0.013	R 24.22	Conc 22.97 PPM
Z 0.008	R 24.21	S 22.64	Conc 22.95 PPM
			AVG: 22.957 PPM

2nd Component — PROPANE

1st Analysis Date: 09/21/2006

R 49.85	S 24.28	Z 0.111	Conc 24.54 PPM
S 24.27	Z -0.011	R 50.02	Conc 24.51 PPM
Z 0.052	R 49.87	S 24.24	Conc 24.52 PPM
			AVG: 24.523 PPM

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

3rd 2006

Coke Plant

Contents

No. 2 Precarbon Facility Compliance Monitoring and Deviation Report
Nos. 2, 5 and 7 Underfiring Stacks COMS Excess Emissions Report (on Disk)
Nos. 2, 5 and 7 Underfiring Stacks Opacity Monitor Performance Audit

U. S. Steel - Gary Works
Coke and Chemicals Division
Precarbon COMS Waiver
Compliance Monitoring and Deviation Report

Reporting Period: 3rd Quarter 2006

#2 Precarbon

Parameter	Deviations Occurred This Reporting Period	No Deviations Occurred This Reporting Period
%CO		X
PVolts		X
PAmps		X
SVolts		X
SAmps		X
ESPress		X
VEs		X

Key	Limit	Description
%CO	<6%	Percent of CO at discharge of combustion chamber
PVolts	>300	Primary Field Voltage
Pamps	>30	Primary Field Amperage
SVolts	>300	Secondary Field Voltage
Samps	>30	Secondary Field Amperage
ESPress	≥0	ESP Static Pressure
VEs	<13%	Visible Emissions

Explanation and Corrective Actions

NA

INQUEST
ENVIRONMENTAL INC.

3609 Mojave Ct., Ste E ◆ COLUMBIA, MO 65202
(573) 474-8110 ◆ FAX: (573) 474-8371

September 15, 2006

Mr. Joe Abbott
USS - Gary Works
MS-11-6
1 N. Broadway
Gary, Indiana 46402

RE: US Steel Coke Plant, Gary, Indiana, 3rd Quarter, 2006, Opacity Monitor Performance Audits.

Dear Mr. Abbott,

Please find enclosed the results of the performance audits that were recently conducted on the three, Teledyne Monitor Labs, Model 560, opacity monitors that are located on #'s 2, 5, & 7 battery stacks in the Gary Coke Plant.

The audits were performed on September 6th, 2006. The start time and date for each audit were as follows:

Battery Stack #2	07:44 a.m.	09/06/06
Battery Stack #5	01:00 p.m.	09/06/06
Battery Stack #7	09:40 a.m.	09/06/06

All audits were conducted in accordance with 326 IAC 3-5-5 (c)(3). Currently certified neutral density filters were used during each audit. A copy of the certification of the filters used has been enclosed.

Each audit began with the recording of the most recent, daily, automatic, zero and upscale calibration readings. Real-time opacity readings were then recorded, the optics were cleaned, and the real-time readings were taken again.

The calibration device was then attached to the transmissometer in order to simulate a clear stack zero reading. The zero reading of the instrument was then recorded.

Three NIST certified neutral density filters were then individually inserted in the calibration device. The known value of each filter and the instrument's response was recorded. The known value of each filter was adjusted according to each stack's exit correlation ratio. Each filter was inserted five times with the zero reading being recorded after each pass of the filters. The sixth and final pass allowed for the PI system's (data acquisition system) six-minute averages to update with each filter before the reading was recorded.

After the filter challenges were complete, all purge air intake dust filters were cleaned. All lenses and windows in each instrument were also cleaned. The final steps taken at the stack location's consisted of recording the accumulator voltage levels of each instrument. The accumulator voltages have been recorded in my files and will be used for future maintenance and for comparison to the readings taken during the next round of audits. The primary goal of the cleaning was to ensure that all seals are cleaned so as to protect the instrument's optics and electronics.

Following each audit, the control panels mounted in the meter rooms were checked, and were verified to be working properly. Parameters that were checked and found to be acceptable included the most recent automatic

upscale calibration values, the most recent automatic zero readings, and the window dirt percentage levels.

A table has been included below to summarize the results of the performance audits.

Parameter	Limit	Result	Pass/Fail
Stack Exit Correlation Error	≤ 2%	#2 0.0% #5 0.0% #7 0.0%	Pass Pass Pass
Zero & Upscale Response	≤ ±2%	#2 0.0% & -0.1% #5 0.0% & -1.2% #7 0.0% & -0.9%	Pass Pass Pass Pass
Zero Compensation	≤ 4%	#2 0.0% #5 0.0% #7 0.0%	Pass Pass Pass
Optical Alignment	Manufacturer's Recommendation	Verified correct, all instruments	Pass
Optical Surface Dust	≤ 4%	#2 -0.13% #5 2.65 #7 0.70%	Pass Pass Pass
Calibration Error	≤ 3%	#2 Low 0.4 %, Mid 0.3%, High 0.3% #5 Low 0.2%, Mid 0.5%, High 0.9% #7 Low 0.2%, Mid 0.3%, High 1.1%	Pass Pass Pass

Following the audits, Unit #5 was taken off of the stack and a clear stack, bench top calibration was conducted. The unit was found to be operating normally at which time it was placed back on the stack and back into service.

Included in this report are the worksheets and calculations for each of your opacity monitor audits, the current certification for the neutral density filters used, and copies of the database trends produced during each audit.

Thank you very much for choosing Inquest Environmental to participate in this project. We are very pleased to have your organization as a client. Please feel free to call with any comments or questions.

Sincerely,

John A. Kunkel
Inquest Environmental, Inc.

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation:	US Steel	Monitor ID:	#2 Battery Stack
Facility:	Gary, Indiana	Make/Model:	USI 560
Date:	9/6/2006	Serial No.	5601014
Start Time:	7:44am Stop:9:30am		
Auditor:	John Kunkel	Representing:	Inquest Environmental, Inc.
Attendees:	Chris Perkins	Representing:	Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	16.75	Calculated stack exit correlation ratio (Lx / Lt)	0.846
Transmissometer single path length (ft) = Lt	19.79	Source-cited stack exit correlation ratio	0.846
		Stack exit correlation error (Limit ±2%)	0.0

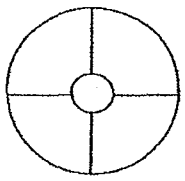
Warning Lamps	OPACITY ALARM	Off	CAL FAIL	Off	POWER FAIL	Off
	DIRTY WINDOW	On	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal. value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal. value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto. cal. value (%Op)	37.3			
Panel meter upscale calibration value (%Op)	37.2	Error (%Op)	-0.1	(Limit ±2%)
Data recorder upscale cal. value (%Op)	37.2	Error (%Op)	-0.1	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	2.5	Transceiver pre-cleaning effluent Opacity (%)	2.0
Retroflector post-clean effluent Opacity (%)	1.3	Transceiver post-clean effluent Opacity (%)	1.5
Retro. optics dust accumulation (Limit 2% Op)	1.2	Trans. Optics dust accumulation (Limit 2% Op)	0.5
Total optical dust accumulation (Limit 4% Op)	1.7		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation.

Calibration Error Check

Range	Low	Mid	High
Filter Serial No.	TT43	VB55	TT44
Certified % Op	18.9	25.4	38.6
Corrected % Op	16.6	22.3	34.1

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0.5	17.0	22.2	34.2	
	0.4	17.0	22.1	34.4	
	0.4	16.9	22.2	34.3	
	0.4	17.0	22.2	34.4	Final Zero
	0.5	16.9	22.0	34.4	0.5
DAS six-minute average	0.5	17.1	22.2	34.5	0.6

Results	Low	Mid	High	
Mean error	0.3	-0.2	0.2	
Confidence interval	0.1	0.1	0.1	
Calibration error	0.4	0.3	0.3	(Limit 3%)
Six-minute averaged error	0.5	-0.1	0.4	(Limit ±2%)

Inquest Environmental, Inc.
Opacity Monitor Audit

Calculations

Stack Exit Correlation Error (%) = (Cited ratio - Calculated ratio) / Calculated ratio x 100

Zero Error (% Opacity) = Measured zero value - Cited zero value

Span Error (% Opacity) = Measured span value - Cited span value

Retroflector Dust Accumulation (% Opacity) = Pre-cleaning Opacity - Post-cleaning Opacity

Transceiver Dust Accumulation (% Opacity) = Pre-cleaning Opacity - Post-cleaning Opacity

Total Dust Accumulation (% Opacity) = Retroflector accumulation + Transceiver accumulation

Corrected Filter Opacity =
[1 - (((1 - Filter value/100)^(Stack exit correlation ratio)) x (1 - Final jig zero/100))] x 100

Difference = Measured Opacity - Corrected filter Opacity

Difference^2 = (Measured Opacity - Corrected filter Opacity)^2

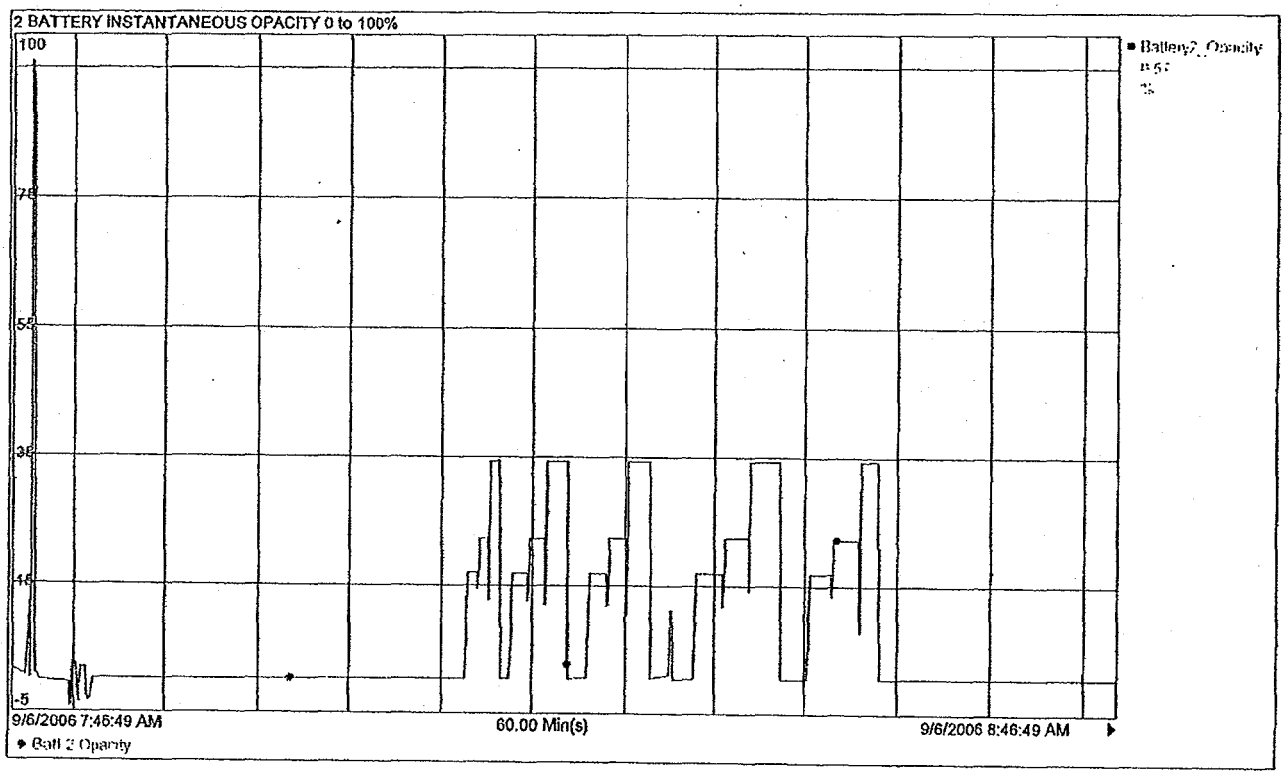
n = Number of readings

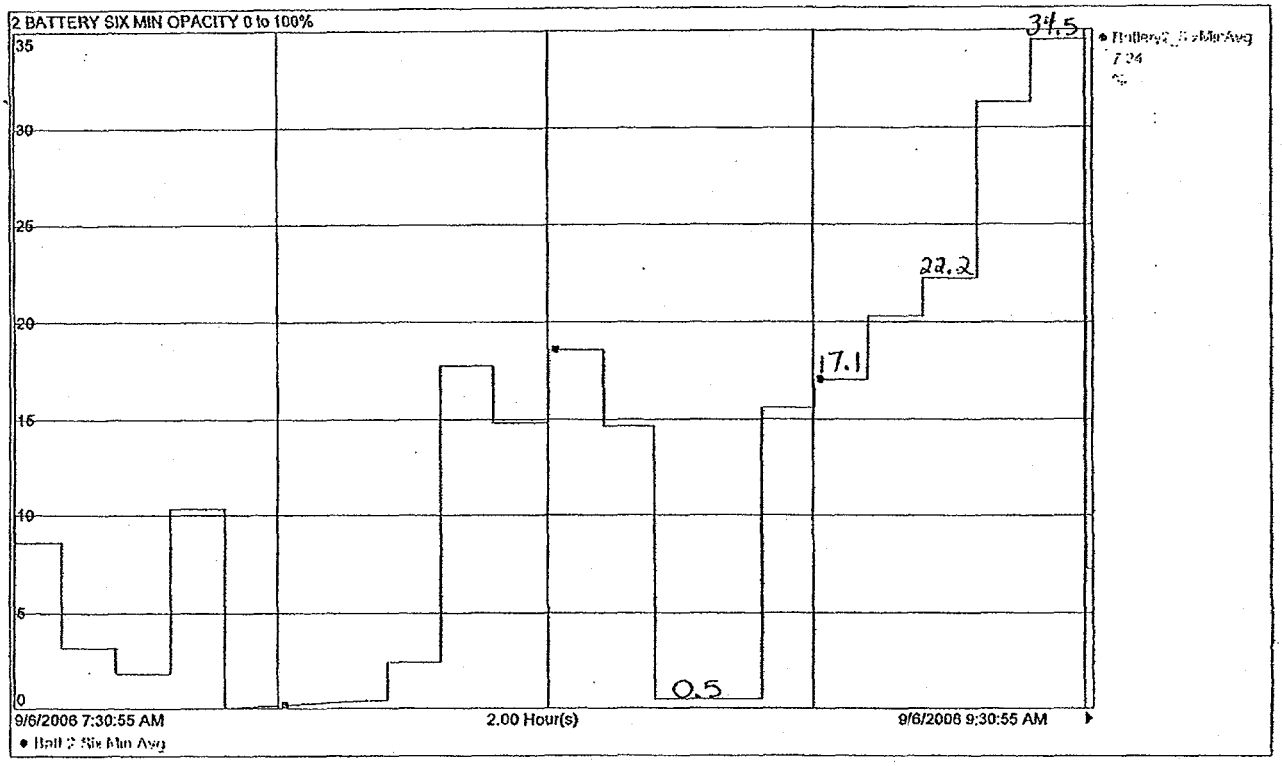
Mean Error (ME) = SUM(Difference) / n

Confidence Interval (CI)= SQRT[(n x SUM(Difference^2)) - SUM(Difference)^2] x 0.2776

Calibration Error (CE)= ABS(ME) + CI

Six-Minute Averaged Error = Six-minute averaged Opacity - Corrected filter Opacity


2 BATTERY INSTANTANEOUS OPACITY 0 to 100%
100
75
50
25
0
-5
9/6/2006 7:46:49 AM
60.00 Min(s)
9/6/2006 8:46:49 AM
Batt 2 Opacity


2 BATTERY SIX MIN OPACITY 0 to 100%
35
30
25
20
15
10
5
0
34.5
22.2
17.1
0.5
9/6/2006 7:30:55 AM
2.00 Hour(s)
9/6/2006 9:30:55 AM

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation:	US Steel	Monitor ID:	#5 Battery Stack
Facility:	Gary, Indiana	Make/Model:	USI 560
Date:	9/6/2006	Serial No.	5601011
Start Time:	1:00pm Stop:2:50pm		
Auditor:	John Kunkel	Representing:	Inquest Environmental, Inc.
Attendees:	Chris Perkins	Representing:	Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	6.00	Calculated stack exit correlation ratio (Lx / Lt)	0.484
Transmissometer single path length (ft) = Lt	12.40	Source-cited stack exit correlation ratio	0.484
		Stack exit correlation error (Limit ±2%)	0.0

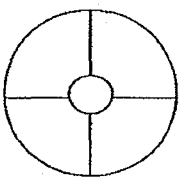
Warning Lamps						
	OPACITY ALARM	Off	CAL FAIL	Off	POWER FAIL	Off
	DIRTY WINDOW	Off	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal. value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal. value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto. cal. value (%Op)	35.3			
Panel meter upscale calibration value (%Op)	34.1	Error (%Op)	-1.2	(Limit ±2%)
Data recorder upscale cal. value (%Op)	34.1	Error (%Op)	-1.2	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	13.2	Transceiver pre-cleaning effluent Opacity (%)	13.4
Retroflector post-clean effluent Opacity (%)	12.5	Transceiver post-clean effluent Opacity (%)	13.4
Retro. optics dust accumulation (Limit 2% Op)	0.7	Trans. Optics dust accumulation (Limit 2% Op)	0.0
Total optical dust accumulation (Limit 4% Op)	0.7		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

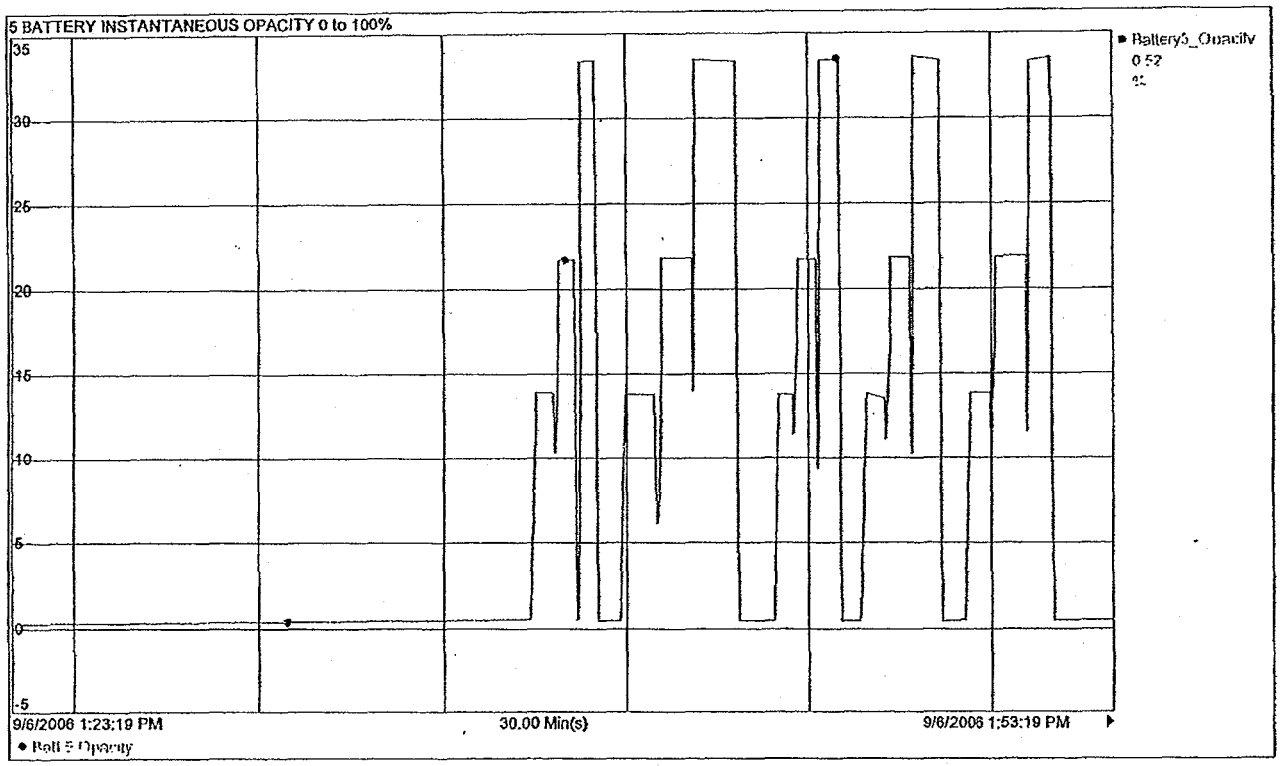
Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation.

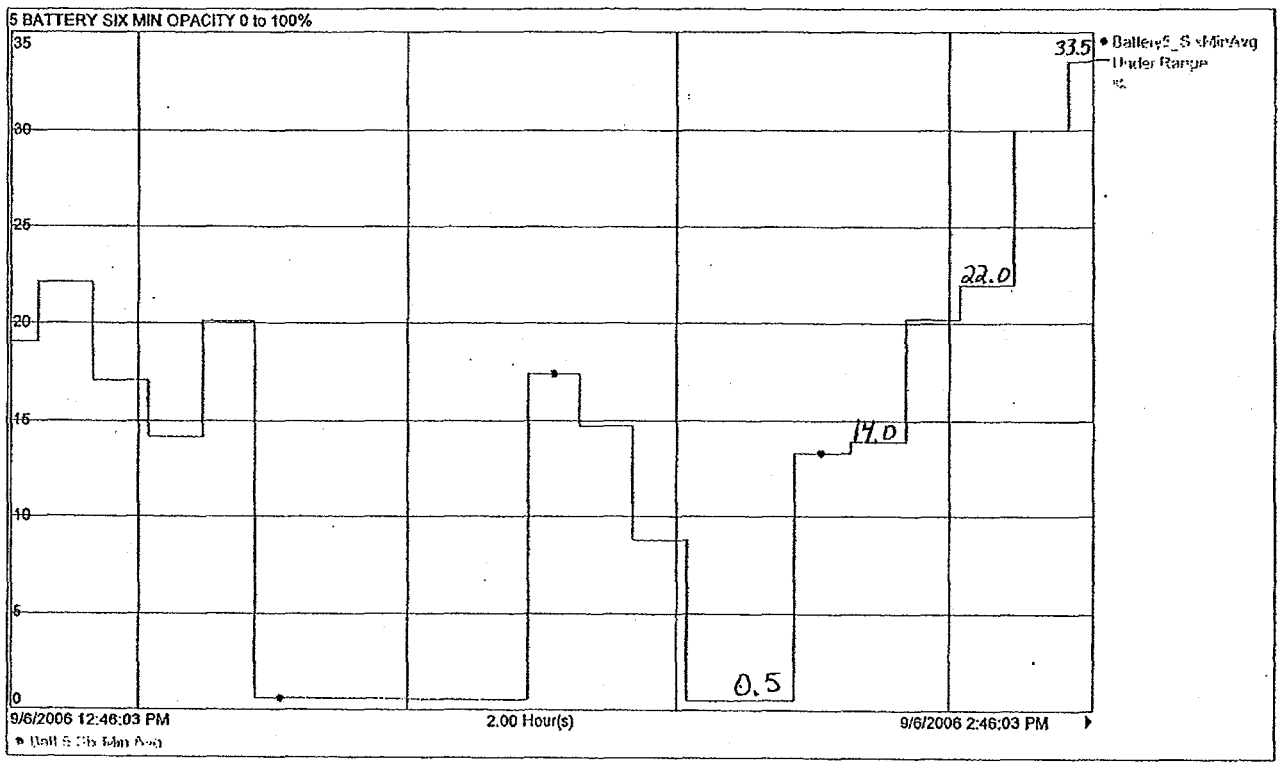
Calibration Error Check

Range	Low	Mid	High
Filter Serial No.	VB55	TT44	TW24
Certified % Op	25.4	38.6	55.4
Corrected % Op	13.7	21.4	32.7

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0.5	13.9	21.7	33.4	
	0.5	13.8	21.9	33.5	
	0.5	13.8	21.8	33.4	
	0.5	13.9	21.9	33.6	Final Zero
	0.4	13.9	21.9	33.3	0.5
DAS six-minute average	0.5	14.0	22.0	33.5	0.5

Results	Low	Mid	High	
Mean error	0.2	0.4	0.7	
Confidence interval	0.1	0.1	0.1	
Calibration error	0.2	0.5	0.9	(Limit 3%)
Six-minute averaged error	0.3	0.5	0.8	(Limit ±2%)


5 BATTERY INSTANTANEOUS OPACITY 0 to 100%
35
30
25
20
15
10
5
0
-5
9/6/2006 1:23:19 PM
30.00 Min(s)
9/6/2006 1:53:19 PM
Battery5_Opacity
0.52


5 BATTERY SIX MIN OPACITY 0 to 100%
35
30
25
20
15
10
5
0
33.5
22.0
14.0
0.5
Battery5_S SMinAvg
Under Range
%
9/6/2006 12:46:03 PM
2.00 Hour(s)
9/6/2006 2:46:03 PM

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation:	US Steel	Monitor ID:	#7 Battery Stack
Facility:	Gary, Indiana	Make/Model:	USI 560
Date:	9/6/2006	Serial No.	5601012
Start Time:	9:40am Stop:11:45am		
Auditor:	John Kunkel	Representing:	Inquest Environmental, Inc.
Attendees:	Chris Perkins	Representing:	Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	6.00	Calculated stack exit correlation ratio (Lx / Lt)	0.503
Transmissometer single path length (ft) = Lt	11.94	Source-cited stack exit correlation ratio	0.503
		Stack exit correlation error (Limit ±2%)	0.0

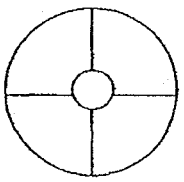
Warning Lamps	OPACITY ALARM	Off	CAL FAIL	Off	POWER FAIL	Off
	DIRTY WINDOW	Off	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal. value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal. value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto. cal. value (%Op)	35.6			
Panel meter upscale calibration value (%Op)	34.7	Error (%Op)	-0.9	(Limit ±2%)
Data recorder upscale cal. value (%Op)	34.7	Error (%Op)	-0.9	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	5.8	Transceiver pre-cleaning effluent Opacity (%)	8.5
Retroflector post-clean effluent Opacity (%)	5.6	Transceiver post-clean effluent Opacity (%)	7.9
Retro. optics dust accumulation (Limit 2% Op)	0.2	Trans. Optics dust accumulation (Limit 2% Op)	0.6
Total optical dust accumulation (Limit 4% Op)	0.8		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

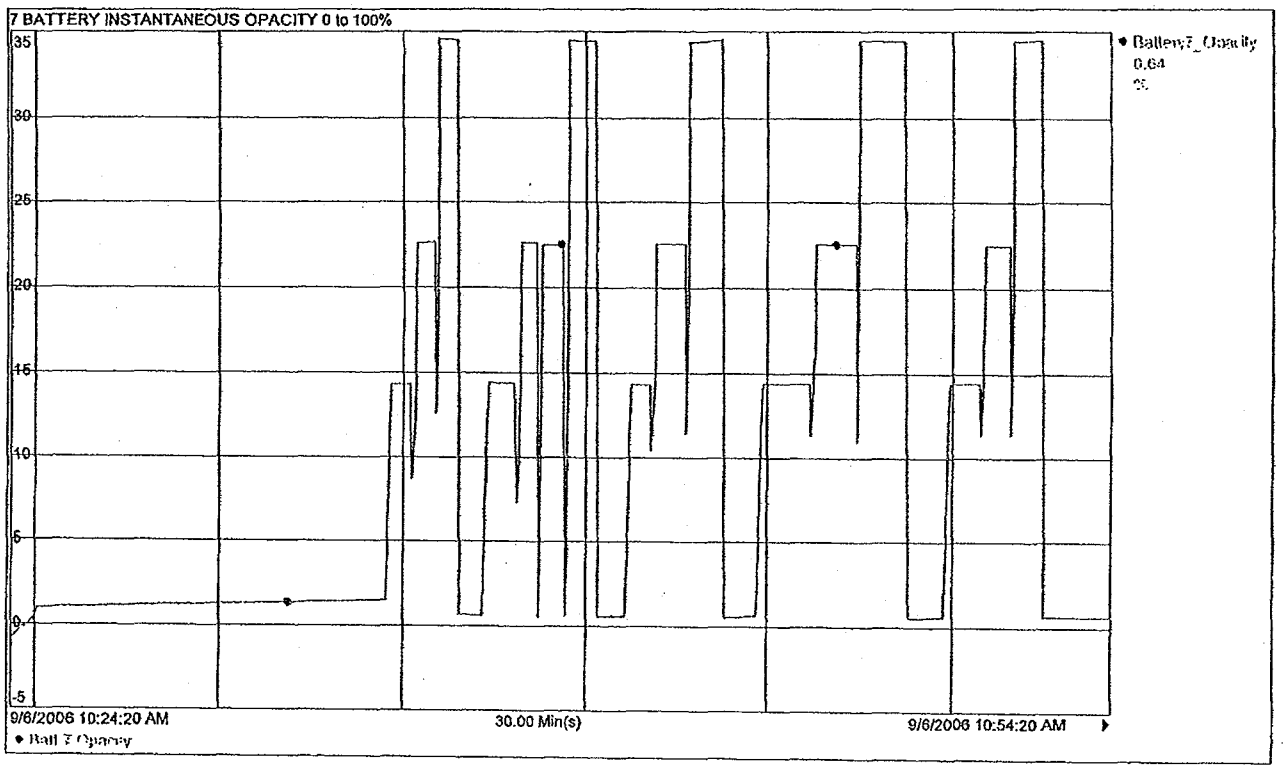
Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation.

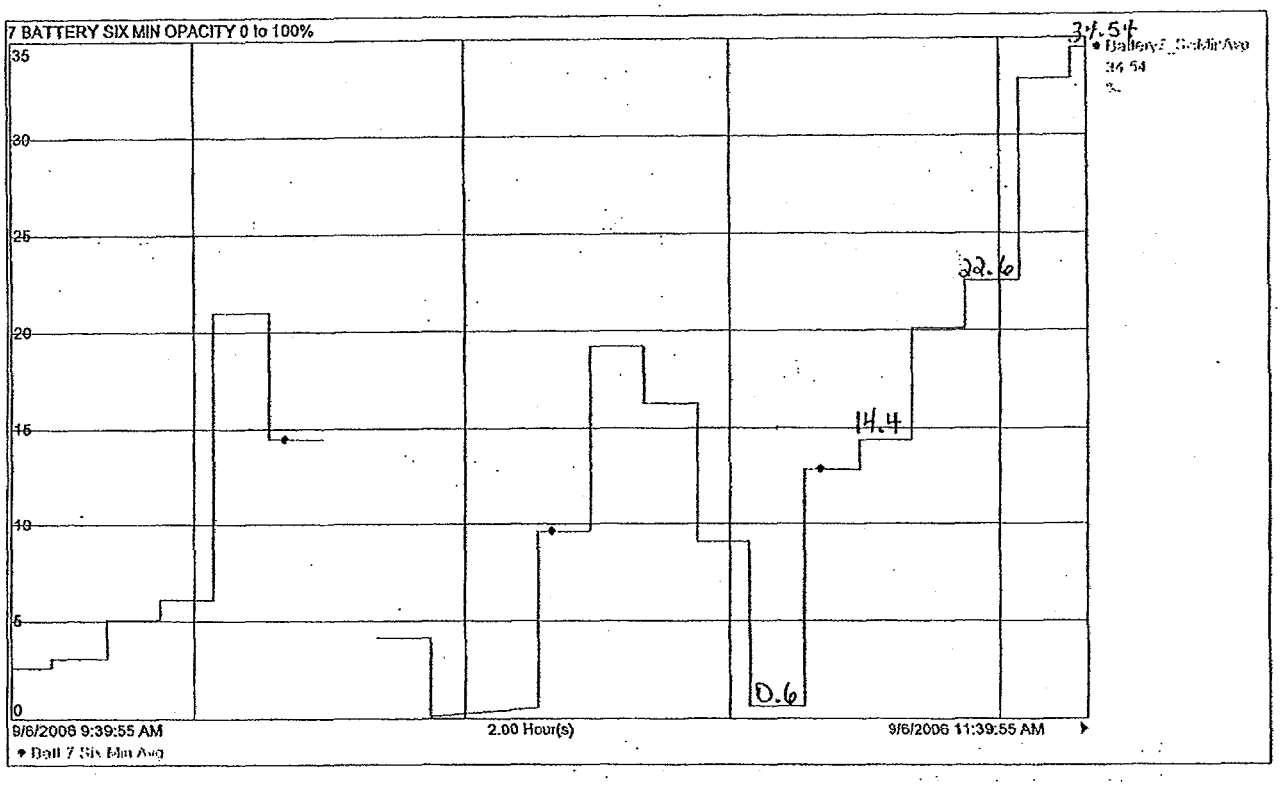
Calibration Error Check

Range	Low	Mid	High
Filter Serial No.	VB55	TT44	TW24
Certified % Op	25.4	38.6	55.4
Corrected % Op	14.3	22.3	33.8

Attenuator:	Zero	Low	Mid	High	
DAS readings:	1.0	14.3	22.6	34.5	
	0.7	14.4	22.6	35.1	
	0.6	14.3	22.5	34.4	
	0.6	14.4	22.5	34.5	Final Zero
	0.5	14.4	22.5	34.4	0.6
DAS six-minute average	0.6	14.4	22.6	34.5	0.6

Results	Low	Mid	High	
Mean error	0.1	0.3	0.8	
Confidence interval	0.1	0.1	0.3	
Calibration error	0.2	0.3	1.1	(Limit 3%)
Six-minute averaged error	0.2	0.3	0.7	(Limit ±2%)


7 BATTERY INSTANTANEOUS OPACITY 0 to 100%
35
30
25
20
15
10
5
0
-5
9/6/2006 10:24:20 AM
30.00 Min(s)
9/6/2006 10:54:20 AM


7 BATTERY SIX MIN OPACITY 0 to 100%
35
30
25
20
15
10
5
0
34.54
22.6
14.4
0.6
9/6/2006 9:39:55 AM
2.00 Hour(s)
9/6/2006 11:39:55 AM
Batt 7 Six Min Avg

CAL CHECK

11600 Black Horse Run, Raleigh, North Carolina 27613 Phone: 919-847-1898 FAX: 919-847-8005

REPORT OF CERTIFICATION OF NEUTRAL DENSITY AUDIT FILTERS

Report prepared for: **Inquest Environmental**

Date of Filter Certification: **November 11, 2005**
Date of Filter Expiration: **November 10, 2006**

Monitor Make/Model: **Teledyne-Monitor Labs 660 Lighthawk series**

Audit Device/Filter Slot Angle of Incidence: **10 degrees**
Path-Length Correction: **1.000 (1.000 constitutes no taper)**

Table 1-1: Individual Filter Certification Data

Serial Number	Opacity Value	Transmittance	Optical Density	Previous Opacity	Change in Opacity	Accuracy
TT43	18.9%	81.1%	0.0912	19.1%	-0.2	± 0.5
VB55	25.4%	74.6%	0.1275	-	-	± 0.5
TW24	55.4%	44.6%	0.3509	55.6%	-0.2	± 0.5

- **Calibration of Spectrophotometer**

Instrument
Spectrophotometer: Varian Cary 50 Serial Number: EL0309-7553
Testing Range: 380nm to 780nm Slit Width: 1.5nm

SRM Reference Material
Calibration Filters: NIST 930D SRM Serial No's: Blank; 30-1591; 20-1591; 10-1591
Date of SRM Certification: 07-12-05 Laboratory Environment: 72 deg F +/- 4 deg F

- **Description of Certification**

Cal Check certifies filters per 40 CFR Part 60, Subpart B, "Performance Specification 1" (PS-1), section 7.1.2. Opacity values are determined and assigned to each filter by use of a laboratory-based spectrophotometer exceeding the specifications set forth in section 6.3 of PS-1, and certified accurate daily using National Institute of Standards and Technology (NIST) 930D Standard Reference Material (SRM).

"Your Clear Choice for Opacity Monitor On-Stack Testing"
Visit us on the web at www.calcheck.com
Printed on recycled paper.

CAL CHECK

11600 Black Horse Run, Raleigh, North Carolina 27613 Phone: 919-847-1898 FAX: 919-847-8005

REPORT OF CERTIFICATION OF NEUTRAL DENSITY AUDIT FILTERS

Report prepared for: **Inquest Environmental (Continued)**

Each opacity audit filter is placed into the sample chamber at an angle equal to the corresponding opacity monitors' audit device or filter slot. Once positioned, each filter is analyzed (or scanned) from 380nm to 780nm, rotated 90 degrees in the plane of the glass surface, and analyzed again from 380nm to 780nm. Once all the data has been accumulated, averaged transmission values at 10nm intervals is multiplied by the corresponding weighting factor as specified in Table 1-1 of PS-1 to obtain the Source C Human Eye Response transmittance. From this value, the single-pass opacity and optical density values are determined and assigned to the filter.

For newer opacity monitors that employ monochromatic light sources, such as LED's or laser's, *and* installed after the promulgation of the latest version of PS-1, Section 7.6 (i.e., those installed and certified after April 9, 2001), the determination of filter opacity can be determined from the operating range of said light source. This provision was established in PS-1 to account for different types of neutral density glass used for certification of monochromatic light source-based monitors.

Signature of Instrument Operator

Al Siffer
Project Manager
Laboratory Division
asiffer@calcheck.com

"Your Clear Choice for Opacity Monitor On-Stack Testing"
Visit us on the web at www.calcheck.com

Printed on recycled paper.

Opacity
Certification
Services, LLC

8600 Harbor Drive
Raleigh, North Carolina 27615
Phone: 919-846-6040
Fax: 919-846-6041
www.opacitycert.com

NEUTRAL DENSITY OPACITY AUDIT FILTER CERTIFICATION RESULTS (Page 2)

Regulations Pertaining to Opacity Filter Certification

The certification of opacity audit attenuators (otherwise known as "filters") must be performed per the specifications put forth in United States Environmental Protection Agency (US EPA) document 40 CFR, Part 60, Subpart B, Performance Specification 1. All results reported by Opacity Certification Services, LLC (OCS) have been performed in accordance with this Federal Register-posted protocol, and all results are traceable to the National Institute of Standards and Technology (NIST).

How your Opacity Filters are Certified

OCS utilizes a laboratory-based spectrophotometer to produce opacity data for your filters (see **Spectrophotometer and its Accuracy Certification** above for pertinent information). Once the spectrophotometer has been deemed accurate per Performance Specification 1, filter certification can commence.

Individual opacity filters are placed into the spectrophotometer sample chamber at the proper angle of incidence appropriate for the designated opacity monitor, and scanned from 780 – 380nm, rotated 90 degrees, then scanned again. Once the second scan has been completed, an average transmittance is determined at every 10nm between 780-380nm.

At this point, one of two methods of determining opacity is employed to assign an opacity value to each filter. For opacity monitors that employ broad-band light sources (such as a incandescent bulb or a broadband LED), or for monochromatic light-sourced monitors installed prior to the latest version of Performance Specification 1, the method for assigning the opacity value is by use of the "Source C Human Eye Response" protocol, which assigns weighting factors for all transmittance values, sums the values, and divides by 100,000 to give the overall transmittance value for the filter.

The second method of determining opacity was inserted into the latest version of Performance Specification 1 as a way of dealing with the increasing number of opacity monitors utilizing monochromatic light sources, such as LED's or lasers. This newer method allows for the opacity value to be assigned to each filter only in the wavelengths employed by the light source.

At OCS, when we certify filters for monochromatic light-sourced monitors, we include both the monochromatic data as well as the Source C Human Eye Response data. Utilize whichever set of data that more closely matches your results!

Signature of Person who Performed Your Filter Certifications

Al Siffer
Opacity Certification Services, LLC
asiffer@opacitycert.com

If you need additional copies of this document, or have misplaced your original, please let me know.

Opacity
Certification
Services, LLC

8600 Harbor Drive
Raleigh, North Carolina 27615
Phone: 919-846-6040
Fax: 919-846-6041
www.opacitycert.com

NEUTRAL DENSITY OPACITY AUDIT FILTER CERTIFICATION RESULTS

This report prepared for: **Inquest Environmental**

Date of Filter Certification	Recommended Date for Recertification
MARCH 17, 2006	March 16, 2007

Opacity Filter Certification Results

Monitor Make/Model: **TML 560 LightHawk**
Audit Filter Slot Angle of Incidence: **10-degrees**
Path-Length Correction Factor: **1.000 (no stack-taper)**

Filter Serial Number	New Opacity	New Optical Density	New Transmittance	Previous Opacity	Difference from New and Previous	Accuracy
TT42	8.3%	0.0375	91.7%	(8.4%)	-0.1	± 0.5
TT44	38.6%	0.2120	61.4%	(38.5%)	+0.1	± 0.5

Note: This is a tabular form of your filter certification results. For more information on each specific filter, please refer to the two-page individual certification document.

Spectrophotometer and its Accuracy Certification

Instrument			
Spectrophotometer	Varian Cary 50 Conc	Serial Number	EL0602-3153
Range of Scanning	780 – 380nm, in 10nm Intervals	Instrument Slit Width	1.5nm
Reference Materials Used to Check the Spectrophotometer			
Reference Material Type	NIST 930D/E series	Reference Material Serial Numbers	Blank; 430-248; 420-248; and 410-248
SRM Date of Certification	February 20, 2006	Environmental Factors for Filter Testing	71 degrees F, ± 3 degrees F

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

David Sampias
IDEM/NW Regional Office
8315 Virginia St., Ste 1
Merrillville, Indiana 46410

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) [illegible] C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7006 0810 0006 3557 2868

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Dave Cline
Indiana Department of Environmental Mgt.
Office of Air Quality
Mail Code 61-50
100 N. Senate Avenue
Indianapolis, IN 46204-2251

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) JOHN E. JACKSON C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7006 0810 0006 3557 2844

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Rodney Sommerville
City of Gary
Department of Environmental Affairs
839 Broadway 2nd Floor NE
Gary, Indiana 46402

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) BEVERLY TOMSBERG C. Date of Delivery 10 2006

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7006 0810 0006 3557 2851

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

United States Steel Corporation
Gary Works
One North Broadway
Gary, IN 46402-3199

January 29, 2007

Certified Mail
Return Receipt Requested

Dave Cline
Indiana Department of Environmental Management
Office of Air Quality
Mail Code 61-50
100 North Senate Avenue
Indianapolis, IN 46204-2251

Subject: **Fourth (4th) Quarter 2006 Reports**
Operation Permit No. T089-7663-00121
U.S. Steel – Gary Works

Dear Mr. Cline:

As required, the following reports are enclosed and cover the reporting period of October 1, 2006 through December 31, 2006:

- Operating Permit Certification
- Quarterly Deviation and Compliance Monitoring
- No. 2 Precarbon Facility Compliance Monitoring
- Nos. 2, 5 and 7 Underfiring Stacks Opacity Exceedances
- Coke Oven Battery Underfiring NG Injection Jets Natural Gas Usage Rates
- Nos. 2, 5 and 7 Underfiring Stacks COMS Excess Emissions (On Diskette)
- Nos. 2, 5 and 7 Underfiring Stacks Opacity Monitor Performance Audit
- Coke Plant Boiler House Nos. 1 through 10 Boilers NG Usage Rates
- Coke Plant Boiler House Nos. 1 through 10 Boilers NOx Emissions
- No. 3 Sinter Plant Reheat Burners Natural Gas Usage Rates
- No. 3 Sinter Plant Reheat Burners Coke Oven Gas Usage Rates
- No. 3 Sinter Plant Reheat Burners PM_{10} and SO_2 Emissions
- No. 3 Sinter Plant CEMS Excess Emissions
- No. 3 Sinter Plant Cylinder Gas Audit
- South Sheet Mill Hydrogen Annealing Furnaces Natural Gas Usage
- TBBH - No. 6 Boiler Natural Gas Usage
- Coke Plant Boiler House Nos. 9 and 10 Boilers CO Excess Emissions

The Turboblower Boiler House No. 4a Boiler did not operate during the 4th quarter 2006.

The following semi-annual reports are enclosed and cover the reporting period of July 1, 2006 through December 31, 2006.

- Semi-Annual Natural Gas Fired Boiler Certification for the Coke Plant Boiler House Boiler Nos. 3 through 10
- Semi-Annual Battery NESHAP Report (40 CFR 63, Subpart L)
- Semi-Annual Byproducts NESHAP Report (40 CFR 61, Subpart L and Subpart V)

The following semi-annual reports are enclosed and cover the reporting period of August 18, 2006 through December 31, 2006.

- Semi-Annual Natural Gas Fired Boiler Certification for the No. 4 Boiler House Boiler Nos. 1, 2 and 3
- Semi-Annual Natural Gas Fired Boiler Certification for the Turbo Blower Boiler House Boiler Nos. 1, 2, 3, 5 and 6

If there are any questions concerning the enclosed, please contact me at 219.888.3387.

Sincerely,

Jim Alexander
Manager, Environmental Air Compliance

cc:

Dave Sampias (w/o diskette data)
IDEM/NWRO
8315 Virginia St, Suite 1
Merrillville, Indiana 46410

Rodney Sommerville (w/o diskette data)
Environmental Affairs Department
839 Broadway, 2nd Floor NE
Gary, Indiana 46402

America's Steel Most Recycled Material

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT CERTIFICATION

Source Name:	U. S. Steel – Gary Works
Source Address:	One North Broadway, Gary, Indiana 46402
Mailing Address:	One North Broadway, Gary, Indiana 46402
Part 70 Permit No.:	T089-7663-00121
Reporting Period:	October 1, 2006 to December 31, 2006

This certification shall be included when submitting monitoring, testing report/results or other documents as required by this approval.

Please check what document is being certified:

- Test Result (specify)
- X Reports (specify) Quarterly Deviation and Compliance Monitoring Report for Iron Producing
  Quarterly Deviation and Compliance Monitoring Report for Steel Producing North
  Quarterly Deviation and Compliance Monitoring Report for Steel Producing South
  Quarterly Deviation and Compliance Monitoring Report for Coke Plant
  No. 2 Precarbon Facility Compliance Monitoring
  Coke Battery Nos. 2, 5 and 7 Opacity Exceedances
  Coke Battery Nos. 2, 5 and 7 Underfiring NG Injection Jets Natural Gas Usage Rates
  Coke Battery Nos. 2, 5 and 7 Underfiring COMS Excess Emissions
  Coke Battery Nos. 2, 5 and 7 Underfiring Opacity Monitor Performance Audit
  Semiannual Byproducts NESHAP Report (40 CFR 61, Subpart L and Subpart V)
  Semiannual Battery NESHAP Report (40 CFR 63, Subpart L)
  Coke Plant Boiler House Nos. 1 through 10 Boilers Natural Gas Usage Rates
  Coke Plant Boiler House Nos. 1 through 10 Boilers NOx Emissions
  No 3 Sinter Plant Recirculating Burners Natural Gas Usage Rates
  No 3 Sinter Plant Recirculating Burners Coke Oven Gas Usage Rates
  No 3 Sinter Plant CEMS Excess Emissions
  South Sheet Mill Hydrogen Annealing Furnaces Natural Gas Usage Rates
  Turboblower Boiler House Boiler No. 6 Natural Gas Usage Rate
- Notification (specify)
- Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete

Signature:	MSWilliams
Printed Name:	Michael S. Williams
Title/Position:	General Manager
Date:	1-26-07

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: U.S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121

Months: October 1 to December 31 **Year:** 2006

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☒ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Permit Requirement (specify permit condition #) C.1(a)

Date of Deviation: 10/12/06	**Duration of Deviation:** 6 minutes/deviation
Number of Deviations: 2	
Probable Cause of Deviation: Stop was missed because the mud gun dolly was not positioned next to the clay before the stop. The sealing ring of the mud gun was damaged during the first stop attempt. The tap hole continued to blow and generate emissions during the first stop until the second stop was successful.	
Response Steps Taken: Reduced wind while installing nozzle on the mud gun and reloading clay to attempt second stop.	

Permit Requirement (specify permit condition #)

Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document is true, accurate and complete.

Form Completed By: Dale Baker

Title/Position: Division Manager, Iron Producing

Date: January 17, 2007

Phone: 219.888.4688

Attach a signed certification to complete this report.

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: U.S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121

Months: October 1 **to** December 31 **Year:** 2006

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☒ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Permit Requirement (specify permit condition #) D.9.4(c)

Date of Deviation: 11/09/06	**Duration of Deviation:** 3 minutes

Number of Deviations: 1

Probable Cause of Deviation: Wet scrap was delivered by Tube City (an outside contractor) to the QBOP without proper notification. Wet scrap was charged into the furnace without preheating.

Response Steps Taken: Initiated scrap preheating to prevent further incidents.

Permit Requirement (specify permit condition #) D.9.4(c)

Date of Deviation: 11/22/06	**Duration of Deviation:** 3 minutes

Number of Deviations: 1

Probable Cause of Deviation: Too much galvanized scrap was added to the regular scrap charge.

Response Steps Taken: Segregate galvanized pile and limit use of pile to one magnet per heat. Re-instruct loading crane men to be alert for galvanized materials.

T089-7663-00121

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document is true, accurate and complete.

Form Completed By: Marcel Novosad

Title/Position: Division Manager, Steel Producing North

Date: January 12, 2007

Phone: 219.888.4397

Attach a signed certification to complete this report.

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: U.S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121

Months: October 1 **to** December 31 **Year:** 2006

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☒ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Permit Requirement (specify permit condition #) D.8.4(b)

Date of Deviation: 12/19/06	**Duration of Deviation:** 3 minutes

Number of Deviations: 1

Probable Cause of Deviation: High cal lime was contaminated with limestone caused slopping on "E" furnace. Emissions could not be captured by the gas cleaner ductwork.

Response Steps Taken: Visually check lime feed system to ensure that there is no contamination.

Permit Requirement (specify permit condition #) D.8.4(b)

Date of Deviation: 12/27/06	**Duration of Deviation:** 3 minutes

Number of Deviations: 1

Probable Cause of Deviation: CASBell duct draft was less than optimal due to the following factors: cover on "D" CASBell hood was not in place; hatch on alloy chute did not move freely and lodged open and the hatch on "E" CASBell alloy chute was partially open.

Response Steps Taken: Replaced cover on "D" CASBell hood and fix hatch on alloy chute to get a better seal.

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document is true, accurate and complete.

Form Completed By: Casey Carrabine

Title/Position: Division Manager, Steel Producing South

Date: January 11, 2007

Phone: 219.888.4803

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

4th 2006

Coke Plant

Contents

No. 2 Precarbon Facility Compliance Monitoring and Deviation Report
Nos. 2, 5 and 7 Underfiring Stacks COMS Excess Emissions Report (on Disk)
Nos. 2, 5 and 7 Underfiring Stacks Opacity Monitor Performance Audit

U. S. Steel - Gary Works
Coke and Chemicals Division
Precarbon COMS Waiver
Compliance Monitoring and Deviation Report

Reporting Period: 4th Quarter 2006

#2 Precarbon

Parameter	Deviations Occurred This Reporting Period	No Deviations Occurred This Reporting Period
%CO		X
PVolts		X
PAmps		X
SVolts		X
SAmps		X
ESPress		X
VEs		X

Key	Limit	Description
%CO	<6%	Percent of CO at discharge of combustion chamber
PVolts	>300	Primary Field Voltage
Pamps	>30	Primary Field Amperage
SVolts	>300	Secondary Field Voltage
Samps	>30	Secondary Field Amperage
ESPress	≥0	ESP Static Pressure
VEs	<13%	Visible Emissions

Explanation and Corrective Actions

NA

INQUEST
ENVIRONMENTAL INC.

3609 Mojave Ct., Ste E ◆ COLUMBIA, MO 65202
(573) 474-8110 ◆ FAX: (573) 474-8371

November 20, 2006

Mr. Joe Abbott
USS - Gary Works
MS-11-6
1 N. Broadway
Gary, Indiana 46402

RE: US Steel Coke Plant, Gary, Indiana, 4th Quarter, 2006, Opacity Monitor Performance Audits.

Dear Mr. Abbott,

Please find enclosed the results of the performance audits that were recently conducted on the three, Teledyne Monitor Labs, Model 560, opacity monitors that are located on #'s 2, 5, & 7 battery stacks in the Gary Coke Plant.

The audits were performed on November 15th, 2006. The start time and date for each audit were as follows:

Battery Stack #2	08:11 a.m	11/15/06
Battery Stack #5	10:10 a.m.	11/15/06
Battery Stack #7	01:10 p.m.	11/15/06

All audits were conducted in accordance with 326 IAC 3-5-5 (c)(3). Currently certified neutral density filters were used during each audit. A copy of the certification of the filters used has been enclosed.

Each audit began with the recording of the most recent, daily, automatic, zero and upscale calibration readings. Real-time opacity readings were then recorded, the optics were cleaned, and the real-time readings were taken again.

The calibration device was then attached to the transmissometer in order to simulate a clear stack zero reading The zero reading of the instrument was then recorded.

Three NIST certified neutral density filters were then individually inserted in the calibration device. The known value of each filter and the instrument's response was recorded. The known value of each filter was adjusted according to each stack's exit correlation ratio. Each filter was inserted five times with the zero reading being recorded after each pass of the filters. The sixth and final pass allowed for the PI system's (data acquisition system) six-minute averages to update with each filter before the reading was recorded.

After the filter challenges were complete, all purge air intake dust filters were cleaned. All lenses and windows in each instrument were also cleaned. The final steps taken at the stack location's consisted of recording the accumulator voltage levels of each instrument The accumulator voltages have been recorded in my files and will be used for future maintenance and for comparison to the readings taken during the next round of audits. The primary goal of the cleaning was to ensure that all seals are cleaned so as to protect the instrument's optics and electronics.

Following each audit, the control panels mounted in the meter rooms were checked, and were verified to be working properly. Parameters that were checked included the most recent automatic upscale calibration values, the most recent automatic zero readings, and the window dirt percentage levels. All were found to be within limits with the exception of Unit #7's most recent upscale reading. It had failed the +/- 2% limit the previous day This unit was scheduled for off-stack calibration and this issue was addressed and corrected.

A table has been included below to summarize the results of the performance audits.

Parameter	Limit	Result	Pass/Fail
Stack Exit Correlation Error	≤ 2%	#2 0.0% #5 0.0% #7 0.0%	Pass Pass Pass
Zero & Upscale Response	≤ ±2%	#2 0.0% & -0.6% #5 0.0% & 0.0% #7 0.0% & -2.3%	Pass Pass Fail
Zero Compensation	≤ 4%	#2 0.0% #5 0.0% #7 0.0%	Pass Pass Pass
Optical Alignment	Manufacturer's Recommendation	Verified correct, all instruments	Pass
Optical Surface Dust	≤ 4%	#2 0.81% #5 0.80% #7 3.30%	Pass Pass Pass
Calibration Error	≤ 3%	#2 Low 0.0 %, Mid -0.3%, High 1.3% #5 Low 0.1%, Mid 1.3%, High -0.2% #7 Low -0.2%, Mid 1.0%, High -0.1%	Pass Pass Pass

Following the audits, Unit #7 was taken off of the stack and a clear stack, bench top calibration was conducted. The unit was found to be operating normally with the exception of excessive dust build-up on the lenses Excessive dust was found to be the reason for the recently failed upscale calibration check. The unit was cleaned and placed back on the stack and back into normal service. The upscale calibration level was re-checked and found to have returned to normal.

Included in this report are the worksheets and calculations for each of your opacity monitor audits, the current certification for the neutral density filters used, and copies of the database trends produced during each audit

Thank you very much for choosing Inquest Environmental to participate in this project. We are very pleased to have your organization as a client. Please feel free to call with any comments or questions.

Sincerely,

John A. Kunkel
Inquest Environmental, Inc.

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation:	US Steel	Monitor ID:	#2 Battery Stack
Facility:	Gary, Indiana	Make/Model:	USI 560
Date:	11/15/2006	Serial No.	5601014
Start Time:	8:11am Stop:9:45am		
Auditor:	John Kunkel	Representing:	Inquest Environmental, Inc
Attendees:	Chris Perkins	Representing:	Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	16.75	Calculated stack exit correlation ratio (Lx / Lt)	0.846
Transmissometer single path length (ft) = Lt	19.79	Source-cited stack exit correlation ratio	0.846
		Stack exit correlation error (Limit ±2%)	0.0

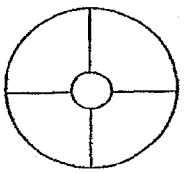
Warning Lamps:	OPACITY ALARM	Off	CAL FAIL	Off	POWER FAIL	Off
	DIRTY WINDOW	On	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal. value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto cal. value (%Op)	37.3			
Panel meter upscale calibration value (%Op)	36.7	Error (%Op)	-0.6	(Limit ±2%)
Data recorder upscale cal value (%Op)	36.7	Error (%Op)	-0.6	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	2.1	Transceiver pre-cleaning effluent Opacity (%)	2.9
Retroflector post-clean effluent Opacity (%)	1.0	Transceiver post-clean effluent Opacity (%)	2.1
Retro optics dust accumulation (Limit 2% Op)	1.1	Trans Optics dust accumulation (Limit 2% Op)	0.8
Total optical dust accumulation (Limit 4% Op)	1.9		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation

Calibration Error Check

Range	Low	Mid	High
Filter Serial No	TT43	VB55	TT44
Certified % Op	19.4	25.8	38.9
Corrected % Op	17.3	22.9	34.6

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0.8	17.0	22.3	36.3	
	0.9	17.3	22.3	35.6	
	0.8	17.2	22.5	35.7	
	0.7	17.2	22.4	35.9	Final Zero
	0.7	17.2	22.4	35.9	0.8
DAS six-minute average	0.8	17.3	22.6	35.9	0.9

Results	Low	Mid	High	
Mean error	-0.1	-0.5	1.3	
Confidence interval	0.1	0.1	0.3	
Calibration error	0.3	0.6	1.6	(Limit 3%)
Six-minute averaged error	0.0	-0.3	1.3	(Limit ±2%)

Inquest Environmental, Inc.
Opacity Monitor Audit

Calculations

Stack Exit Correlation Error (%) = (Cited ratio - Calculated ratio) / Calculated ratio x 100

Zero Error (% Opacity) = Measured zero value - Cited zero value

Span Error (% Opacity) = Measured span value - Cited span value

Retroflector Dust Accumulation (% Opacity) = Pre-cleaning Opacity - Post-cleaning Opacity

Transceiver Dust Accumulation (% Opacity) = Pre-cleaning Opacity - Post-cleaning Opacity

Total Dust Accumulation (% Opacity) = Retroflector accumulation + Transceiver accumulation

Corrected Filter Opacity =
[1 - (((1 - Filter value/100)^(Stack exit correlation ratio)) x (1 - Final jig zero/100))] x 100

Difference = Measured Opacity - Corrected filter Opacity

Difference² = (Measured Opacity - Corrected filter Opacity)²

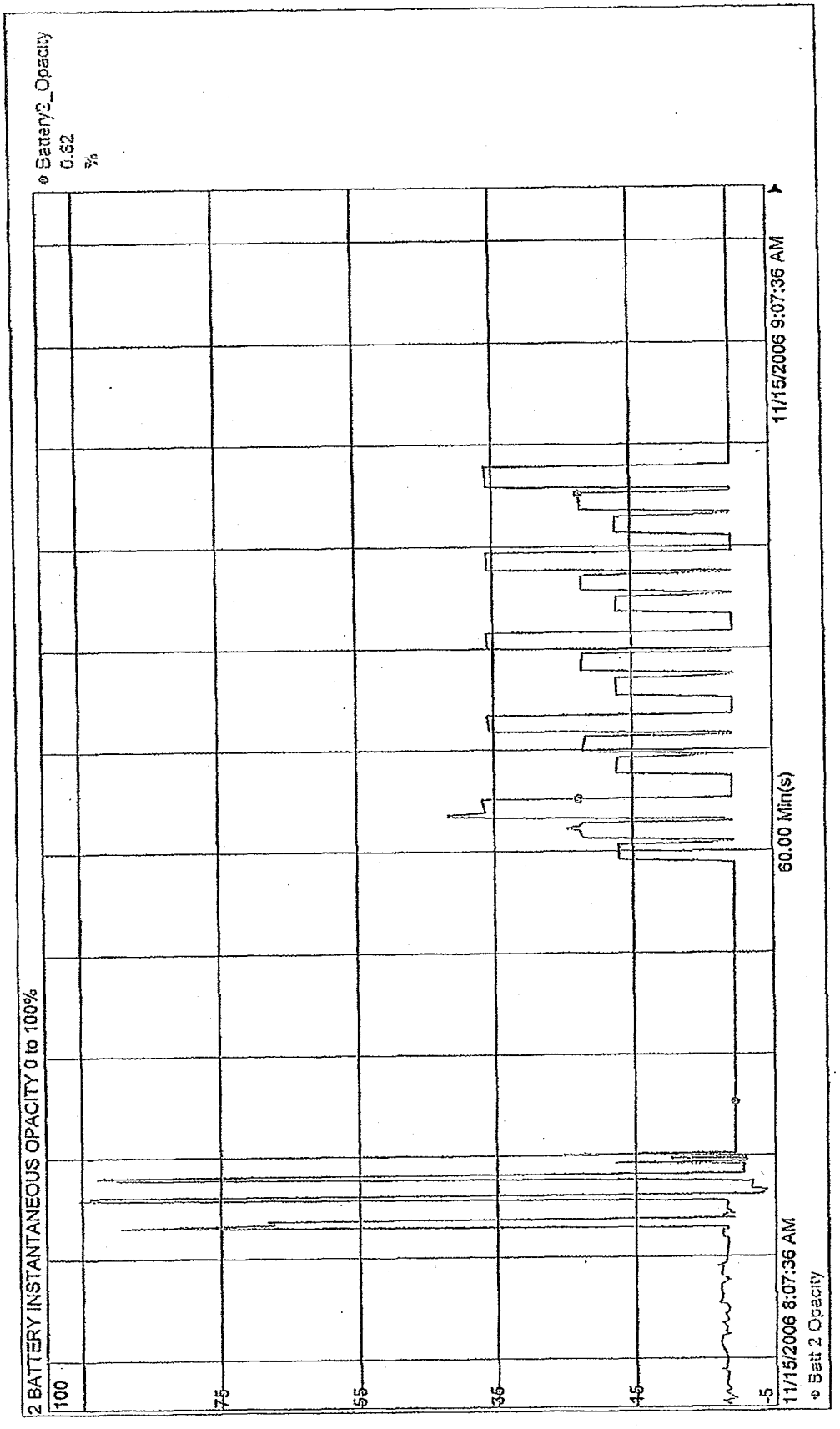
n = Number of readings

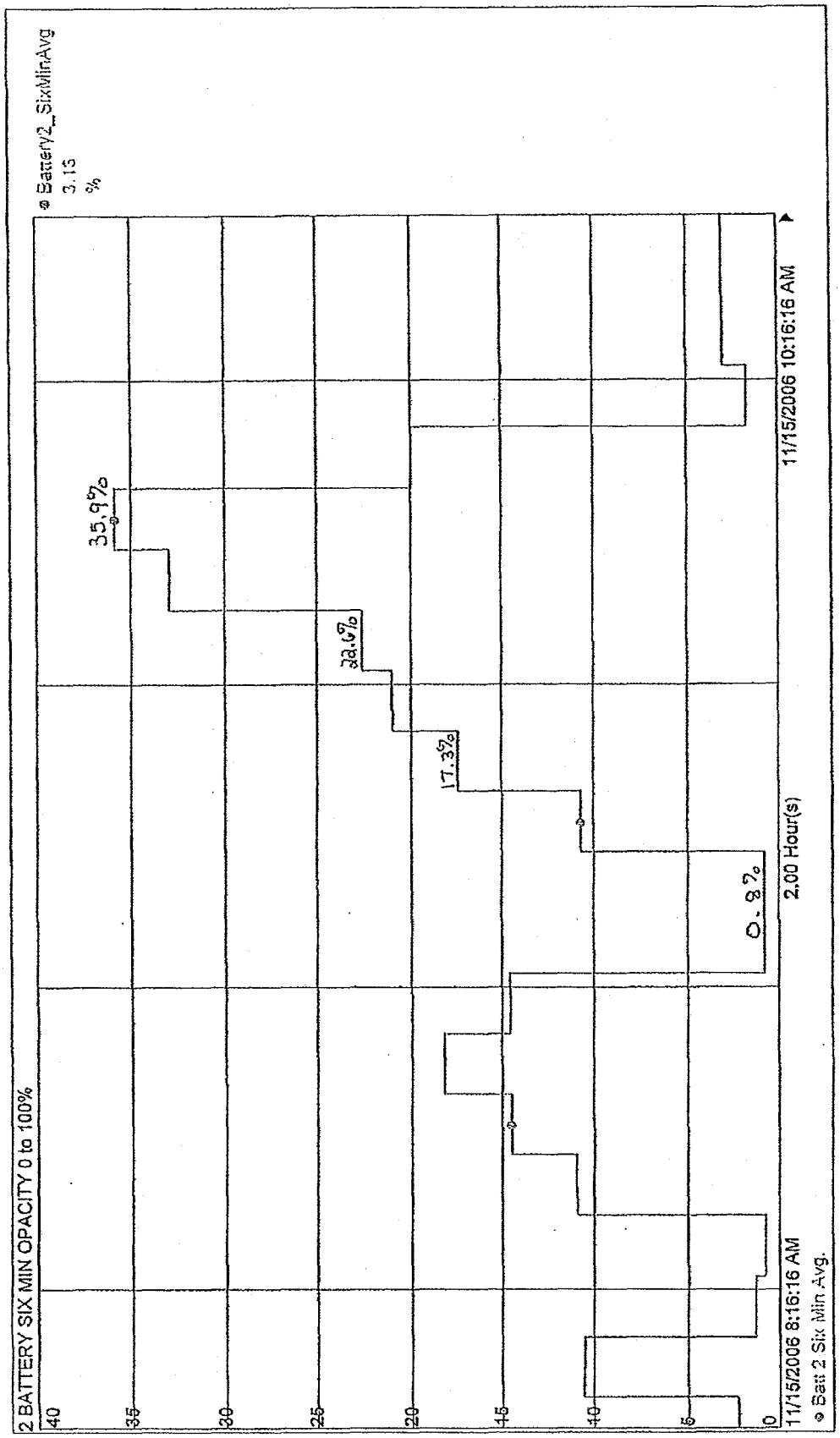
Mean Error (ME) = SUM(Difference) / n

Confidence Interval (CI)= SQRT[(n x SUM(Difference²)) - SUM(Difference)²] x 0.2776

Calibration Error (CE)= ABS(ME) + CI

Six-Minute Averaged Error = Six-minute averaged Opacity - Corrected filter Opacity


2 BATTERY INSTANTANEOUS OPACITY 0 to 100%
Battery2_Opacity
0.62
%
100
75
55
35
15
-5
11/15/2006 8:07:36 AM
60.00 Min(s)
11/15/2006 9:07:36 AM
Batt 2 Opacity


2 BATTERY SIX MIN OPACITY 0 to 100%
Battery2_SixMinAvg
3.13
%
35.9%
22.6%
17.3%
0.8%
40
35
30
25
20
15
10
5
0
11/15/2006 8:16:16 AM
2.00 Hour(s)
11/15/2006 10:16:16 AM
Batt 2 Six Min Avg.

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation:	US Steel	Monitor ID:	#5 Battery Stack
Facility:	Gary, Indiana	Make/Model:	USI 560
Date:	11/15/2006	Serial No.	5601011
Start Time:	10:10am Stop:11:50am		
Auditor:	John Kunkel	Representing:	Inquest Environmental, Inc.
Attendees:	Chris Perkins	Representing:	Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	6.00	Calculated stack exit correlation ratio (Lx / Lt)	0.484
Transmissometer single path length (ft) = Lt	12.40	Source-cited stack exit correlation ratio	0.484
		Stack exit correlation error (Limit ±2%)	0.0

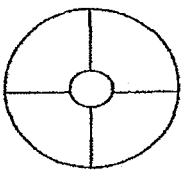
Warning Lamps:	OPACITY ALARM	Off	CAL FAIL	Off	POWER FAIL	Off
	DIRTY WINDOW	Off	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal. value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto cal value (%Op)	35.3			
Panel meter upscale calibration value (%Op)	35.3	Error (%Op)	0.0	(Limit ±2%)
Data recorder upscale cal value (%Op)	35.3	Error (%Op)	0.0	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	1.1	Transceiver pre-cleaning effluent Opacity (%)	1.7
Retroflector post-clean effluent Opacity (%)	0.7	Transceiver post-clean effluent Opacity (%)	1.1
Retro. optics dust accumulation (Limit 2% Op)	0.4	Trans Optics dust accumulation (Limit 2% Op)	0.6
Total optical dust accumulation (Limit 4% Op)	1.0		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

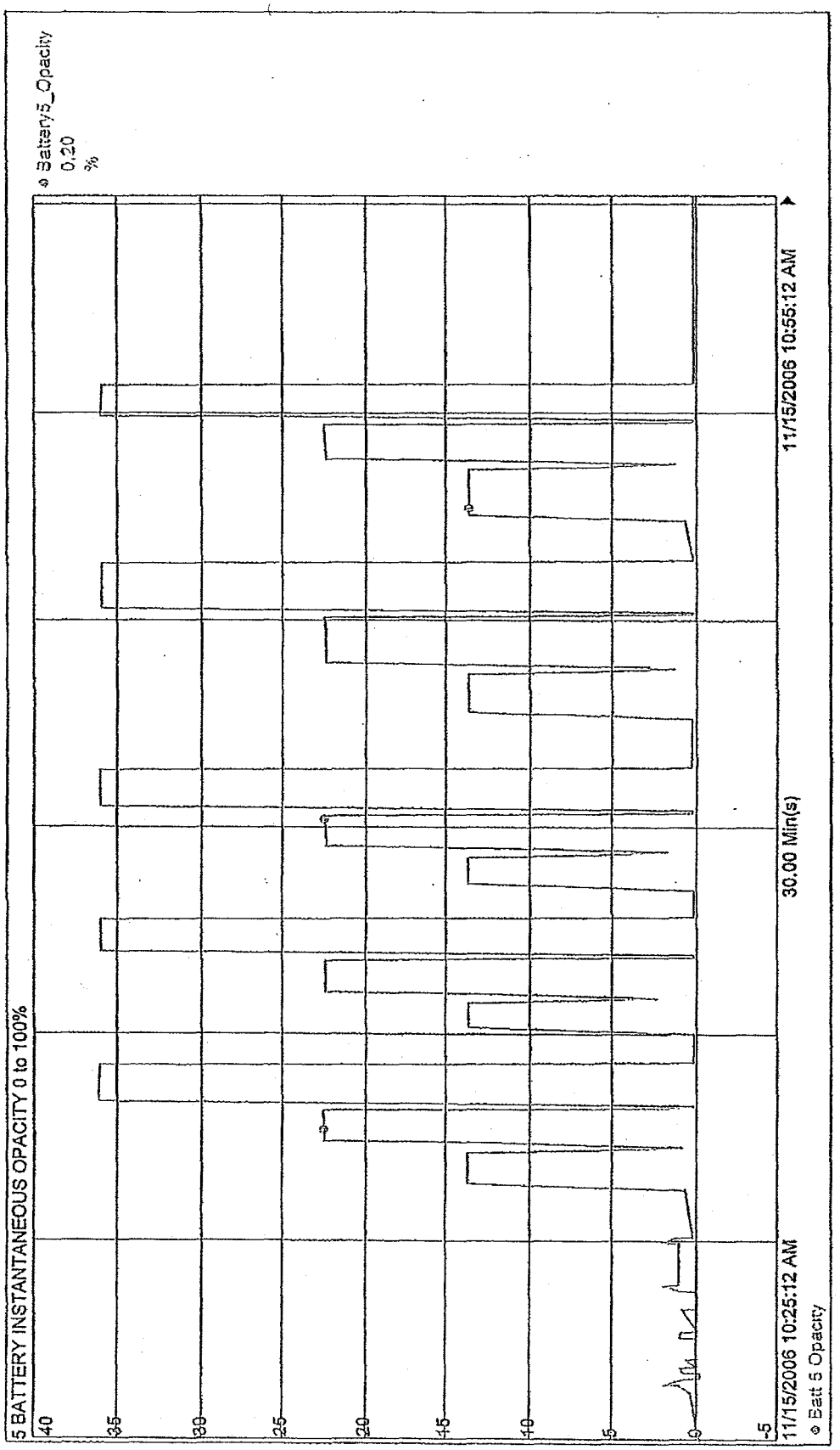
Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation

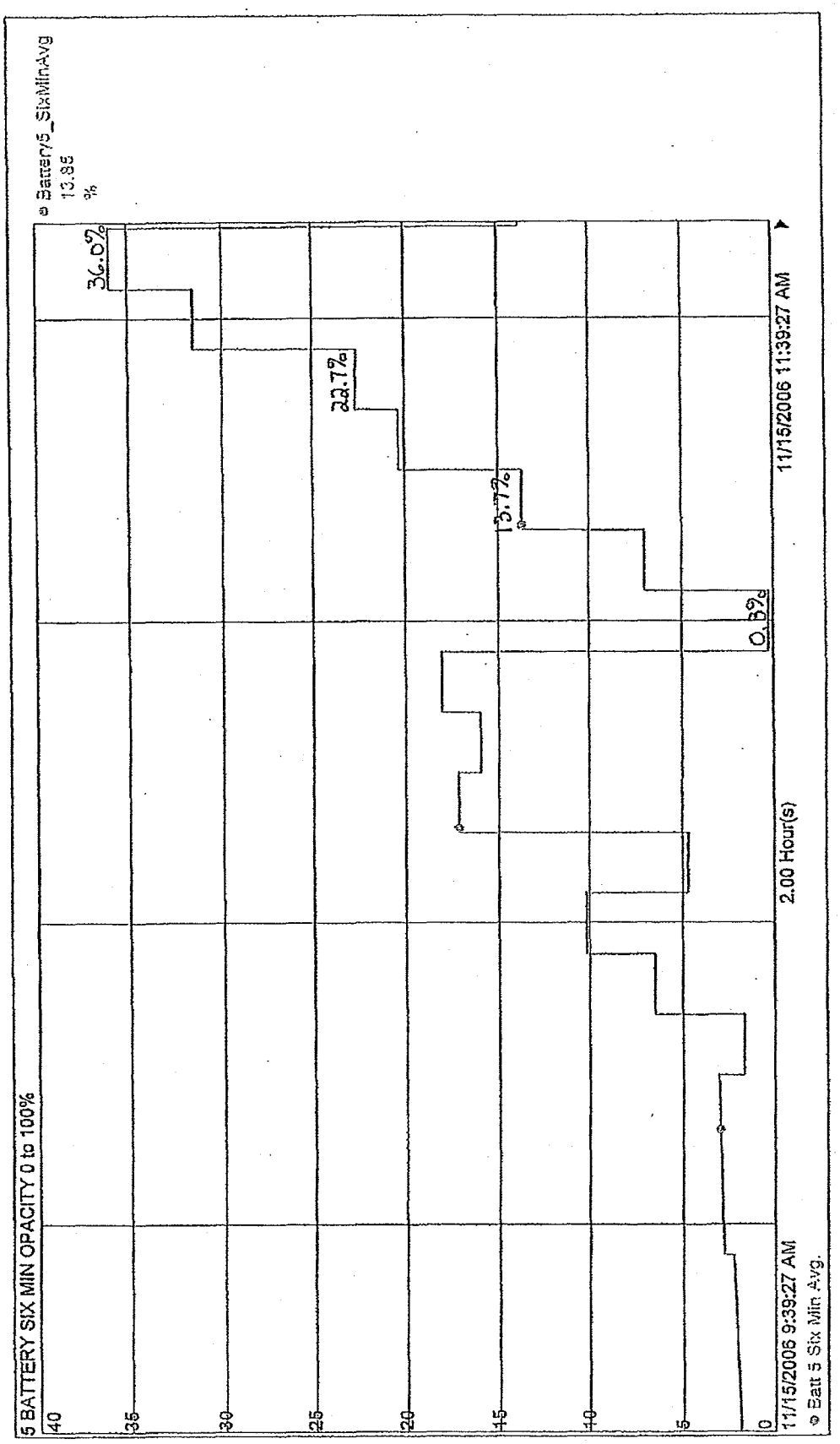
Calibration Error Check

Range	Low	Mid	High
Filter Serial No	VB55	TT44	VN87
Certified % Op	25.8	38.9	60.3
Corrected % Op	13.6	21.4	36.2

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0.3	13.7	22.4	36.1	
	0.2	13.6	22.4	36.0	
	0.2	13.6	22.3	36.0	
	0.3	13.7	22.3	36.0	Final Zero
	0.2	13.6	22.3	36.0	0.2
DAS six-minute average	0.3	13.7	22.7	36.0	0.2

Results	Low	Mid	High	
Mean error	0.0	1.0	-0.2	
Confidence interval	0.0	0.1	0.1	
Calibration error	0.1	1.1	0.3	(Limit 3%)
Six-minute averaged error	0.1	1.3	-0.2	(Limit ±2%)


5 BATTERY INSTANTANEOUS OPACITY 0 to 100%
Battery5_Opacity
0.20
%
40
35
30
25
20
15
10
5
0
-5
11/15/2006 10:25:12 AM
30.00 Min(s)
11/15/2006 10:55:12 AM
Batt 5 Opacity


5 BATTERY SIX MIN OPACITY 0 to 100%
Battery5_SixMinAvg
13.85
%
36.0%
22.7%
13.7%
0.3%
40
35
30
25
20
15
10
5
0
11/15/2006 9:39:27 AM
2.00 Hour(s)
11/15/2006 11:39:27 AM
Batt 5 Six Min Avg.

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation:	US Steel	Monitor ID:	#7 Battery Stack
Facility:	Gary, Indiana	Make/Model:	USI 560
Date:	11/15/2006	Serial No.	5601012
Start Time:	1:10pm Stop:2:35pm		
Auditor:	John Kunkel	Representing:	Inquest Environmental, Inc
Attendees:	Chris Perkins	Representing:	Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	6.00	Calculated stack exit correlation ratio (Lx / Lt)	0.503
Transmissometer single path length (ft) = Lt	11.94	Source-cited stack exit correlation ratio	0.503
		Stack exit correlation error (Limit ±2%)	0.0

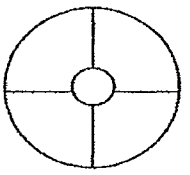
Warning Lamps:						
	OPACITY ALARM	Off	CAL FAIL	On	POWER FAIL	Off
	DIRTY WINDOW	Off	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto cal value (%Op)	35.6			
Panel meter upscale calibration value (%Op)	33.3	Error (%Op)	-2.3	(Limit ±2%)
Data recorder upscale cal value (%Op)	33.3	Error (%Op)	-2.3	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	12.1	Transceiver pre-cleaning effluent Opacity (%)	12.5
Retroflector post-clean effluent Opacity (%)	12.1	Transceiver post-clean effluent Opacity (%)	12.1
Retro optics dust accumulation (Limit 2% Op)	0.0	Trans. Optics dust accumulation (Limit 2% Op)	0.4
Total optical dust accumulation (Limit 4% Op)	0.4		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

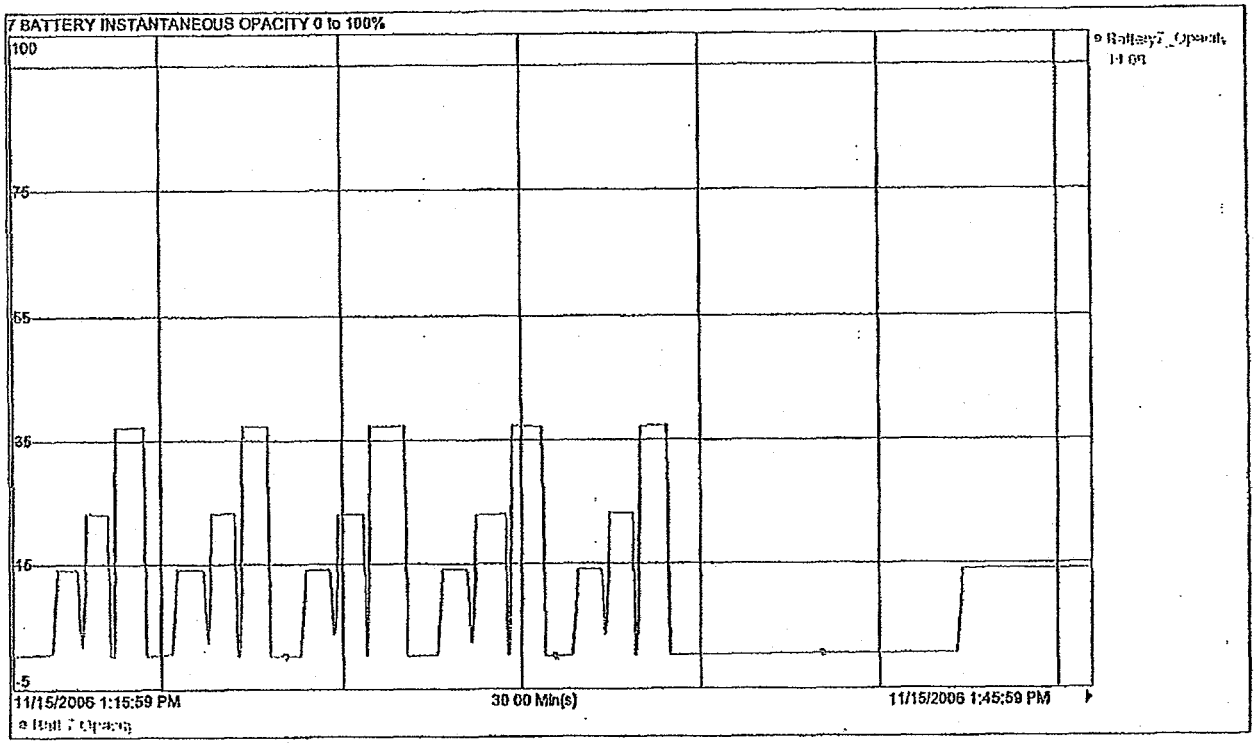
Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation

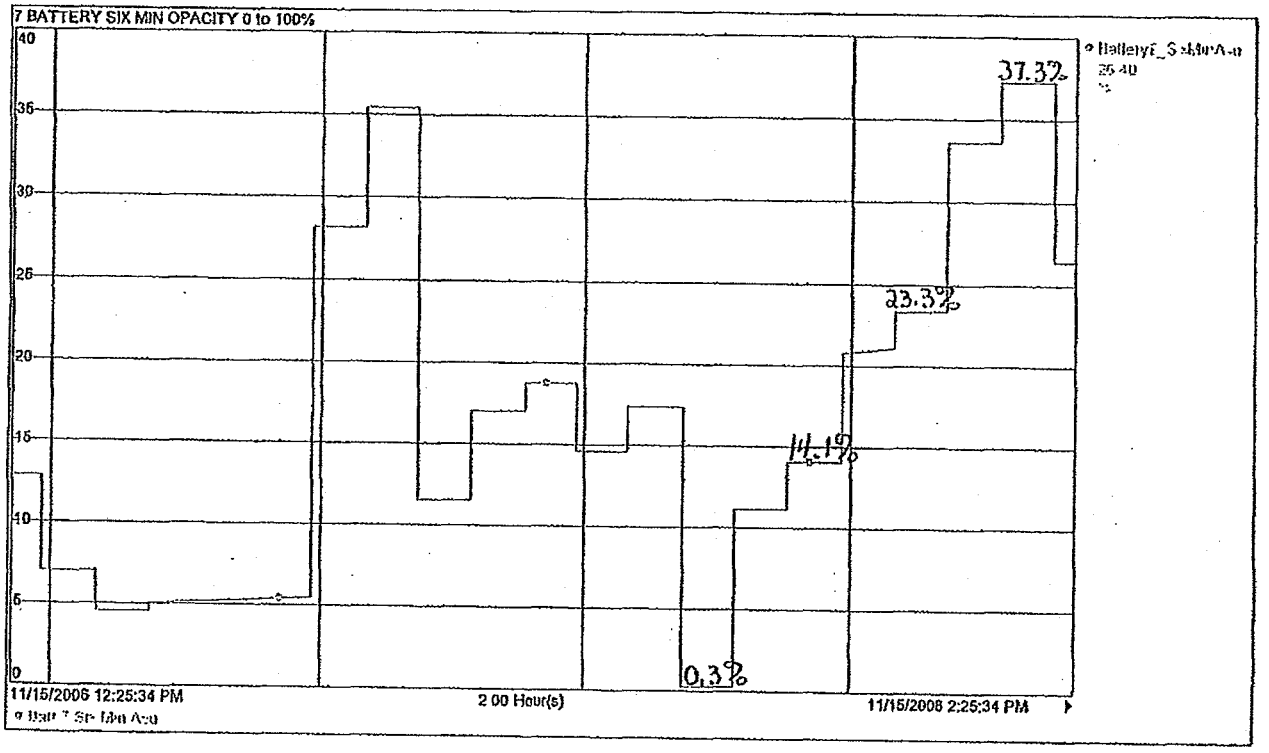
Calibration Error Check

Range	Low	Mid	High
Filter Serial No.	VB55	TT44	VN87
Certified % Op	25.8	38.9	60.3
Corrected % Op	14.3	22.2	37.4

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0.3	14.1	23.2	37.1	
	0.2	14.1	23.2	37.3	
	0 3	14.1	23 0	37.3	
	0.2	14.1	23.0	37.3	Final Zero
	0.2	14.0	23.2	37.2	0.4
DAS six-minute average	0.3	14.1	23.3	37.3	0.2

Results	Low	Mid	High	
Mean error	-0.2	0.9	-0.2	
Confidence interval	0.1	0.2	0.1	
Calibration error	0.2	1.0	0.3	(Limit 3%)
Six-minute averaged error	-0.2	1.0	-0.1	(Limit ±2%)


7 BATTERY INSTANTANEOUS OPACITY 0 to 100%
100
75
55
35
15
-5
11/15/2006 1:15:59 PM
30 00 Min(s)
11/15/2006 1:45:59 PM


7 BATTERY SIX MIN OPACITY 0 to 100%
40
35
30
25
20
15
10
5
0
37.32
23.32
14.19
0.3
11/15/2006 12:25:34 PM
2 00 Hour(s)
11/15/2006 2:25:34 PM

CAL CHECK

11600 Black Horse Run, Raleigh, North Carolina 27613 Phone (919) 847-1898 FAX (919) 847-8005

REPORT OF CERTIFICATION OF NEUTRAL DENSITY AUDIT FILTERS

Report prepared for: **Inquest Environmental Inc**

Date of Filter Certification: **September 29, 2006**
Date of Filter Expiration: September 28, 2007

Monitor Make/Model: **Teledyne-Monitor Labs 560**

Audit Device/Filter Slot Angle of Incidence: **10 degrees**
Path-Length Correction: **1.000 (1.000 constitutes no taper)**

Table 1-1: Individual Filter Certification Data

Serial Number	Opacity Value (%)	Transmittance (%)	Optical Density	Previous Opacity (%)	Change in Opacity (%)	Accuracy (%)
TT42	8.8	91.2	0.0399			± 0.5
TT43	19.4	80.6	0.0939	18.9	0.5	± 0.5
VB55	25.8	74.2	0.129	25.4	0.4	± 0.5
TT44	38.9	61.1	0.214			± 0.5
VN87	60.3	39.7	0.402			± 0.5

- **Calibration of Spectrophotometer**

Instrument
Spectrophotometer: Varian Cary 50 Serial Number: EL0309-7553
Testing Range: 380nm to 780nm

SRM Reference Material
Calibration Filters: NIST 930D SRM Serial No's: Blank; 30-1505; 20-1505; 10-1505
Date of SRM Certification: 01-19-06 Laboratory Environment: 72 deg F +/- 4 deg F

- **Description of Certification**

Cal Check certifies filters per 40 CFR Part 60, Subpart B, "Performance Specification 1", section 7.1.2. Opacity values are determined and assigned to each filter by use of a laboratory-based spectrophotometer exceeding the specifications set forth in section 6 3 of Performance Specification 1, and certified accurate daily using National Institute of Standards and Technology (NIST) 930D Standard Reference Materials (SRM).

"Your Clear Choice for Opacity Monitor On-Stack Testing"
Visit us on the web at www.calcheck.com

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

4th 2006

Coke Plant

Contents

Coke Oven Battery Underfiring Natural Gas Injection Jets NG Usage Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002 and CPNG003)
Parameter: Natural Gas Usage
Limit: 178.7 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2006

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
October	0.000	3.447	3.447
November	0.000	3.447	3.447
December	0.000	3.447	3.447

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Robert H. Lange
Title/Position: Division Manager, Coke
Phone: 219.888.4028

Attach a signed certification to complete this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

4th 2006

Coke Plant Boiler House

Contents

Coke Plant Boiler House – Nos. 1 through 10 Boilers Natural Gas Usage Report
Coke Plant Boiler House – Nos. 1 through 10 Boilers NOx Emissions Report
Coke Plant Boiler House – Nos. 9 and 10 Boilers CO Excess Emissions Report
Coke Plant Boiler House – Nos. 3 through 10 Semi-Annual Certification

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary Indiana 46402
Mailing Address: One North Broadway, Gary Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Boilers No. 1 through No. 10 at the Coke Plant Boiler House
Parameter: Total Natural Gas Usage
Limit: Less than 2,550 million cubic feet (MMCF) per 12-consecutive month period with compliance determined at the end of each month.

Quarter: 4th Year: 2006

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
October	17.8	85.6	103.4
November	10.4	81.4	91.8
December	5.5	79.3	84.8

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Kevin F. McGuire
Title/Position: Area Manager, Utilities
Phone: 219.888.2719

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary Indiana 46402
Mailing Address: One North Broadway, Gary Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Boilers No. 1 through No. 10 at the Coke Plant Boiler House
Parameter: Total NOx Emissions
Limit: Less than 64.6 tons per twelve (12) consecutive month period period with compliance determined at the end of each month

NOx Emissions (tons/month) = (280 X + 36 Y + 129 Z) / 2000
Where X=total monthly natural gas usage in Boilers Nos. 1 through 8 (MMcf/month)
Y=monthly natural gas usage rate in temporary rental bolier (MMcf/month)
Z=total monthly natural gas usage in Boilers Nos. 9 and 10 (MMcf/month)

Quarter: 4th Year: 2006

Month	Boiler Nos. 1 through 8		Boiler Nos. 9 and 10		NOx Emissions (tons)	NOx Emissions Previous 11 Months	NOx Emissions 12-month Period
	Natural Gas Usage Rate (MMcf)	NOx Emissions (tons)	Natural Gas Usage Rate (MMcf)	NOx Emissions (tons)			
October	12.34	1.73	5.49	0.35	2.08	9.95	12.03
November	6.08	0.85	4.31	0.28	1.13	10.01	11.14
December	2.28	0.32	3.23	0.21	0.53	9.84	10.37

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter. uire
Title/Position: Area Manager, Utilities
Phone: 219.888.2719

Attach a signed certification to complete this report.

U.S. Steel Corporation – Gary Works
Coke Plant Boiler House No. 9 Boiler
Fourth (4th) Quarter 2006 Excess Emissions Report
Part 70 Permit No. T089-7663-00121

Plant Operations Downtime Summary

Date of facility downtime:	None
Time of commencement and completion of downtime:	None
Reason(s) for the downtime:	None
Total facility downtime for this quarter:	None

Excess Emissions Summary

Date of excess emissions:	No excess emissions this quarter
Time of commencement and completion:	
Magnitude:	
Reason(s) for excess emissions:	

CEMS Instrument Downtime Summary

Date of downtime:	No CEMS downtime during boiler operation
Time of commencement:	
Duration of downtime:	
Nature of system repairs and adjustments:	

U.S. Steel Corporation – Gary Works
Coke Plant Boiler House No. 10 Boiler
Fourth (4th) Quarter 2006 Excess Emissions Report
Part 70 Permit No. T089-7663-00121

Plant Operations Downtime Summary

Date of facility downtime:	Various times during the quarter, does not affect CEMS operation
Time of commencement and completion of downtime:	Various times during the quarter, does not affect CEMS operation
Reason(s) for the downtime:	Regularly scheduled outages and unscheduled boiler stoppages
Total facility downtime for this quarter:	Approximately 9 days

Excess Emissions Summary

Date of excess emissions:	No excess emissions this quarter
Time of commencement and completion:	
Magnitude:	
Reason(s) for excess emissions:	

CEMS Instrument Downtime Summary

Date of downtime:	No CEMS downtime during boiler operation
Time of commencement:	
Duration of downtime:	
Nature of system repairs and adjustments:	

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name:	U. S. Steel – Gary Works
Source Address:	One North Broadway, Gary, Indiana 46402
Mailing Address:	One North Broadway, Gary, Indiana 46402
Source Modification No:	T089-7663-00121

Coke Plant Boiler House Nos. 3 through 10 Boilers
Natural Gas and/or Coke Oven Gas
From: July 1, 2006 To: December 31, 2006

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:	MSWilliams
Printed Name:	Michael S. Williams
Title/Position:	General Manager
Date:	1-26-07

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

4th 2006

No. 3 Sinter Plant

Contents

No. 3 Sinter Plant – Reheat Burners NG and COG Usage Report
No. 3 Sinter Plant – VOC Excess Emissions Report
No. 3 Sinter Plant – VOC CEM Cylinder Gas Audit

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility Parameter: Nos. 1 and 3 Sinter Strand, Natural Gas Reheat Burners (ISB001 and ISB003)
Natural Gas Usage
Limit: 95.5 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2006

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
October	0.000	1.222	1.222
November	0.000	1.222	1.222
December	0.000	1.222	1.222

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility Nos. 1 and 3 Sinter Strand, Recirculating Burners (ISB001 and ISB003)
Parameter: Coke Oven Gas
Limit: 1,637.4 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2006

Month	Coke Oven Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
October	4.804	272.231	277.036
November	6.157	265.059	271.217
December	7.092	240.837	247.929

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

EPA-R5-2012-0005960000321

U. S. Steel Sinter Plant CEMS - Quarterly Excess Emissions Summary

Fourth Quarter 2006

Date	Limit Exceeded	Emission Rate	Cause/Reason	Corrective Action

No Excess Emissions This Quarter

50.69 tons	Quarterly VOC Emissions
0	Quarterly VOC Exceedances

EPA-USS-0325750

EPA-R5-2012-0005960000321

U. S. Steel Sinter Plant CEMS - Quarterly System Downtime Summary

Fourth Quarter 2006

	Date	Time	Hours Lost	System Component	Cause/Reason	Corrective Action
Start	1-Oct-06	6:29	24	Stack 1 Flow	Failed Calibration	Cleared with calibration folowing day
Stop	2-Oct-06	6:29				
Start	5-Oct-06	9:30	2	Stack 1 NMHC	NMHC High warning	Initiated Daily Calibration
Stop	5-Oct-06	11:30				
Start	6-Oct-06	8:45	0.5	Stack 2 NMHC	NMHC High warning	Initiated Daily Calibration
Stop	6-Oct-06	9:15				
Start	21-Oct-06	6:29	6	Stack 1 Flow	Failed Calibration	Initiated Daily Calibration
Stop	21-Oct-06	12:00				
Start	23-Oct-06	6:29	4	Stack 2 Flow	Failed Calibration	Initiated Daily Calibration
Stop	23-Oct-06	10:34				
Start	3-Nov-06	10:45	1	All	Manual Calibration	Initiated Daily Calibration
Stop	3-Nov-06	11:45				
Start	27-Dec-06	14:39	1	All	Cylinder Gas Audit	Initiated Daily Calibration
Stop	27-Dec-06	15:10				

36 **Total Hours Invalid**

2010 **Total Hours of Operation**

98.23% **Total System Availability**

EPA-USS-0325751

U.S. STEEL SINTER STACK 1 CGA

CYLINDER GAS AUDIT FORM

U. S. STEEL GROUP

PLANT: Gary Works
LOCATION: Gary Indiana

PROJECT NUMBER:
DATE: 12/27/2006

PERIOD ENDING: FOURTH QUARTER 2006

GAS TYPE: Methane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111004-109

UNIT: #3 Sinter Plant Stack #1
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

Response Factor: 1.2890

	LOW	HIGH
CYLINDER NUMBER	CC68108	XC031801B
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	2/15/2009
CERTIFIED VALUE	22.95	58.82
RUN 1	22.11	56.79
RUN 2	23.04	56.56
RUN 3	22.81	56.56
MEAN	22.65	56.63
ERROR RATE	-1.29%	-3.72%

Methane Raw Data

Low	High
9.5	24.4
9.9	24.3
9.8	24.3

GAS TYPE: Propane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111004-109

UNIT: #3 Sinter Plant Stack #1
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

	LOW	HIGH
CYLINDER NUMBER	CC68108	XC031801B
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	2/15/2009
CERTIFIED VALUE	24.52	59.01
RUN 1	23.30	59.10
RUN 2	23.00	58.40
RUN 3	22.60	58.60
MEAN	22.97	58.70
ERROR RATE	-6.33%	-0.53%

U.S. STEEL SINTER STACK 2 CGA

CYLINDER GAS AUDIT FORM

U. S. STEEL GROUP

PLANT: Gary Works
LOCATION: Gary Indiana

PROJECT NUMBER:
DATE: 12/27/2006

PERIOD ENDING: FOURTH QUARTER 2006

GAS TYPE: Methane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111005-109

UNIT: #3 Sinter Plant Stack #2
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

Response Factor: 1.2920

	LOW	HIGH
CYLINDER NUMBER	CC68108	XC031801B
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	2/15/2009
CERTIFIED VALUE	22.95	58.82
RUN 1	22.76	57.35
RUN 2	22.99	57.12
RUN 3	22.76	56.66
MEAN	22.83	57.04
ERROR RATE	-0.51%	-3.02%

Methane Raw Data

Low	High
9.8	24.7
9.9	24.6
9.8	24.4

GAS TYPE: Propane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111005-109

UNIT: #3 Sinter Plant Stack #2
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

	LOW	HIGH
CYLINDER NUMBER	CC68108	XC031801B
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	2/15/2009
CERTIFIED VALUE	24.52	59.01
RUN 1	22.80	59.90
RUN 2	23.10	60.50
RUN 3	23.60	61.40
MEAN	23.17	60.60
ERROR RATE	-5.52%	2.69%

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG
12/27/2006 14:43:00	9.7 C	23.5 C	9.9 C	22.8 C
12/27/2006 14:44:00	9.6 C	23.3 C	9.9 C	22.8 C
12/27/2006 14:45:00	9.5 C	23.0 C	9.8 C	22.7 C
12/27/2006 14:46:00	12.5 C	53.0 C	16.3 C	59.8 C
12/27/2006 14:47:00	23.9 C	59.2 C	24.7 C	59.7 C
12/27/2006 14:48:00	24.3 C	59.0 C	24.7 C	59.8 C
12/27/2006 14:49:00	24.4 C	59.1 C	24.7 C	59.9 C
12/27/2006 14:50:00	24.3 C	58.7 C	24.5 C	59.6 C
12/27/2006 14:51:00	21.8 C	29.0 C	17.6 C	23.2 C
12/27/2006 14:52:00	10.2 C	22.9 C	9.9 C	23.2 C
12/27/2006 14:53:00	9.9 C	23.0 C	9.9 C	23.1 C
12/27/2006 14:54:00	9.8 C	22.8 C	9.7 C	23.0 C
12/27/2006 14:55:00	13.1 C	52.9 C	16.5 C	60.2 C
12/27/2006 14:56:00	24.5 C	59.2 C	24.4 C	60.3 C
12/27/2006 14:57:00	24.3 C	58.3 C	24.6 C	61.0 C
12/27/2006 14:58:00	24.3 C	58.4 C	24.6 C	60.5 C
12/27/2006 14:59:00	19.7 C	22.4 C	15.3 C	17.9 C
12/27/2006 15:00:00	9.8 C	22.6 C	9.9 C	23.6 C
12/27/2006 15:01:00	9.8 C	22.6 C	9.8 C	23.6 C
12/27/2006 15:02:00	9.7 C	22.6 C	9.8 C	24.3 C
12/27/2006 15:03:00	15.4 C	43.4 C	19.1 C	66.8 C
12/27/2006 15:04:00	19.4 C	62.4 C	24.4 C	61.3 C
12/27/2006 15:05:00	24.2 C	58.4 C	24.4 C	61.4 C
12/27/2006 15:06:00	24.3 C	58.5 C	19.5 C	45.7 C
12/27/2006 15:07:00	24.3 C	58.6 C	21.2 C	64.5 C
12/27/2006 15:08:00	22.6 C	23.7 C	15.9 C	6.5 C
12/27/2006 15:09:00	17.5 C	10.6 C	1.5 C	-0.2 C

Airgas.

Certificate of Analysis: EPA Protocol Gas Mixture

Cylinder Number:	CC68108	Reference Number:	46-124075723-1
Cylinder Pressure:	2000.6 PSIG	Expiration Date:	9/21/2009
Certification Date:	9/21/2006	Laboratory:	ASG - Cheshire - CT

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
METHANE	22.95 PPM	+/- 1%	FTIR	G1
PROPANE	24.52 PPM	+/- 1%	FTIR	G1
Air	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig.

Signature on file

Approval Signature

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
GMIS 11220	AIR	METHANE	SG9154509	24.54 PPM
NTRM 52007	NITROGEN	PROPANE	SG902367ALB	50.5 PPM

Analytical Results

1st Component METHANE

1st Analysis Date: 09/21/2006

R 24.21	S 22.65	Z 0.016	Conc 22.95 PPM
S 22.66	Z -0.013	R 24.22	Conc 22.97 PPM
Z 0.008	R 24.21	S 22.64	Conc 22.95 PPM
			AVG: 22.957 PPM

2nd Component PROPANE

1st Analysis Date: 09/21/2006

R 49.85	S 24.28	Z 0.111	Conc 24.54 PPM
S 24.27	Z -0.011	R 50.02	Conc 24.51 PPM
Z 0.052	R 49.87	S 24.24	Conc 24.52 PPM
			AVG: 24.523 PPM

Airgas.

Certificate of Analysis: EPA Protocol Gas Mixture

Cylinder Number:	XC031801B	Reference Number:	54-124057812-6
Cylinder Pressure:	2000.6 PSIG	Expiration Date:	2/15/2009
Certification Date:	2/15/2006	Laboratory:	ASG - Chicago - IL

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
METHANE	58.82 PPM	+/- 1%	FID	G1
PROPANE	59.01 PPM	+/- 1%	FID	G1
Air	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig.

Signature on file

Approval Signature

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
NTRM 51715		PROPANE	SG9101987ALB	103.6 PPM
GMIS 60104		METHANE	CC146254	249.6 PPM

Analytical Results

1st Component METHANE

1st Analysis Date: 02/15/2006

R 249.1	S 59.23	Z 0	Conc 59.34 PPM
S 58.64	Z 0	R 249.3	Conc 58.71 PPM
Z 0	R 249.3	S 58.36	Conc 58.43 PPM
			AVG: 58.827 PPM

2nd Component PROPANE

1st Analysis Date: 02/15/2006

R 103.7	S 58.76	Z 0	Conc 58.7 PPM
S 59.15	Z 0	R 104	Conc 58.92 PPM
Z 0	R 103.9	S 59.59	Conc 59.42 PPM
			AVG: 59.013 PPM

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

4th 2006

South Sheet Mill Hydrogen Annealing Furnaces

Contents

South Sheet Mill Hydrogen Annealing Furnaces - Natural Gas Usage Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name:	U.S. Steel - Gary Works
Source Address:	One North Broadway Ave., Gary, Indiana 46402
Mailing Address:	One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.:	T089-7663-00121
Facility	South Sheet Mill Hydrogen Atmosphere Batch Annealing Furnaces
Parameter:	NOx
Limit:	37.2 million cubic feet of natural gas per 12 consecutive month period with compliance demonstrated at the end of each month

Year: 2006

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
October	0.00	8.18	8.18
November	0.23	8.05	8.29
December	0.33	7.90	8.23

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by:	Jim Alexander
Title/Position:	Manager, Environmental Air Compliance
Phone:	219.888.3387

Attach a signed certification to complete this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

4th 2006

Turboblower House - No. 6 Boiler

Contents

Turboblower House - No. 6 Boiler Natural Gas Usage Report
Turboblower House - Nos. 1, 2, 3, 5 and 6 Boilers
Semi-Annual Natural Gas Fired Boiler Certification

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U. S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No. T089-7663-00121
Facility: Turboblower Boiler House (TBBH) Boiler No. 6
Parameter: Natural Gas Usage
Limits: 1,059.7 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Quarter: 4th Year: 2006

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
October	49.04	463.20	512.2
November	6.67	491.06	497.7
December	0.00	461.47	461.5

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name:	U. S. Steel – Gary Works
Source Address:	One North Broadway, Gary, Indiana 46402
Mailing Address:	One North Broadway, Gary, Indiana 46402
Source Modification No:	T089-7663-00121

Turbo Blower Boiler House Nos. 1, 2, 3, 5 and 6 Boilers
Natural Gas, Coke Oven Gas, Blast Furnace Gas and/or Fuel Oil
From: August 18, 2006 To: December 31, 2006

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:	MS Williams
Printed Name:	Michael S. Williams
Title/Position:	General Manager
Date:	1-26-07

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Semiannual Report

July 1, 2006 to December 31, 2006

Coke Plant

Contents

Semi-Annual Battery NESHAP Report (40 CFR 63, Subpart L)
Semi-Annual Byproducts NESHAP Report (40 CFR 61, Subpart L and Subpart V)

U.S. Steel
Gary Coke Operations
Semiannual Coke Battery Compliance Certification
40 CFR 63, Subpart L

Reporting Period
July 1 – December 31
2006

Venting Incidents (40 CFR 63.311(d)(1)):

No venting incidents occurred during this reporting period.

Coke Oven Battery Startup, Shutdown, or Malfunction Events (40 CFR 63.311(d)(2):

No startup, shutdown or malfunction events occurred during this reporting period.

Implementation of Work Practice Plans (40 CFR 63.311(d)(3):

The facility was not required to implement the work practice plans during this reporting period under the requirements of 40 CFR 63.306(c).

EPA-R5-2012-0005960000321

US Steel
Gary Coke Operations Byproducts Plant
40 CFR 61, Subpart L
2006 Semiannual Report
Reporting Period: July 1 - December 31

Process Vessels, Storage Tanks, Tar-Intercepting Sumps and Light Oil Sumps (61.132 and 61.133

Number of Leaks Detected: 4
Number of Leaks Repaired: 4

Brief description of any visible defect in the source or ductwork
None beyond usual and customary routine maintenance.

Brief description of any system abnormalities found during each annual maintenance inspection that occurred in this reporting peric
None beyond usual and customary routine maintenance.

Exhausters (61.135):

Number of Exhauster Leaks Detected 0
Number of Exhauster Leaks Repaired: 0

Owner/Operator Statement:
All provisions of 40 CFR 61, Subpart L have been fulfilled during this semiannual reporting period.

EPA-USS-0325764

EPA-R5-2012-0005960000321

US Steel
Gary Coke Operations Byproducts Plant
40 CFR 61, Subpart V
2006 Semiannual Report
Reporting Period: July 1 - December 31

Process Unit Identification: Light Oil Production System

Number of Valves For Which Leaks Were Detected:[1]	0
Number of Valves For Which Leaks Were Not Repaired:	--
Number of Pumps For Which Leaks Were Detected:[1]	1
Number of Pumps For Which Leaks Were Not Repaired:	--
Number of Compressors For Which Leaks Were Detected:[1]	NA, see Subpart L Report for Exhausters
Number of Compressors For Which Leaks Were Not Repaired:	NA, see Subpart L Report for Exhausters

Explain any delay of repairs and, if applicable, why a process unit shutdown was technically infeasible:

None, this reporting period.

Dates of any light oil production system shutdowns (which stops production of light oil)

None, this reporting period.

Results of any NDE performance testing conducted on PRVs in gas/vapor service (after release):[1]

None, this reporting period.

(1 - NDE means no detectable emissions as determined by instrument monitoring at levels 500 ppm)

Owner/Operator Statement:
All provisions of 40 CFR 61, Subpart V have been fulfilled during this semiannual reporting period.

EPA-USS-0325765

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Quarterly Report

4th 2006

No. 4 Boiler House Boiler Nos. 1, 2 and 3

Contents

Semi-Annual Natural Gas Fired Boiler Certification

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name:	U. S. Steel – Gary Works
Source Address:	One North Broadway, Gary, Indiana 46402
Mailing Address:	One North Broadway, Gary, Indiana 46402
Source Modification No:	T089-7663-00121

No. 4 Boiler House Nos. 1, 2, and 3 Boilers
Natural Gas, Blast Furnace Gas and/or Fuel Oil
From: August 18, 2006 To: December 31, 2006

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:	MS Williams
Printed Name:	Michael S. Williams
Title/Position:	General Manager
Date:	1-26-07

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

EPA-R5-2012-0005960000321

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

David Sampias
IDEM/NW Regional Office
8315 Virginia St., Ste 1
Merrillville, Indiana 46410

COMPLETE THIS SECTION ON DELIVERY

A. Signature: X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name): [illegible] C. Date of Delivery: 11-30-2

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label): 7006 0100 0005 6636 1395

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

EPA-USS-0325768

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Rodney Sommerville
City of Gary
Department of Environmental Affairs
839 Broadway 2nd Floor NE
Gary, Indiana 46402

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X R. Sommerville
☐ Agent
☐ Addressee

B. Received by (Printed Name): R. SOMMERVILLE
C. Date of Delivery:

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label): 7006 0100 0005 6636 1401

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

EPA-R5-2012-0005960000321

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Dave Cline
Indiana Department of Environmental Mgt.
Office of Air Quality
Mail Code 61-50
100 N. Senate Avenue
Indianapolis, IN 46204-2251

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) John F. Jackson C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

JOHN F. JACKSON

FEB 0 2 2007

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7006 0100 0005 6636 1388

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

EPA-USS-0325770

If there are any questions concerning the enclosed, please contact me at 219.888.3387.

Sincerely,

Jim Alexander
Manager, Environmental Air Compliance

cc:

Dave Sampias (w/o diskette data)
IDEM/NWRO
8315 Virginia St, Suite 1
Merrillville, Indiana 46410

Rodney Sommerville (w/o diskette data)
Environmental Affairs Department
839 Broadway, 2nd Floor NE
Gary, Indiana 46402

America's Steel Most Recycled Material

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: U. S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Reporting Period: January 1, 2007 to March 31, 2007

This certification shall be included when submitting monitoring, testing report/results or other documents as required by this approval.

Please check what document is being certified:

X Test Result (specify) Sinter Plant Relative Accuracy Test Audit Report
X Reports (specify) Quarterly Deviation and Compliance Monitoring Report for Iron Producing
Quarterly Deviation and Compliance Monitoring Report for Steel Producing North
Quarterly Deviation and Compliance Monitoring Report for Steel Producing South
Quarterly Deviation and Compliance Monitoring Report for Coke Plant
No. 2 Precarbon Facility Compliance Monitoring
Coke Battery Nos. 2, 5 and 7 Opacity Exceedances
Coke Battery Nos. 2, 5 and 7 Underfiring NG Injection Jets Natural Gas Usage Rates
Coke Battery Nos. 2, 5 and 7 Underfiring COMS Excess Emissions
Coke Battery Nos 2, 5 and 7 Underfiring Opacity Monitor Performance Audit
Coke Plant Boiler House Nos. 1 through 10 Boilers Natural Gas Usage Rates
Coke Plant Boiler House Nos. 1 through 10 Boilers NOx Emissions
No. 3 Sinter Plant Recirculating Burners Natural Gas Usage Rates
No. 3 Sinter Plant Recirculating Burners Coke Oven Gas Usage Rates
No. 3 Sinter Plant CEMS Excess Emissions
South Sheet Mill Hydrogen Annealing Furnaces Natural Gas Usage Rates
Turboblower Boiler House Boiler No 6 Natural Gas Usage Rate

- Notification (specify)
- Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature: MS Williams

Printed Name: Michael S. Williams

Title/Position: General Manager

Date: 4-23-07

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: U.S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121

Months: January 1 **to** March 31 **Year:** 2007

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☒ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Permit Requirement (specify permit condition #) C.1(a), D.7.16

Date of Deviation: 02/06/07	**Duration of Deviation:** 6 minutes/deviation

Number of Deviations: 1

Probable Cause of Deviation: Keeper closed hole without the ceramic sealing ring combined with a cut nozzle allowed clay to leak in the trough where it burned and produced emissions.

Response Steps Taken: Review procedure with Keeper.

Permit Requirement (specify permit condition #) C.1(a), D.7.16

Date of Deviation: 03/14/07	**Duration of Deviation:** 6 minute/deviation

Number of Deviations: 2

Probable Cause of Deviation: While preparing for an outage, bearing failure to shaft of No. 2 fan reduced baghouse emissions capture.

Response Steps Taken: Repair the damage to No. 2 fan.

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document is true, accurate and complete.

Form Completed By: Dale Baker

Title/Position: Division Manager, Iron Producing

Date: April 23, 2007

Phone: 219.888.4688

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: U.S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121

Months: January 1 to March 31 **Year:** 2007

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☒ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
Permit Requirement (specify permit condition #) D.9.4(c), D.9.17	
Date of Deviation: 01/15/07	**Duration of Deviation:** 3 minutes
Number of Deviations: 1	
Probable Cause of Deviation: Water entrained in the scrap that was charged was possibly frozen.	
Response Steps Taken: Increase scrap preheating time to prevent further incidents.	

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document is true, accurate and complete.

Form Completed By: Casey C. Carrabine

Title/Position: Division Manager, Steel Producing North

Date: April 23, 2007

Phone: 219.888.4803

Attach a signed certification to complete this report.

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: U.S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121

Months: January 1 **to** March 31 **Year:** 2007

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☒ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Permit Requirement (specify permit condition #) D.8.4(b), D.8.15

Date of Deviation: 02/12/07	**Duration of Deviation:** 3 minutes

Number of Deviations: 1

Probable Cause of Deviation: Reaction from resuming the blow on Mary furnace.

Response Steps Taken: Visually check lime feed system to ensure that there is no contamination.

Permit Requirement (specify permit condition #) D.8.4(b), D.8.15

Date of Deviation: 02/23/07	**Duration of Deviation:** 3 minutes

Number of Deviations: 1

Probable Cause of Deviation: Puffing condition from Evelyn's furnace lance port

Response Steps Taken: Checked duct system for leaks and possible sources of extraneous air. Seal leaks between breach and upper hood.

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document is true, accurate and complete.

Form Completed By: Robert H. Lange

Title/Position: Division Manager, Steel Producing South

Date: April 23, 2007

Phone: 219.888.7435

U.S. Steel – Gary Works

Indiana Department of Environmental Management

1st Quarter 2007

Coke Plant

Contents

No. 2 Precarbon Facility Compliance Monitoring and Deviation Report
Nos. 2, 5 and 7 Underfiring Stacks COMS Excess Emissions Report (on Disk)
Nos. 2, 5 and 7 Underfiring Stacks Opacity Monitor Performance Audit

U. S. Steel - Gary Works
Coke and Chemicals Division
Precarbon COMS Waiver
Compliance Monitoring and Deviation Report

Reporting Period: 1st Quarter 2007

#2 Precarbon

Parameter	Deviations Occurred This Reporting Period	No Deviations Occurred This Reporting Period
%CO		X
PVolts		X
PAmps		X
SVolts		X
SAmps		X
ESPress		X
VEs		X

Key	Limit	Description
%CO	<6%	Percent of CO at discharge of combustion chamber
PVolts	>300	Primary Field Voltage
Pamps	>30	Primary Field Amperage
SVolts	>300	Secondary Field Voltage
Samps	>30	Secondary Field Amperage
ESPress	≥0	ESP Static Pressure
VEs	<13%	Visible Emissions

Explanation and Corrective Actions

NA

INQUEST
ENVIRONMENTAL INC.

3609 Mojave Ct., Ste E ◆ COLUMBIA, MO 65202
(573) 474-8110 ◆ FAX: (573) 474-8371

March 16, 2007

Mr. Kevin Bish
USS - Gary Works
MS-11-6
1 N. Broadway
Gary, Indiana 46402

RE: US Steel Coke Plant, Gary, Indiana, 1st Quarter, 2007, Opacity Monitor Performance Audits.

Dear Mr. Abbott,

Please find enclosed the results of the performance audits that were recently conducted on the three, Teledyne Monitor Labs, Model 560, opacity monitors that are located on #'s 2, 5, & 7 battery stacks in the Gary Coke Plant.

The audits were performed on March 13th, 2007. The start time and date for each audit were as follows:

Battery Stack #2	08:10 a.m.	03/13/07
Battery Stack #5	10:30 a.m.	03/13/07
Battery Stack #7	01:15 p.m.	03/13/07

All audits were conducted in accordance with 326 IAC 3-5-5 (c)(3). Currently certified neutral density filters were used during each audit. A copy of the certification of the filters used has been enclosed.

Each audit began with the recording of the most recent, daily, automatic, zero and upscale calibration readings. Real-time opacity readings were then recorded, the optics were cleaned, and the real-time readings were taken again.

The calibration device was then attached to the transmissometer in order to simulate a clear stack zero reading. The zero reading of the instrument was then recorded.

Three NIST certified neutral density filters were then individually inserted in the calibration device. The known value of each filter and the instrument's response was recorded. The known value of each filter was adjusted according to each stack's exit correlation ratio. Each filter was inserted five times with the zero reading being recorded after each pass of the filters. The sixth and final pass allowed for the PI system's (data acquisition system) six-minute averages to update with each filter before the reading was recorded.

After the filter challenges were complete, all purge air intake dust filters were cleaned. All lenses and windows in each instrument were also cleaned. The primary goal of the cleanings is to ensure that all seals are cleaned so as to protect the instrument's optics and electronics. The final steps taken consisted of checking the service data readings of each instrument. The service readings may give an indication of any potential problems with the instruments. All readings were found to be at proper levels.

Following each audit, the control panels mounted in the meter rooms were checked, and were verified to be

working properly. Parameters that were checked included the most recent automatic upscale calibration values, the most recent automatic zero readings, and the window dirt percentage levels. All were found to be within limits.

A table has been included below to summarize the results of the performance audits.

Parameter	Limit	Result	Pass/Fail
Stack Exit Correlation Error	≤ 2%	#2 0.0% #5 0.0% #7 0.0%	Pass Pass Pass
Zero & Upscale Response	≤ ±2%	#2 0.0% & -076% #5 0.0% & -0.2% #7 0.0% & -0.8%	Pass Pass Fail
Zero Compensation	≤ 4%	#2 0.0% #5 0.0% #7 0.0%	Pass Pass Pass
Optical Alignment	Manufacturer's Recommendation	Verified correct, all instruments	Pass
Optical Surface Dust	≤ 4%	#2 0.20% #5 0.63% #7 0.02%	Pass Pass Pass
Calibration Error	≤ 3%	#2 Low 0.1 %, Mid 0.4%, High 0.6% #5 Low 0.1%, Mid 0.6%, High 0.2% #7 Low 0.1%, Mid 0.7%, High 0 1%	Pass Pass Pass

Following the audits, Unit #7 was taken off of the stack and a clear stack, bench top calibration was conducted. The unit was found to be operating normally. The unit was then cleaned and placed back on the stack and back into normal service.

Included in this report are the worksheets and calculations for each of your opacity monitor audits, the current certification for the neutral density filters used, and copies of the database trends produced during each audit.

Thank you very much for choosing Inquest Environmental to participate in this project. We are very pleased to have your organization as a client. Please feel free to call with any comments or questions.

Sincerely,

John A. Kunkel
Inquest Environmental, Inc.

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation:	US Steel	Monitor ID:	#2 Battery Stack
Facility:	Gary, Indiana	Make/Model:	USI 560
Date:	3/13/2007	Serial No.	5601014
Start Time:	8:10am Stop:9:45am		
Auditor:	John Kunkel	Representing:	Inquest Environmental, Inc.
Attendees:	Cody Boston	Representing:	Inquest Environmental, Inc.

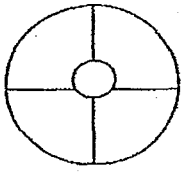
Stack exit inside diameter (ft) = Lx	16.75	Calculated stack exit correlation ratio (Lx / Lt)	0.846
Transmissometer single path length (ft) = Lt	19.79	Source-cited stack exit correlation ratio	0.846
		Stack exit correlation error (Limit ±2%)	0.0

Warning Lamps	OPACITY ALARM	Off	CAL FAIL	Off	POWER FAIL	Off
	DIRTY WINDOW	On	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal. value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal. value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto. cal. value (%Op)	37.3			
Panel meter upscale calibration value (%Op)	36.6	Error (%Op)	-0.7	(Limit ±2%)
Data recorder upscale cal. value (%Op)	36.6	Error (%Op)	-0.7	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	1.6	Transceiver pre-cleaning effluent Opacity (%)	2.2
Retroflector post-clean effluent Opacity (%)	1.4	Transceiver post-clean effluent Opacity (%)	1.6
Retro. optics dust accumulation (Limit 2% Op)	0.2	Trans. Optics dust accumulation (Limit 2% Op)	0.6
Total optical dust accumulation (Limit 4% Op)	0.8		

Is Alignment correct? Yes Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation.

Calibration Error Check

Range	Low	Mid	High
Filter Serial No.	TT43	VB55	TT44
Certified % Op	19.4	25.8	38.9
Corrected % Op	16.8	22.4	34.2

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0.2	16.9	22.1	34.8	
	0.3	16.8	22.1	34.8	
	0.2	16.8	22.0	34.5	
	0.2	16.9	22.2	34.6	Final Zero
	0.1	16.8	22.1	34.6	0.2
DAS six-minute average	0.2	16.8	22.1	34.6	0.4

Results	Low	Mid	High	
Mean error	0.0	-0.3	0.5	
Confidence interval	0.1	0.1	0.2	
Calibration error	0.1	0.4	0.6	(Limit 3%)
Six-minute averaged error	0.0	-0.3	0.4	(Limit ±2%)

Inquest Environmental, Inc.
Opacity Monitor Audit

Calculations

Stack Exit Correlation Error (%) = (Cited ratio - Calculated ratio) / Calculated ratio x 100

Zero Error (% Opacity) = Measured zero value - Cited zero value

Span Error (% Opacity) = Measured span value - Cited span value

Retroflector Dust Accumulation (% Opacity) = Pre-cleaning Opacity - Post-cleaning Opacity

Transceiver Dust Accumulation (% Opacity) = Pre-cleaning Opacity - Post-cleaning Opacity

Total Dust Accumulation (% Opacity) = Retroflector accumulation + Transceiver accumulation

Corrected Filter Opacity =
[1 - (((1 - Filter value/100)^(Stack exit correlation ratio)) x (1 - Final jig zero/100))] x 100

Difference = Measured Opacity - Corrected filter Opacity

Difference^2 = (Measured Opacity - Corrected filter Opacity)^2

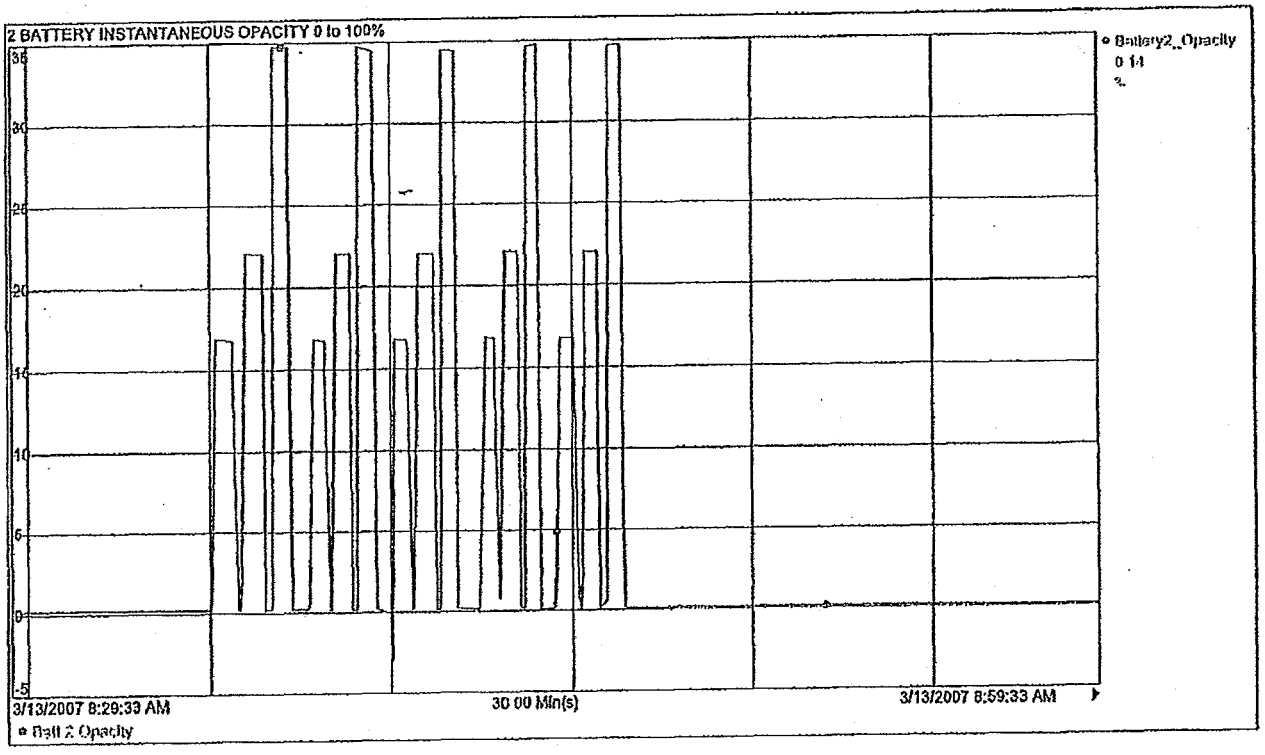
n = Number of readings

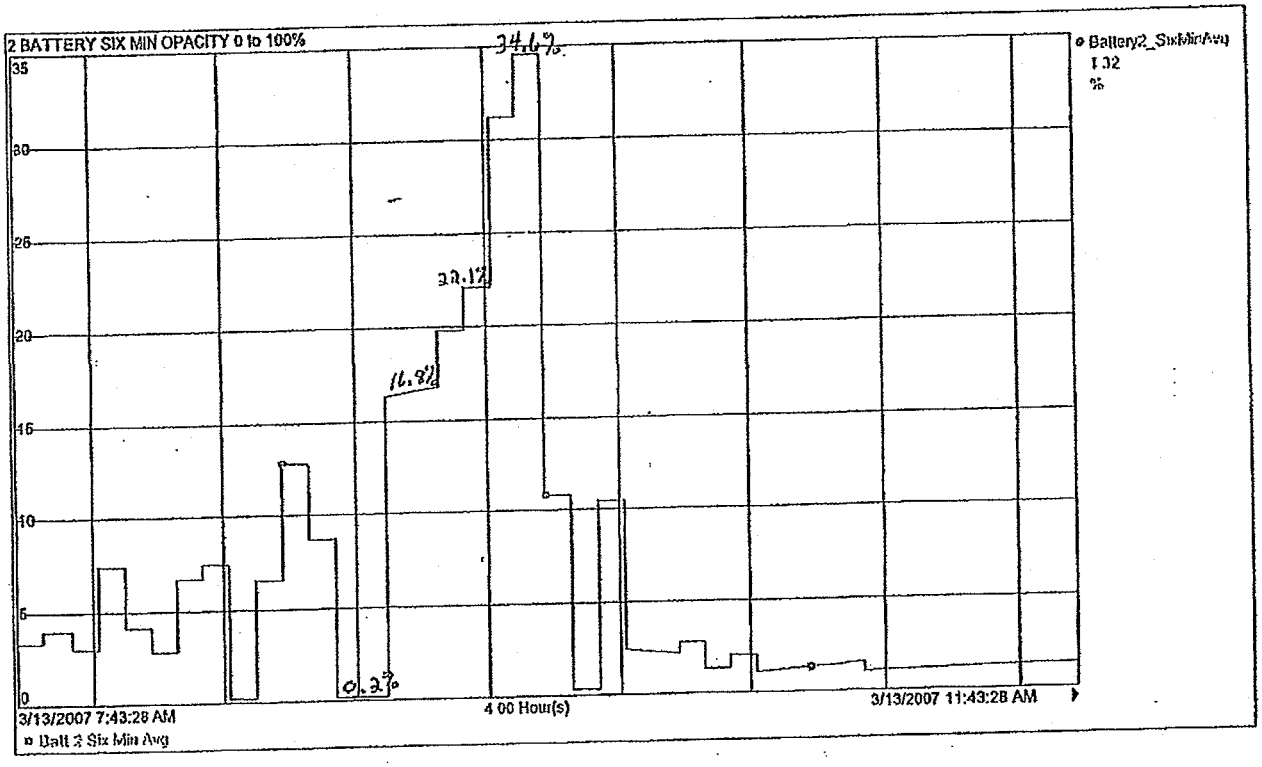
Mean Error (ME) = SUM(Difference) / n

Confidence Interval (CI)= SQRT[(n x SUM(Difference^2)) - SUM(Difference)^2] x 0.2776

Calibration Error (CE)= ABS(ME) + CI

Six-Minute Averaged Error = Six-minute averaged Opacity - Corrected filter Opacity


2 BATTERY INSTANTANEOUS OPACITY 0 to 100%
35
30
25
20
15
10
5
0
-5
3/13/2007 8:29:33 AM
30 00 Min(s)
3/13/2007 8:59:33 AM
Batt 2 Opacity
Battery2_Opacity


2 BATTERY SIX MIN OPACITY 0 to 100%
35
30
25
20
15
10
5
0
34.6%
22.1%
16.8%
0.2%
3/13/2007 7:43:28 AM
4 00 Hour(s)
3/13/2007 11:43:28 AM
Battery2_SixMinAvg
1.32
%
Batt 2 Six Min Avg

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation:	US Steel	Monitor ID:	#5 Battery Stack
Facility:	Gary, Indiana	Make/Model:	USI 560
Date:	3/13/2007	Serial No.	5601011
Start Time:	10:30am Stop:11:55am		
Auditor:	John Kunkel	Representing:	Inquest Environmental, Inc.
Attendees:	Cody Boston	Representing:	Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	6.00	Calculated stack exit correlation ratio (Lx / Lt)	0.484
Transmissometer single path length (ft) = Lt	12.40	Source-cited stack exit correlation ratio	0.484
		Stack exit correlation error (Limit ±2%)	0.0

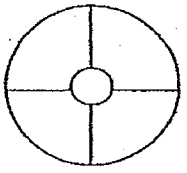
Warning Lamps	OPACITY ALARM	Off	CAL FAIL	Off	POWER FAIL	Off
	DIRTY WINDOW	Off	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal. value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal. value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto cal. value (%Op)	35.3			
Panel meter upscale calibration value (%Op)	35.1	Error (%Op)	-0.2	(Limit ±2%)
Data recorder upscale cal. value (%Op)	35.1	Error (%Op)	-0.2	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	4.8	Transceiver pre-cleaning effluent Opacity (%)	4.9
Retroflector post-clean effluent Opacity (%)	4.6	Transceiver post-clean effluent Opacity (%)	4.8
Retro. optics dust accumulation (Limit 2% Op)	0.2	Trans. Optics dust accumulation (Limit 2% Op)	0.1
Total optical dust accumulation (Limit 4% Op)	0.3		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

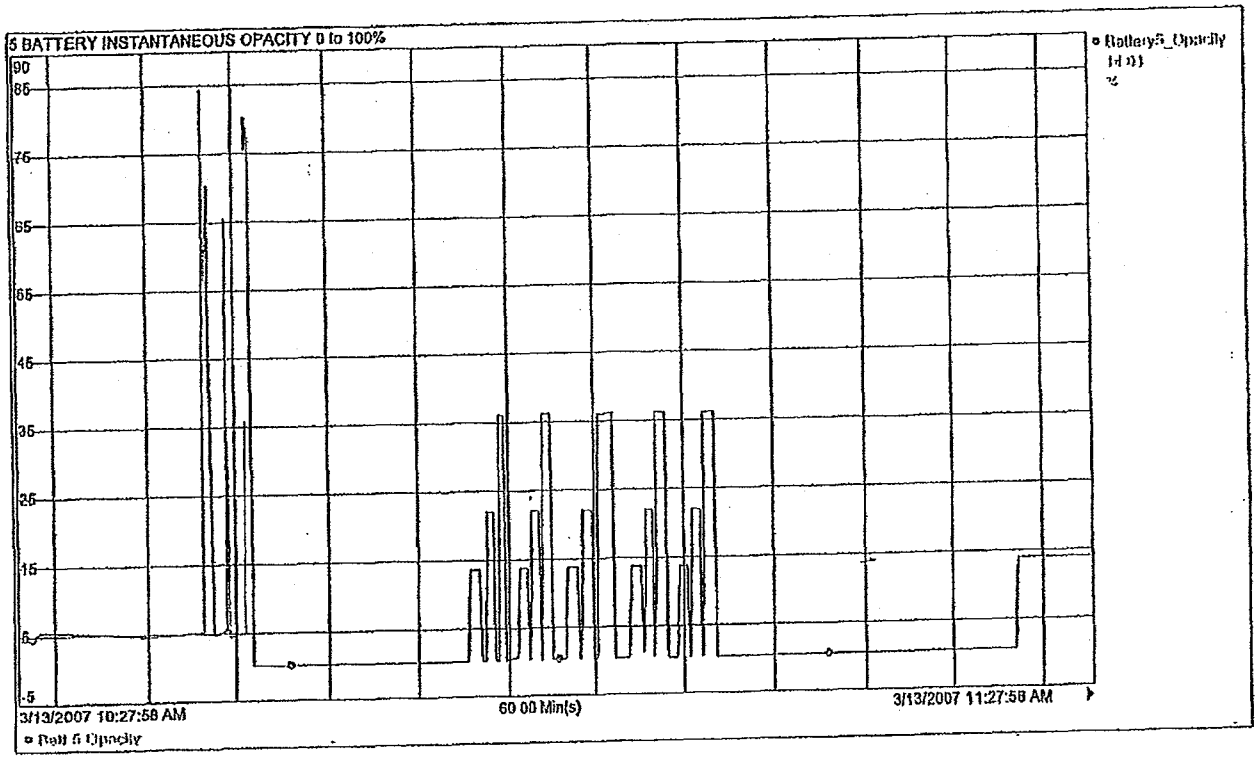
Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation.

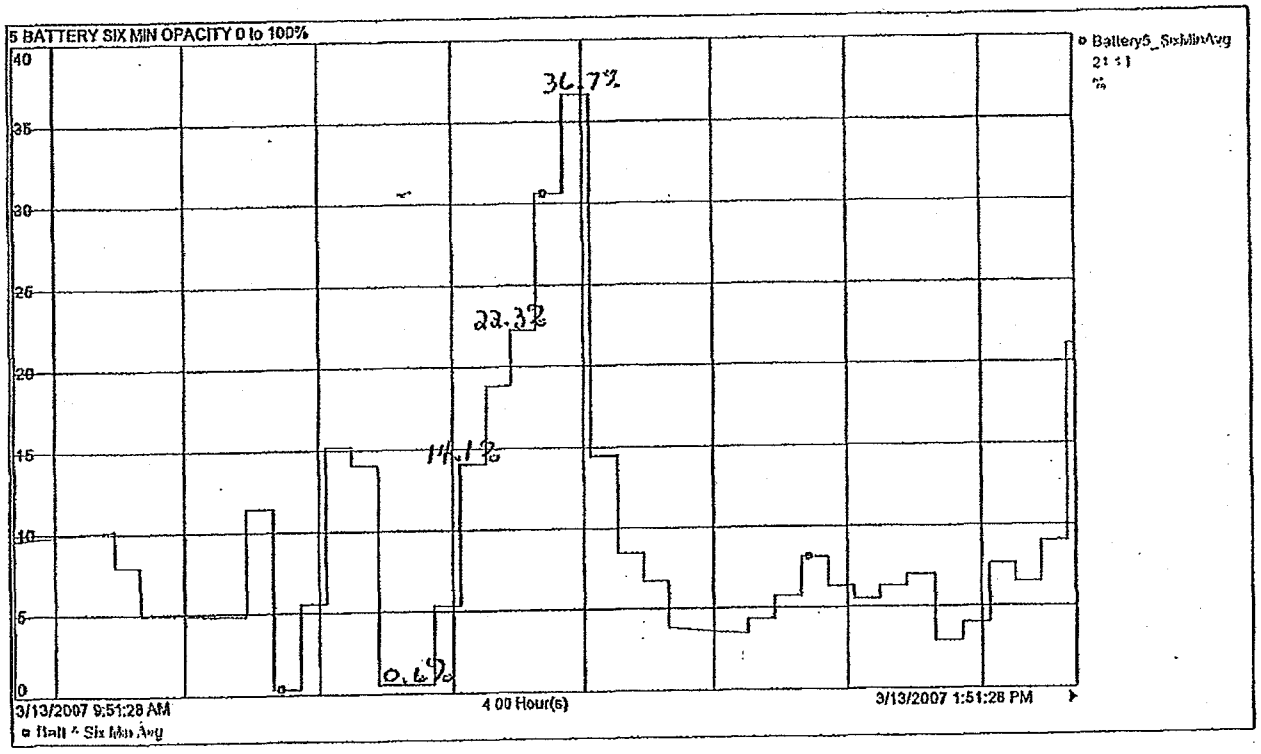
Calibration Error Check

Range	Low	Mid	High
Filter Serial No.	VB55	TT44	VN87
Certified % Op	25.8	38.9	60.3
Corrected % Op	13.7	21.5	36.3

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0.4	13.7	22.0	36.2	
	0.3	13.7	22.1	36.3	
	0.4	13.9	22.1	36.1	
	0.3	13.8	22.0	36.3	Final Zero
	0.4	13.8	22.1	36.1	0.3
DAS six-minute average	0.6	14.1	22.3	36.7	0.5

Results	Low	Mid	High	
Mean error	0.0	0.6	-0.1	
Confidence interval	0.1	0.0	0.1	
Calibration error	0.1	0.6	0.2	(Limit 3%)
Six-minute averaged error	0.3	0.8	0.4	(Limit ±2%)


5 BATTERY INSTANTANEOUS OPACITY 0 to 100%
90
85
75
65
55
45
35
25
15
5
-5
3/13/2007 10:27:58 AM
60.00 Min(s)
3/13/2007 11:27:58 AM
Batt 5 Opacity


5 BATTERY SIX MIN OPACITY 0 to 100%
40
35
30
25
20
15
10
5
0
36.7%
22.3%
14.1%
0.6%
3/13/2007 9:51:28 AM
4 00 Hour(s)
3/13/2007 1:51:28 PM

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation:	US Steel	Monitor ID:	#7 Battery Stack
Facility:	Gary, Indiana	Make/Model:	USI 560
Date:	3/13/2007	Serial No.	5601012
Start Time:	1:15pm Stop:2:35pm		
Auditor:	John Kunkel	Representing:	Inquest Environmental, Inc.
Attendees:	Cody Boston	Representing:	Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	6.00	Calculated stack exit correlation ratio (Lx / Lt)	0.503
Transmissometer single path length (ft) = Lt	11.94	Source-cited stack exit correlation ratio	0.503
		Stack exit correlation error (Limit ±2%)	0.0

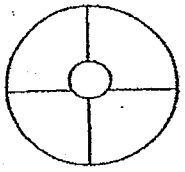
Warning Lamps						
	OPACITY ALARM	Off	CAL FAIL	On	POWER FAIL	Off
	DIRTY WINDOW	Off	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal. value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal. value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto. cal. value (%Op)	33.6			
Panel meter upscale calibration value (%Op)	32.8	Error (%Op)	-0.8	(Limit ±2%)
Data recorder upscale cal. value (%Op)	32.8	Error (%Op)	-0.8	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	2.2	Transceiver pre-cleaning effluent Opacity (%)	2.4
Retroflector post-clean effluent Opacity (%)	2.2	Transceiver post-clean effluent Opacity (%)	2.2
Retro optics dust accumulation (Limit 2% Op)	0.0	Trans. Optics dust accumulation (Limit 2% Op)	0.2
Total optical dust accumulation (Limit 4% Op)	0.2		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

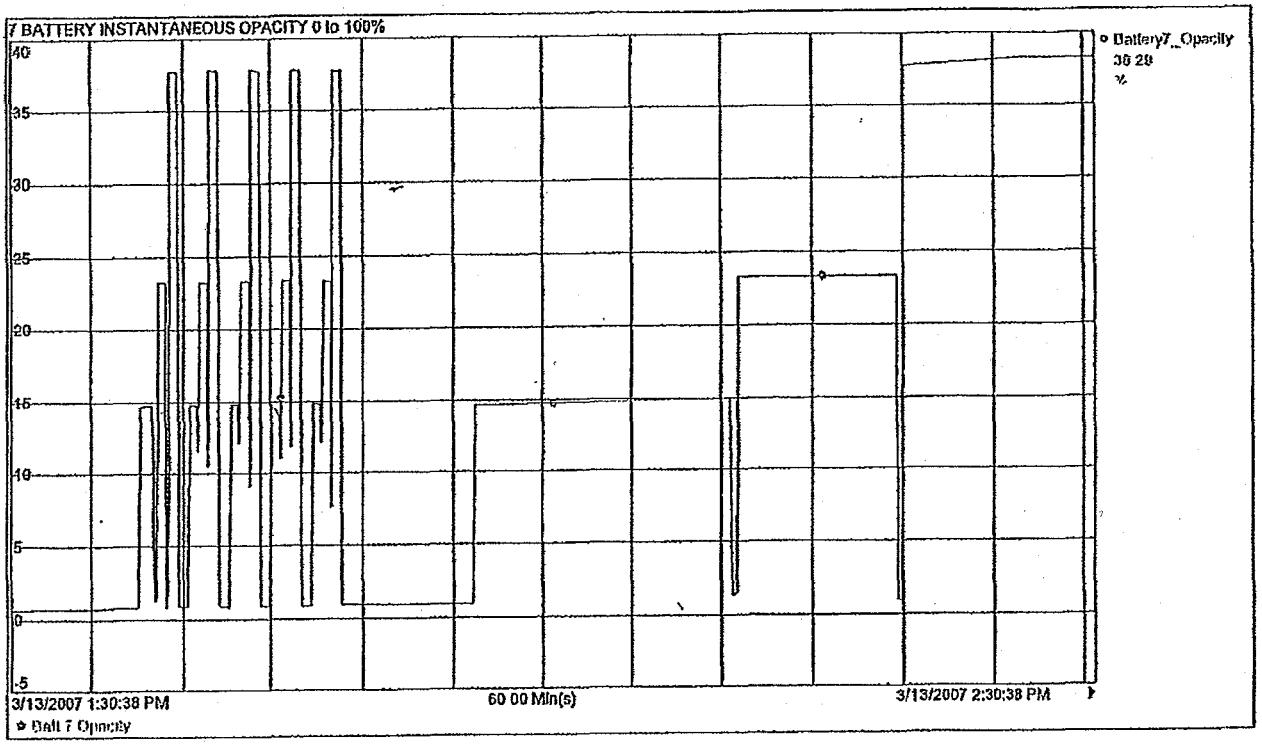
Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation.

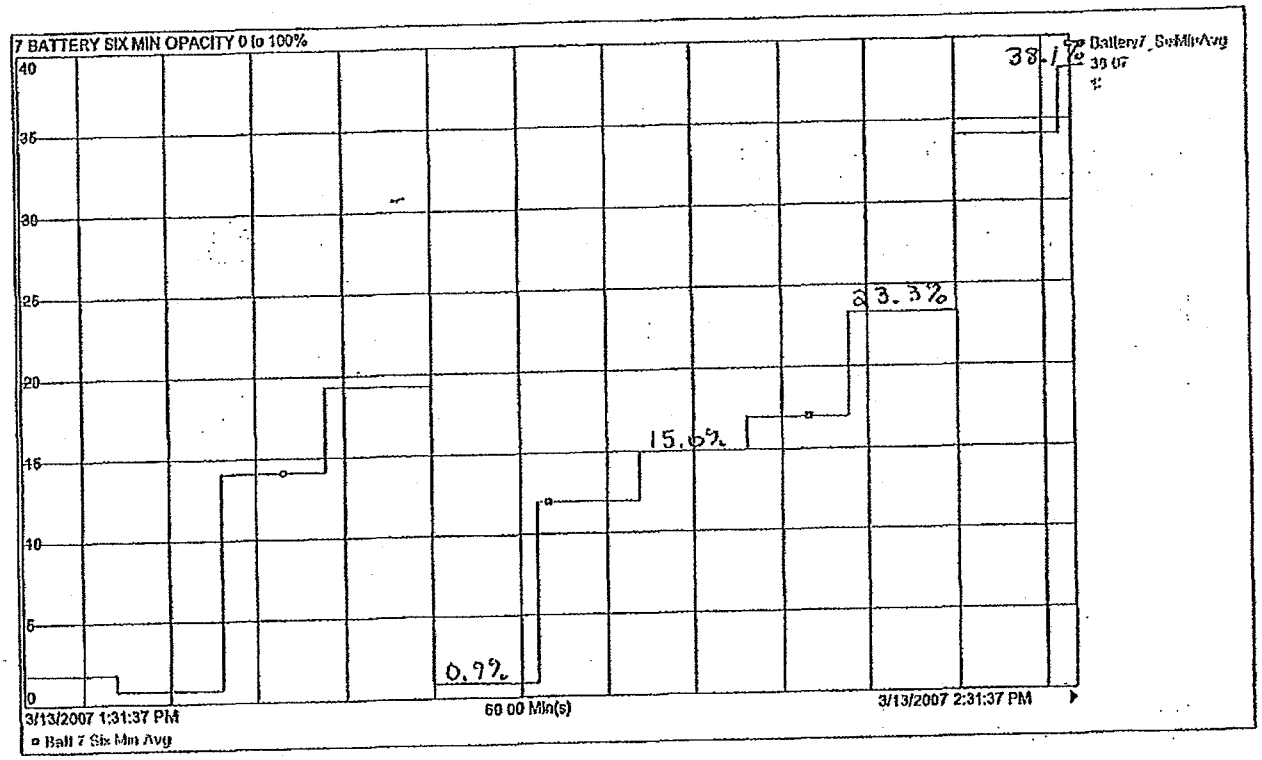
Calibration Error Check

Range	Low	Mid	High
Filter Serial No.	VB55	TT44	VN87
Certified % Op	25.8	38.9	60.3
Corrected % Op	14.7	22.7	37.8

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0.6	14.7	23.3	37.8	
	0.9	14.8	23.3	37.8	
	0.9	14.8	23.3	37.9	
	0.9	14.8	23.4	37.8	Final Zero
	0.8	14.9	23.4	37.8	0.9
DAS six-minute average	0.9	15.0	23.3	38.1	1.0

Results	Low	Mid	High	
Mean error	0.0	0.6	0.0	
Confidence Interval	0.1	0.1	0.1	
Calibration error	0.1	0.7	0.1	(Limit 3%)
Six-minute averaged error	0.3	0.6	0.3	(Limit ±2%)


7 BATTERY INSTANTANEOUS OPACITY 0 to 100%
40
35
30
25
20
15
10
5
0
-5
Battery7_Opacity
36 29
%
3/13/2007 1:30:38 PM
60 00 Min(s)
3/13/2007 2:30:38 PM
Batt 7 Opacity


7 BATTERY SIX MIN OPACITY 0 to 100%
40
35
30
25
20
15
10
5
0
38.1%
23.3%
15.6%
0.7%
3/13/2007 1:31:37 PM
60 00 Min(s)
3/13/2007 2:31:37 PM
Ball 7 Six Min Avg

CAL CHECK

11600 Black Horse Run, Raleigh, North Carolina 27613 Phone (919) 847-1898 FAX (919) 847-8005

REPORT OF CERTIFICATION OF NEUTRAL DENSITY AUDIT FILTERS

Report prepared for: **Inquest Environmental Inc**

Date of Filter Certification: **September 29, 2006**
Date of Filter Expiration: September 28, 2007

Monitor Make/Model: **Teledyne-Monitor Labs 560**

Audit Device/Filter Slot Angle of Incidence: **10 degrees**
Path-Length Correction: 1.000 (1.000 constitutes no taper)

Table 1-1: Individual Filter Certification Data

Serial Number	Opacity Value (%)	Transmittance (%)	Optical Density	Previous Opacity (%)	Change in Opacity (%)	Accuracy (%)
TT42	8.8	91.2	0.0399			± 0.5
TT43	19.4	80.6	0.0939	18.9	0.5	± 0.5
VB55	25.8	74.2	0.129	25.4	0.4	± 0.5
TT44	38.9	61.1	0.214			± 0.5
VN87	60.3	39.7	0.402			± 0.5

- **Calibration of Spectrophotometer**

Instrument
Spectrophotometer: Varian Cary 50 Serial Number: EL0309-7553
Testing Range: 380nm to 780nm

SRM Reference Material
Calibration Filters: NIST 930D SRM Serial No's: Blank; 30-1505; 20-1505; 10-1505
Date of SRM Certification: 01-19-06 Laboratory Environment: 72 deg F +/- 4 deg F

- **Description of Certification**

Cal Check certifies filters per 40 CFR Part 60, Subpart B, "Performance Specification 1", section 7.1.2. Opacity values are determined and assigned to each filter by use of a laboratory-based spectrophotometer exceeding the specifications set forth in section 6.3 of Performance Specification 1, and certified accurate daily using National Institute of Standards and Technology (NIST) 930D Standard Reference Materials (SRM).

"Your Clear Choice for Opacity Monitor On-Stack Testing"
Visit us on the web at www.calcheck.com

U.S. Steel – Gary Works

Indiana Department of Environmental Management

1st Quarter 2007

Coke Plant

Contents

Coke Oven Battery Underfiring Natural Gas Injection Jets NG Usage Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002 and CPNG003)
Parameter: Natural Gas Usage
Limit: 178.7 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
January	0.0	0.0	0.0
February	1.4	0.0	1.4
March	19.7	0.0	19.7

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Anthony E. Pacilio
Title/Position: Division Manager, Coke
Phone: 219.888.4028

Attach a signed certification to complete this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

1st Quarter 2007

Coke Plant Boiler House

Contents

Coke Plant Boiler House – Nos. 1 through 10 Boilers Natural Gas Usage Report
Coke Plant Boiler House – Nos. 1 through 10 Boilers NOx Emissions Report
Coke Plant Boiler House – Nos. 9 and 10 Boilers CO Excess Emissions Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary Indiana 46402
Mailing Address: One North Broadway, Gary Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Boilers No. 1 through No. 10 at the Coke Plant Boiler House
Parameter: Total Natural Gas Usage
Limit: Less than 2,550 million cubic feet (MMCF) per 12-consecutive month period with compliance determined at the end of each month.

Quarter: 1st Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
January	5.8	75.4	81.2
February	6.0	76.8	82.9
March	5.5	77.5	83.0

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Kevin F. McGuire
Title/Position: Area Manager, Utilities
Phone: 219.888.2719

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary Indiana 46402
Mailing Address: One North Broadway, Gary Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Boilers No. 1 through No. 10 at the Coke Plant Boiler House
Parameter: Total NOx Emissions
Limit: Less than 64.6 tons per twelve (12) consecutive month period period with compliance determined at the end of each month

NOx Emissions (tons/month) = (280 X + 36 Y + 129 Z) / 2000
Where X=total monthly natural gas usage in Boilers Nos. 1 through 8 (MMcf/month)
Y=monthly natural gas usage rate in temporary rental boiler (MMcf/month)
Z=total monthly natural gas usage in Boilers Nos. 9 and 10 (MMcf/month)

Quarter: 1st Year: 2007

Month	Boiler Nos. 1 through 8		Boiler Nos. 9 and 10		NOx Emissions (tons)	NOx Emissions Previous 11 Months	NOx Emissions 12-month Period
	Natural Gas Usage Rate (MMcf)	NOx Emissions (tons)	Natural Gas Usage Rate (MMcf)	NOx Emissions (tons)			
January	4.20	0.59	1.65	0.11	0.69	9.15	9.85
February	5.27	0.74	0.75	0.05	0.79	9.25	10.04
March	5.44	0.76	0.09	0.01	0.77	9.35	10.12

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Kevin F. McGuire
Title/Position: Area Manager, Utilities
Phone: 219.888.2719

Attach a signed certification to complete this report.

U.S. Steel Corporation – Gary Works
Coke Plant Boiler House No. 9 Boiler
First (1st) Quarter 2007 Excess Emissions Report
Part 70 Permit No. T089-7663-00121

Plant Operations Downtime Summary

Date of facility downtime:	None
Time of commencement and completion of downtime:	None
Reason(s) for the downtime:	None
Total facility downtime for this quarter:	None

Excess Emissions Summary

Date of excess emissions:	No excess emissions this quarter
Time of commencement and completion:	
Magnitude:	
Reason(s) for excess emissions:	

CEMS Instrument Downtime Summary

Date of downtime:	No CEMS downtime during boiler operation
Time of commencement:	
Duration of downtime:	
Nature of system repairs and adjustments:	

U.S. Steel Corporation – Gary Works
Coke Plant Boiler House No. 10 Boiler
First (1st) Quarter 2007 Excess Emissions Report
Part 70 Permit No. T089-7663-00121

Plant Operations Downtime Summary

Date of facility downtime:	Various times during the quarter, does not affect CEMS operation
Time of commencement and completion of downtime:	Various times during the quarter, does not affect CEMS operation
Reason(s) for the downtime:	Regularly scheduled outages and unscheduled boiler stoppages
Total facility downtime for this quarter:	Approximately 4 days

Excess Emissions Summary

Date of excess emissions:	No excess emissions this quarter
Time of commencement and completion:	
Magnitude:	
Reason(s) for excess emissions:	

CEMS Instrument Downtime Summary

Date of downtime:	No CEMS downtime during boiler operation
Time of commencement:	
Duration of downtime:	
Nature of system repairs and adjustments:	

U.S. Steel – Gary Works

Indiana Department of Environmental Management

1st Quarter 2007

No. 3 Sinter Plant

Contents

No. 3 Sinter Plant – Reheat Burners NG and COG Usage Report
No. 3 Sinter Plant – VOC Excess Emissions Report
No. 3 Sinter Plant – VOC CEM Cylinder Gas Audit

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name:	U.S. Steel - Gary Works
Source Address:	One North Broadway Ave., Gary, Indiana 46402
Mailing Address:	One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.:	T089-7663-00121
Facility	Nos. 1 and 3 Sinter Strand, Natural Gas Reheat Burners (ISB001 and ISB003)
Parameter:	Natural Gas Usage
Limit:	95.5 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
January	0.000	1.222	1.222
February	0.000	1.222	1.222
March	0.000	0.084	0.084

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by:	Jim Alexander
Title/Position:	Manager, Environmental Air Compliance
Phone:	219.888.3387

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Nos. 1 and 3 Sinter Strand, Recirculating Burners (ISB001 and ISB003)
Parameter: Coke Oven Gas
Limit: 1,637.4 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2007

Month	Coke Oven Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
January	14.959	203.452	218.411
February	27.573	155.989	183.562
March	22.438	156.846	179.284

☑ No deviation occurred in this quarter.

☑ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

EPA-R5-2012-0005960000321

U. S. Steel Sinter Plant CEMS - Quarterly Excess Emissions Summary

First Quarter 2007

Date	Limit Exceeded	Emission Rate	Cause/Reason	Corrective Action

No Excess Emissions This Quarter

52.15 tons Quarterly VOC Emissions

0 Quarterly VOC Exceedances

EPA-USS-0325804

EPA-R5-2012-0005960000321

U. S. Steel Sinter Plant CEMS - Quarterly System Downtime Summary

First Quarter 2007

	Date	Time	Hours Lost	System Component	Cause/Reason	Corrective Action
Start	5-Jan-07	6:29	6	Stack 1 Flow	Failed Calibration	Initiated Daily Calibration
Stop	5-Jan-07	11:38				
Start	19-Jan-07	10:00	3	All	Changed Air Bottle	Recalibrate system Initiated Daily Calibration
Stop	19-Jan-07	13:00				
Start	24-Jan-07	8:37	2	All	Changed Daily Cal Cylinder	Recalibrate system Initiated Daily Calibration
Stop	24-Jan-07	9:37				
Start	26-Jan-07	6:29	2	Stack 1 Flow	Failed Calibration	Initiated Daily Calibration
Stop	26-Jan-07	7:53				
Start	8-Feb-07	7:56	2	NMHC Stack 1	Calibration Drift	Recalibrate system Initiated Daily Calibration
Stop	8-Feb-07	8:20				
Start	21-Feb-07	12:54	2	All	Changed H2 and Daily Cal Cylinder	Recalibrate system Initiated Daily Calibration
Stop	21-Feb-07	13:30				
Start	7-Mar-07	16:27	1	Stack 1 VOC	Stack 2 Maintenance	Recalibrate system Initiated Daily Calibration
Stop	7-Mar-07	16:55				
Start	8-Mar-07	12:52	2	Stack 2 VOC	Satck 1 Maintenance	Recalibrate system Initiated Daily Calibration
Stop	8-Mar-07	13:30				
Start	9-Mar-07	14:34	1	All	Recalibration system	Recalibrate system Initiated Daily Calibration
Stop	9-Mar-07	14:58				
Start	10-Mar-07	6:29	5	Temp Stack 1	Failed Calibration	Initiated Daily Calibration
Stop	10-Mar-07	11:00				
Start	12-Mar-07	12:15	1	All	Cal Drift Stack 2	Recalibrate system Initiated Daily Calibration
Stop	12-Mar-07	12:37				

32.0 Total Hours Invalid

2104.0 Total Hours of Operation

98% Total System Availability

EPA-USS-0325805

Platt Environmental Services, Inc.

371 Balm Court
Wood Dale, IL 60191
630-521-9400
630-521-9494 fax

Relative Accuracy Test Audit

Test Report

U. S. Steel Gary Works
Sinter Plant Windbox Stack No. 1 and Stack No. 2
Gary, Indiana
March 14 and 15, 2007

Report Submittal Date
April 18, 2007

Prepared By

Platt Environmental Services

Report No. M071107

TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 EXECUTIVE SUMMARY 2

3.0 TEST METHODOLOGY 2
- Method 1 Sample and Velocity Traverse Determination 2
- Method 2 Volumetric Flow Rate Determination 3
- Method 3 Oxygen (O_2)/Carbon Dioxide (CO_2) Determination 3
- Method 25A Volatile Organic Compound (VOC) Determination 3
- ANSI/ASTM E337-62 Moisture (H_2O) Determination 4

4.0 TEST RESULT SUMMARY 5

5.0 CONCLUSION AND CERTIFICATION 9

APPENDIX
- Test Section Diagrams 11
- Sample Train Diagrams 15
- Calculation Nomenclature and Formulas 19
- Reference Method Test Data (Hand and Computerized Sheets) 24
- Continuous Emissions Monitoring System Data and Plant Operating Data 68
- Calibration Data 124
- Field Data Sheets 160
- Calibration Gas Cylinder Data 180

1.0 Introduction

PLATT ENVIRONMENTAL SERVICES (PES) conducted a relative accuracy test audit (RATA) test program for Mostardi Platt Environmental (MPE) at the U. S. Steel Gary Works Sinter Plant Windbox Stack No.1 and Stack No.2 in Gary, Indiana on March 14 and 15, 2007. This report summarizes the results of the test program and test methods used.

The test locations, test dates and test parameters are summarized below.

Test Overview

Test Location	Test Date	Test Parameters
Stack No. 1 and Stack No. 2	March 14 and 15, 2007	Non-Methane Hydrocarbons (NMHC) and Volumetric Flow

The identification of individuals associated with the test program is summarized below.

Location	Address	Contact
Test Facility	U.S. Steel Group Sinter Plant One North Broadway Gary, Indiana 46402-3199	Mike Mangahas Onsite Project Manager OCS Environmental, Inc (219) 888-4116
Testing Company Representative	Platt Environmental Services, Inc. 371 Balm Court Wood Dale, Illinois 60191	Jeffrey M. Crivlare (630) 521-9400 (phone) jcrivlare@plattenv.com

The test crew consisted of Messrs. S. Sands, A. Sorce, C. Trezak and J. Crivlare of PES. Mr. Steve Friend of the Indiana Department of Environmental Management (IDEM) observed the test program. The purpose of the test program was to coorellate the relative accuracies of the CEM systems during normal operating conditions.

2.0 Executive Summary

The test results from this test program indicate that each CEM system meets the United States Environmental Protection Agency (USEPA) performance specification for relative accuracy as published in 40 CFR Part 60.

Table 1
Test Results

Test Location	Test Parameter	Actual Relative Accuracy	Acceptable Relative Accuracy
Windbox Stack No. 1	NMHC lbs/hr	10.77 %	<20.0 %
	scfm	3.26 %	<20.0 %
Windbox Stack No. 2	NMHC lbs/hr	4.17 %	<20.0 %
	scfm	1.85 %	<20.0 %

3.0 Test Methodology

Emissions testing was conducted following the methods specified in 40CFR Part 60, Appendix A. Schematics of the sampling trains used are included in the appendix. Copies of field data sheets and analyzer print-outs for each test run are included in the appendix.

The following methodologies were used during the test program:

Method 1 Sample and Velocity Traverse Determination

Test measurement points were selected in accordance with Method 1. The characteristics of each measurement location are summarized below, in Table 2.

Table 2

Sample Point Selection

Location	Upstream Diameters	Downstream Diameters	Test Parameter	Number of Sampling Points
Stack No. 1	> 2.0 Diameters	> 0.5 Diameters	Volumetric Flow	24
Stack No. 2	> 2.0 Diameters	> 0.5 Diameters	Volumetric Flow	24

Method 2 Volumetric Flow Rate Determination

Gas velocity was measured following Method 2, for purposes of calculating stack gas volumetric flow rate. An S-type pitot tube, differential pressure gauge, thermocouple and temperature readout were used to determine gas velocity at each sample point. All of the equipment used was calibrated in accordance with the specifications of the Method. Calibration data is presented in the appendix.

Method 3 Oxygen (O_2)/Carbon Dioxide (CO_2) Determination

Stack gas molecular weight was determined in accordance with Method 3. A Fyrite analyzer was used to determine stack gas oxygen and carbon dioxide content and, by difference, nitrogen content.

Method 25A Volatile Organic Compound (VOC) Determination

Total hydrocarbon (THC) and non-methane hydrocarbon (NMHC) concentrations and emission rates were determined in accordance with Method 25A. A VIG 200 Gas Chromatograph/Flame Ionization Detector (GC/FID) was used to determine THC concentrations and methane concentrations. Stack gas was delivered to the system via a Teflon® sampling line, heated to a minimum temperature of 250°F.

The concentration of methane was subtracted from the THC concentration in order to determine NMHC concentrations. A response factor of 1.214 was developed and used to determine the methane concentration on a propane basis.

The system was calibrated before and after each test run using certified calibration gases. Calibration data and copies of gas certifications are presented in the appendix.

ANSI/ASTM E337-02 Moisture (H_2O) Determination

American National Standards Institute (ANSI)/American Standard Testing Method (ASTM), E337-02 reapproved 2002, wet bulb/dry bulb moisture determination method was used to determine moisture content at each test location. Water vapor content of the location was determined as follows:

$$Bws = \left[\frac{e' - AP(t - t')}{P}\right]$$

where :

e' = saturated vapor pressure of water, in. Hg, at the wet bulb temperatu re, t'

$A = 3.67 \times 10^{-4}[1 + 0.00064(t' - 32)]$

P = absolute pressure, in. Hg, in the duct

t = dry bulb temperatu re, °F

t' = wet bulb temperatu re, °F

4.0 Test Result Summary

Client: U.S. Steel-Gary Works					**Location:** Stack			
Plant: Sinter Plant Windbox Stack No.1					**Date:** 3/14/07			
Project #: M071107					**Test Method:** 25A and Volumetric Flow			
CEM Monitor Information								
THC&NMHC Monitor/Model:			JUM 109A		**THC&NMHC Serial #:**		98111004-109	
Flow Monitor/Model:			MPA-MPSPCPP		**Flow Serial #:**		8402601	
1=accept 0=reject	**Test Run**	**Test Date**	**Start Time**	**End Time**	**RM NMHC lbs/hr**	**CEM NMHC lbs/hr**	**(RM-CEM) Difference (di)**	**Difference^2 (di^2)**
1	1	03/14/07	10:44	11:04	29.65	26.20	3.45	11.903
1	2	03/14/07	11:28	11:48	30.27	27.99	2.28	5.198
0	3	03/14/07	12:15	12:35	32.20	27.50	4.70	22.090
1	4	03/14/07	12:58	13:18	31.84	27.90	3.94	15.524
1	5	03/14/07	13:36	13:56	30.07	29.60	0.47	0.221
1	6	03/14/07	14:18	14:38	30.62	27.30	3.32	11.022
1	7	03/14/07	14:57	15:17	28.32	27.50	0.82	0.672
1	8	03/14/07	15:36	15:56	30.11	27.30	2.81	7.896
1	9	03/14/07	16:18	16:38	28.47	27.40	1.07	1.145
1	10	03/14/07	16:58	17:18	26.29	27.30	-1.01	1.020
				n	9			
				t(0.975)	2.306			
				Mean Reference Method Value	29.516		RM avg	
				Mean CEM Value	27.610		CEM avg	
				Sum of Differences	17.150		di	
				Mean Difference	1.906		d	
				Sum of Differences Squared	54.601		di^2	
				Standard Deviation	1.655		sd	
				Confidence Coefficient 2.5% Error (1-tail)	1.272		cc	
				Relative Accuracy	10.77		RA	

RATA Type: Flow (scfm) - High (Normal)

Regulation: 40CFR60, Appendix A

Reference Method Used: 2

Plant Name:	U.S. Steel - Gary Works	Test Date:	3/14/2007
Unit Number:	Sinter Plant Windbox Stack No.1	Project Number:	M071107
Test Location:	Stack		
Monitor:	MPA-MPSPCPP	Serial Number:	8402601

	Test Run	Date	Start Time	End Time	Reference Method Volumetric Flow scfm	CEM Output Volumetric Flow scfm	(RM-CEM) Difference (di)	Difference^2 (di^2)
1	1	3/14/2007	10:40	10:55	299338	284250	15088	227655590
1	2	3/14/2007	11:30	11:45	287976	284620	3356	11262744
1	3	3/14/2007	12:20	12:35	287060	283680	3380	11426649
1	4	3/14/2007	13:00	13:15	289527	277100	12427	154442305
0	5	3/14/2007	13:40	13:55	295698	277790	17908	320696652
1	6	3/14/2007	14:20	14:35	294265	287100	7165	51340449
1	7	3/14/2007	15:00	15:15	288618	285390	3228	10421370
1	8	3/14/2007	15:40	15:55	289188	285570	3618	13087294
1	9	3/14/2007	16:20	16:35	285861	287170	-1309	1713898
1	10	3/14/2007	17:00	17:15	287725	286150	1575	2480777

n	9
t(0.975)	2.306
Mean Reference Method Value	289951.005 RM avg
Mean CEM Value	284558.889 CEM avg
Sum of Differences	48529.041 di
Mean Difference	5392.116 $\bar{d}$
Sum of Differences Squared	483831077.202 di^2
Standard Deviation	5269.688 sd
Confidence Coefficient 2.5% Error (1-tail)	4050.633 cc
Relative Accuracy	3.26 RA

Client: U.S. Steel-Gary Works
Plant: Sinter Plant Windbox Stack No.2
Project #: M071107

Location: Stack
Date: 3/15/07
Test Method: 25A and Volumetric Flow

CEM Monitor Information

THC&NMHC Monitor/Model:	JUM 109A	**THC&NMHC Serial #:**	98111005-109
Flow Monitor/Model:	MPA-MPSPCPP	**Flow Serial #:**	8402602

1=accept 0=reject	Test Run	Test Date	Start Time	End Time	RM NMHC lbs/hr	CEM NMHC lbs/hr	(RM-CEM) Difference (di)	Difference^2 (di^2)
1	1	03/15/07	10:40	11:00	34.40	34.48	-0.08	0.006
1	2	03/15/07	11:21	11:41	32.08	32.28	-0.20	0.040
1	3	03/15/07	12:02	12:22	32.63	31.37	1.26	1.588
1	4	03/15/07	12:42	13:02	29.75	28.61	1.14	1.300
1	5	03/15/07	13:23	13:43	32.29	30.64	1.65	2.723
1	6	03/15/07	14:04	14:24	32.02	30.52	1.50	2.250
1	7	03/15/07	14:44	15:04	31.37	30.37	1.00	1.000
0	8	03/15/07	15:23	15:43	35.72	33.62	2.10	4.410
1	9	03/15/07	16:03	16:23	32.17	32.49	-0.32	0.102
1	10	03/15/07	16:44	17:04	32.45	31.59	0.86	0.740

n	9	
t(0.975)	2.306	
Mean Reference Method Value	32.129	RM avg
Mean CEM Value	31.372	CEM avg
Sum of Differences	6.810	dI
Mean Difference	0.757	d
Sum of Differences Squared	9.748	di^2
Standard Deviation	0.758	sd
Confidence Coefficient 2.5% Error (1-tail)	0.583	cc
Relative Accuracy	4.17	RA

RATA Type: Flow (scfh) - High (Normal)

Regulation: 40CFR60, Appendix A

Reference Method Used: 2

Plant Name:	U.S. Steel - Gary Works	Test Date:	3/15/2007
Unit Number:	Sinter Plant Windbox Stack No. 2	Project Number:	M071107
Test Location:	Stack		
Monitor:	MPA-MPSPCPP	Serial Number:	8402602

	Test Run	Date	Start Time	End Time	Reference Method Volumetric Flow scfm	CEM Output Volumetric Flow scfm	(RM-CEM) Difference (di)	Difference^2 (di^2)
0	1	3/15/2007	10:43	10:58	292635	303940	-11305	127801209
1	2	3/15/2007	11:22	11:37	297759	308530	-10771	116021412
1	3	3/15/2007	12:03	12:18	308478	307490	988	975673
1	4	3/15/2007	12:43	12:58	302154	301430	724	523788
1	5	3/15/2007	13:25	13:40	306899	304830	2069	4282459
1	6	3/15/2007	14:04	14:19	308067	303820	4247	18040632
1	7	3/15/2007	14:45	15:00	304926	305990	-1064	1131279
1	8	3/15/2007	15:25	15:40	298824	300340	-1516	2298092
1	9	3/15/2007	16:03	16:18	298349	307710	-9361	87628613
1	10	3/15/2007	16:45	17:00	308870	309620	-750	562753

n	9
t(0.975)	2.306
Mean Reference Method Value	303814.029 RM avg
Mean CEM Value	305528.889 CEM avg
Sum of Differences	-15433.739 $\sum d_i$
Mean Difference	-1714.860 $\bar{d}$
Sum of Differences Squared	231464698.640 $\sum d_i^2$
Standard Deviation	5062.089 sd
Confidence Coefficient 2.5% Error (1-tail)	3891.059 cc
Relative Accuracy	1.85 RA

EPA-R5-2012-0005960000321

5.0 Conclusion and Certification

PLATT ENVIRONMENTAL SERVICES is pleased to have been of service to Mostardi Platt Environmental. If you have any questions regarding this test report, please do not hesitate to contact us at 630-521-9400.

CERTIFICATION

As project manager, I hereby certify that this test report represents and true and accurate summary of emissions test results and the methodologies employed to obtain those results, and the test program was performed in accordance with that methods specified in this test report.

PLATT ENVIRONMENTAL SERVICES

Jeffrey M. Crivlare — Project Manager

Scott W. Banach — Quality Assurance

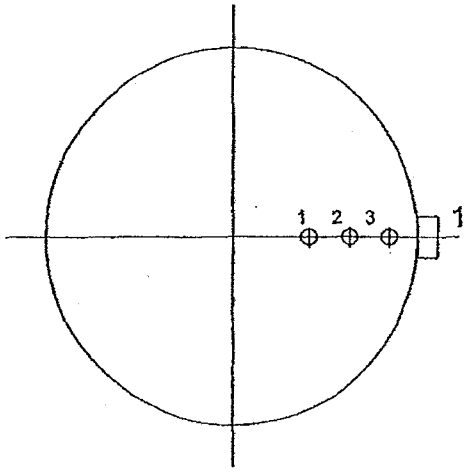
EPA-USS-0325816

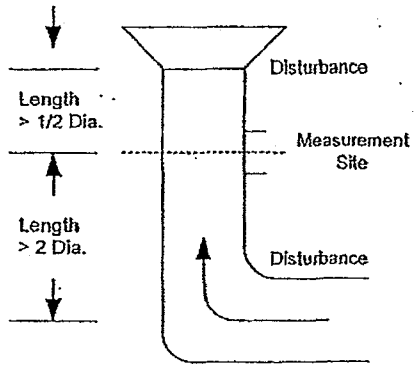
EPA-R5-2012-0005960000321

APPENDIX

EPA-USS-0325817

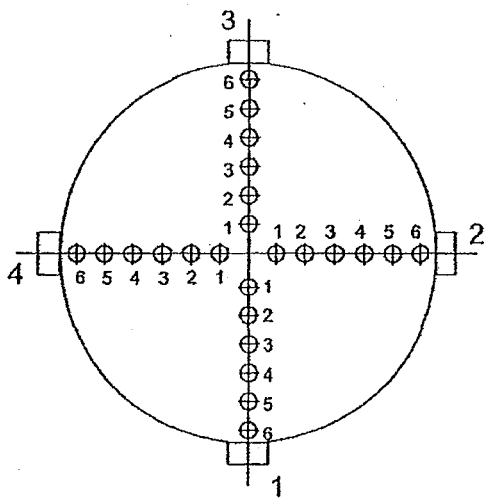
GASEOUS TRAVERSE FOR ROUND DUCTS

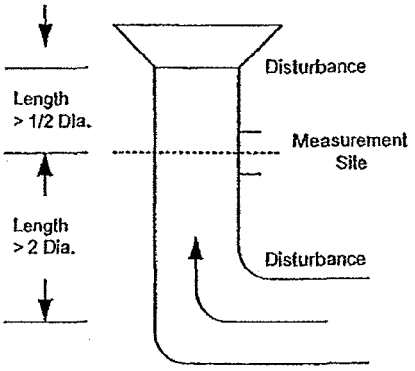




Job:	U.S. Steel Gary Works Gary, Indiana	Distance from Inside Wall To Traverse Point:
Date:	March 14, 2007	1. 2.0 Meters 2. 1.2 Meters
Unit No:	Sinter Plant Windbox Stack	3. 0.4 Meters
Test Location:	Stack No. 1	
Stack Diameter:	11.0 Feet	
Stack Area:	95.03 Square Feet	
No. Sample Points:	3	

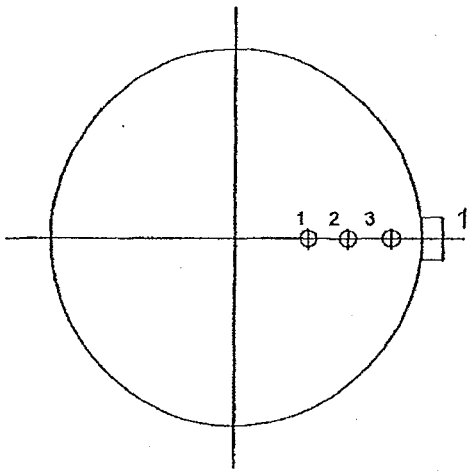
EQUAL AREA TRAVERSE FOR ROUND DUCTS

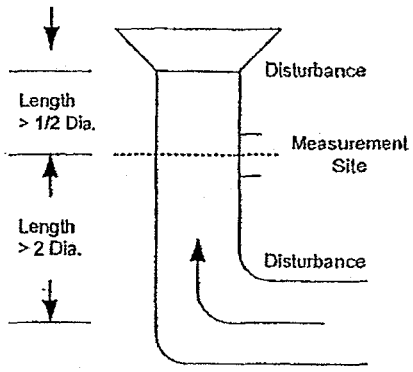




Job:	U.S. Steel Gary Works Gary, Indiana
Date:	March 14, 2007
Test Location:	Sinter Plant Windbox Stack 1
Stack Diameter:	11.00 Feet
Stack Area:	95.03 Square Feet
No. Points Across Diameter:	12
No. of Ports:	4

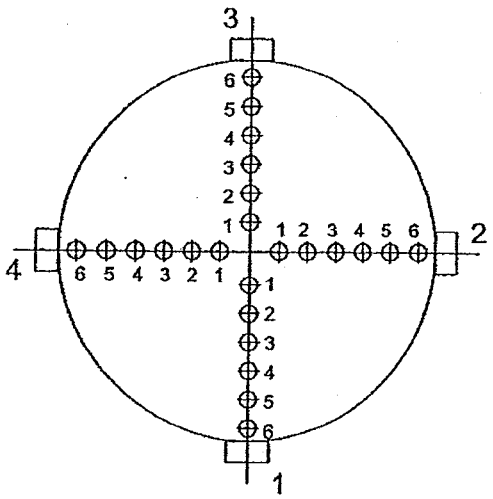
GASEOUS TRAVERSE FOR ROUND DUCTS

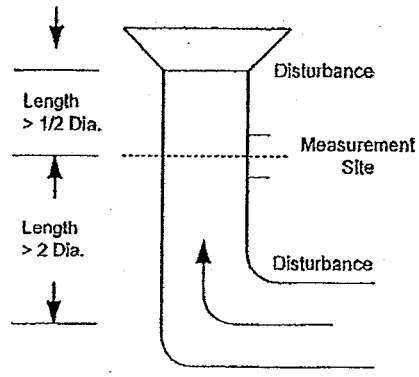




Job:	U.S. Steel Gary Works Gary, Indiana	Distance from Inside Wall To Traverse Point:
Date:	March 15, 2007	1. 2.0 Meters 2. 1.2 Meters
Unit No:	Sinter Plant Windbox Stack	3. 0.4 Meters
Test Location:	Stack No. 2	
Stack Diameter:	11.0 Feet	
Stack Area:	95.03 Square Feet	
No. Sample Points:	3	

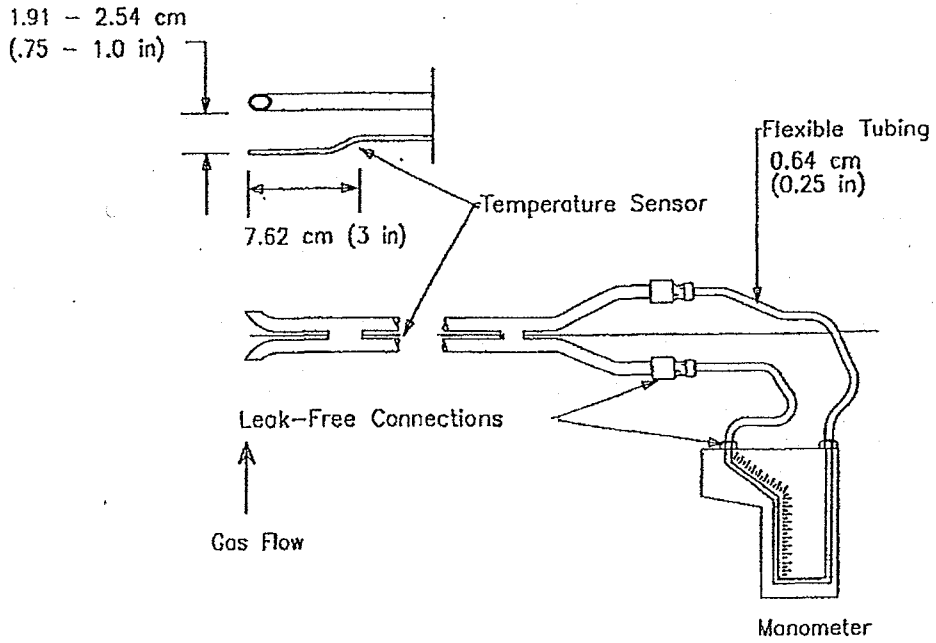
EQUAL AREA TRAVERSE FOR ROUND DUCTS



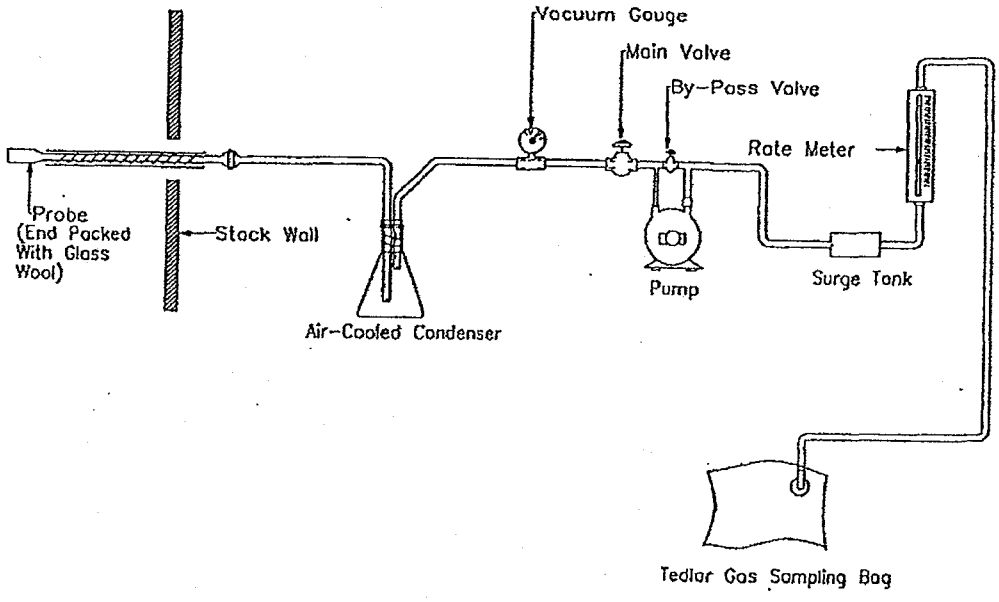


Job:	U.S. Steel Gary Works Gary, Indiana
Date:	March 15, 2007
Test Location:	Sinter Plant Windbox Stack 2
Stack Diameter:	11.00 Feet
Stack Area:	95.03 Square Feet
No. Points Across Diameter:	12
No. of Ports:	4

USEPA Method 2 - S-Type Pitot Tube Diagram

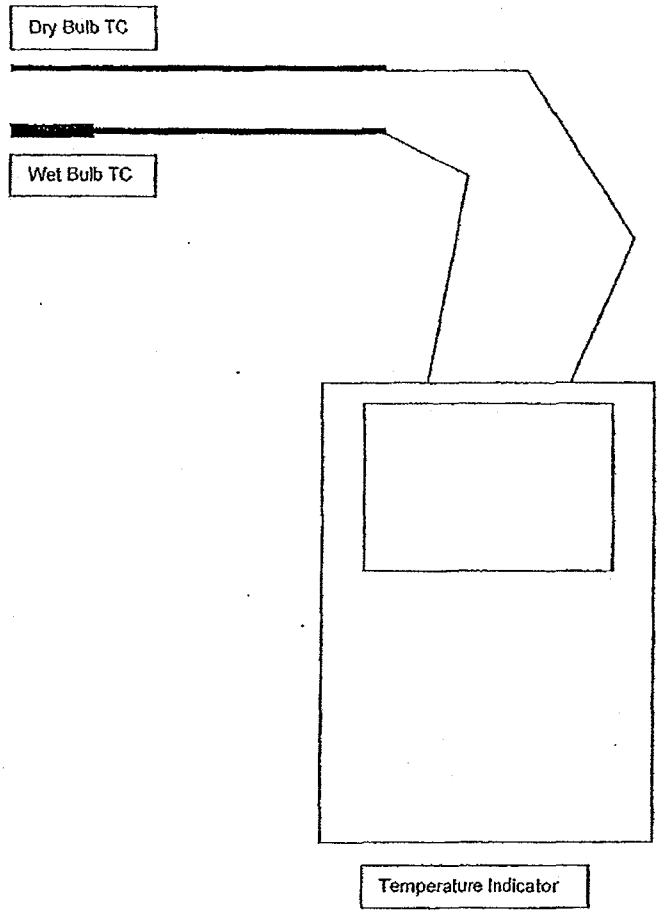


USEPA Method 3 - Integrated Oxygen/Carbon Dioxide Sample Train Diagram

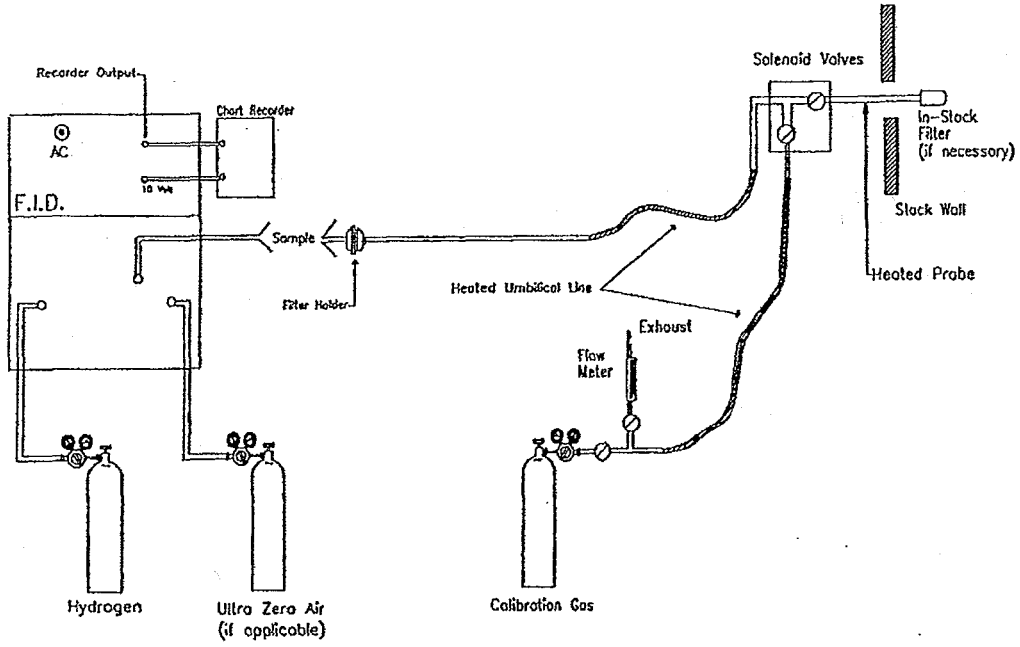


Moisture Determination

ANSI/ASTM Method E337-02, Reapproved 2002



USEPA Method 25A -Total Gaseous Organic Compound Sample Train



PLATT ENVIRONMENTAL SERVICES, INC.

Volumetric Flow Nomenclature

A = Cross-sectional area of stack or duct, ft^2

B_{ws} = Water vapor in gas stream, proportion by volume

C_p = Pitot tube coefficient, dimensionless

M_d = Dry molecular weight of gas, lb/lb-mole

M_s = Molecular weight of gas, wet basis, lb/lb-mole

M_w = Molecular weight of water, 18.0 lb/lb-mole

P_{bar} = Barometric pressure at testing site, in. Hg

P_g = Static pressure of gas, in. Hg (in. H_2O/13.6)

P_s = Absolute pressure of gas, in. Hg = $P_{bar} + P_g$

P_{std} = Standard absolute pressure, 29.92 in. Hg

Q_{acfm} = Actual volumetric gas flow rate, acfm

Q_{sd} = Dry volumetric gas flow rate corrected to standard conditions, dscf/hr

R = Ideal gas constant, 21.85 in. Hg-ft^3/°R-lb-mole

T_s = Absolute gas temperature, °R

T_{std} = Standard absolute temperature, 528°R

v_s = Gas velocity, ft/sec

$V_{w(std)}$ = Volume of water vapor in gas sample, corrected to standard conditions, scf

Y = Dry gas meter calibration factor

Δp = Velocity head of gas, in. H_2O

K_1 = 17.647 °R/in. Hg

%EA = Percent excess air

$\%CO_2$ = Percent carbon dioxide by volume, dry basis

$\%O_2$ = Percent oxygen by volume, dry basis

$\%N_2$ = Percent nitrogen by volume, dry basis

0.264 = Ratio of O_2 to N_2 in air, v/v

0.28 = Molecular weight of N_2 or CO, divided by 100

0.32 = Molecular weight of O_2 divided by 100

0.44 = Molecular weight of CO_2 divided by 100

13.6 = Specific gravity of mercury (Hg)

MOISTURE CALCULATIONS

$$V_{wc(std)} = \frac{(V_f - V_i)\,\rho_w\,R\,T_{std}}{P_{std}\,M_w} = 0.04707(V_f - V_i)$$

$$V_{wsg(std)} = \frac{(W_f - W_i)\,R\,T_{std}}{P_{std}\,M_w} = 0.04715\,(W_f - W_i)$$

$$V_{m(std)} = 17.64\;V_m\,Y\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}$$

$$B_{ws} = \frac{V_{wc(std)} + V_{wsg(std)}}{V_{wc(std)} + V_{wsg(std)} + V_{m(std)}}$$

Where:

B_{ws} = Water vapor in gas stream, proportion by volume
M_w = Molecular weight of water, 18.015 lb/lb-mole
P_{bar} = Barometric pressure at the testing site, in. Hg
P_{std} = Standard absolute pressure, 29.92 in. Hg
R = Ideal gas constant, 0.048137 (in. Hg)(ft^3)/(g-mole)(°R) = [21.8348(in. Hg)(ft^3)/(lb-mole)(°R)]/453.592 g-mole/lb-mole
T_m = Absolute average dry gas meter temperature, °R
T_{std} = Standard absolute temperature, 528 °R
V_f = Final volume of condenser water, ml
V_i = Initial volume of condenser water, ml
V_m = Dry gas volume measured by dry gas meter, dcf
$V_{m(std)}$ = Dry gas volume measured by dry gas meter, corrected to standard conditions, scf
$V_{wc(std)}$ = Volume of condensed water vapor, corrected to standard conditions, scf
$V_{wsg(std)}$ = Volume of water vapor collected in silica gel, corrected to standard conditions, scf
W_f = Final weight of silica gel, g
W_i = Initial weight of silica gel, g
Y = Dry gas meter calibration factor
ΔH = Average pressure exerted on dry gas meter outlet by gas sample bag, in. H_2O
ρ_w = Density of water, 0.9982 g/ml
13.6 = Specific gravity of mercury (Hg)
17.64 = T_{std}/P_{std}
0.04707 = ft^3/ml 0.04715 = ft^3/g

PLATT ENVIRONMENTAL SERVICES, INC.

Ppmv to Lb/Hr Conversion Calculations

1. $$\text{ppm } SO_2 \times 1.660 \times 10^{-7} = \frac{\text{lbs}/SO_2}{\text{scf}}$$

$$\frac{\text{lbs } SO_2}{\text{scf}} \times \frac{\text{scf}}{\text{min}} \times \frac{60 \text{ min}}{\text{hr}} = \frac{\text{lbs } SO_2}{\text{hr}}$$

2. $$\text{ppm } NO_x \times 1.194 \times 10^{-7} = \frac{\text{lbs}/NO_x}{\text{scf}}$$

$$\frac{\text{lbs } NO_x}{\text{scf}} \times \frac{\text{scf}}{\text{min}} \times \frac{60 \text{ min}}{\text{hr}} = \frac{\text{lbs } NO_x}{\text{hr}}$$

3. $$\text{ppm CO} \times 7.266 \times 10^{-8} = \frac{\text{lbs/CO}}{\text{scf}}$$

$$\frac{\text{lbs CO}}{\text{scf}} \times \frac{\text{scf}}{\text{min}} \times \frac{60 \text{ min}}{\text{hr}} = \frac{\text{lbs CO}}{\text{hr}}$$

4. $$\text{ppm } C_3H_8 \times 1.142 \times 10^{-7} = \frac{\text{lbs}C_3H_8}{\text{scf}}$$

$$\frac{\text{lbs } C_3H_8}{\text{scf}} \times \frac{\text{scf}}{\text{min}} \times \frac{60 \text{ min}}{\text{hr}} = \frac{\text{lbs } C_3H_8}{\text{hr}}$$

5. $$\text{ppm } CH_4 \times 4.164 \times 10^{-8} = \frac{\text{lbs}CH_4}{\text{scf}}$$

$$\frac{\text{lbs } CH_4}{\text{scf}} \times \frac{\text{scf}}{\text{min}} \times \frac{60 \text{ min}}{\text{hr}} = \frac{\text{lbs } CH_4}{\text{hr}}$$

PLATT ENVIRONMENTAL SERVICES, INC.

Volumetric Air Flow Calculations (Wet Bulb/ Dry Bulb)

$$Bws = \left[\frac{e' - AP(t - t')}{P}\right]$$

e' = saturated vapor presssure of water, in.Hg,
at the wet bulb temperature, t'
$A = 3.67 \times 10^{-4}\left[1 + 0.00064\,(t' - 32)\right]$
P = pressure, inches mercury, in the duct
t = dry bulb temperature, °F
t' = wet bulb temperature, °F
Bws = water vapor in gas stream proportion
by volume

$$Md = (0.44 \times \%CO_2) + (0.32 \times \%O_2) + \left[0.28 \times (100 - \%CO_2 - \%O_2)\right]$$

$$MS = Md \times (1 - Bws) + (18 \times Bws)$$

$$Vs = \sqrt{\frac{(Ts + 460)}{Ms \times Ps}} \times \sqrt{DP} \times Cp \times 85.49$$

$$Acfm = Vs \times \text{Area (of stack or duct)} \times 60$$

$$Dscfm = Acfm \times 17.647 \times \left[\frac{Ps}{(460 + Ts)}\right] \times (1 - Bws)$$

$$Scfm = Acfm \times 17.647 \times \left[\frac{Ps}{(460 + Ts)}\right]$$

$$Scfh = Scfm \times 60\,\frac{min}{hr}$$

acfm = actual cubic feet per minute
dscfm = dry standard cubic feet per minute
scfm = standard cubic feet per minute
scfh = standard cubic feet per hour

Cp = pitot tube correction factor
Ps = absolute flue gas pressure
Ms = molecular weight of gas (lb/lb mole)
Md = dry molecular weight of gas (lb/lb mole)

PLATT ENVIRONMENTAL SERVICES, INC.

Relative Accuracy Test Audit (RATA) Calculations

Mean Difference

$$\bar{d} = \frac{1}{n}\sum_{i=1}^{n} di$$

Standard Deviation

$$Sd = \left[\frac{\sum_{i=1}^{n} d_i^2 - \frac{\left[\sum_{i=1}^{n} d_i\right]^2}{n}}{n-1}\right]^{1/2}$$

Confidence Coefficient

$$CC = t_{0.975}\frac{Sd}{\sqrt{n}}$$

Relative Accuracy

$$RA = \frac{|\bar{d}| + |CC|}{RM\,avg} \times 100$$

PART 75 AND 60 GASEOUS FIELD DATA SHEET

Project Number: M071107
Client: USX
Test Location: Sinter Plant Stack #1

Date: 3/14/07
Operator: JMC
Fuel Factor:

Test	Time Start	Time End	Reference Method Data			Volumetric Flow Data		
			[redacted]	[redacted]	[redacted]	[redacted]	scfh, RM Data	scfh, CEM Data
			THC as C_3H_8	CH_4 as CH_4	CH_4 as C_3H_8	NMHC	scfm	NMHC lbs/hr
1	1044	1104	33.6	47.3	19.1	14.5	299,347	29.74
2	1128	1148	34.2	46.6	18.9	15.3	287,976	30.18
3	1215	1235	36.0	48.5	19.6	16.4	287,060	32.26
4	1258	1319	34.7	44.6	18.0	16.1	289,527	31.94
5	1336	1356	35.4	50.8	20.6	14.8	295,498	29.98
6	1418	1438	33.6	45.5	17.3	16.3	294,265	32.06
7	1457	1517	33.1	46.4	19.8	14.3	288,618	28.28
8	1536	1556	34.5	47.7	19.3	15.2	289,180	30.12
9	1618	1638	37.4	51.5	22.9	14.5	285,861	28.40
10	1658	1718	36.0	56.0	22.7	13.3	287,725	26.2

Test	Calibration Corrected RM Data				CEM Data (lbs/hr) RF = 1.28			
	NO_x ppm	SO_2 ppm	CO_2 %	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
—	—	—	—	CH_4 as CH_4	THC	NMHC	NMHC	Flow
1				47.5	33.6	13.4	26.2	284,250
2				44.0	33.1	14.4	28.0	287,620
3				46.5	33.9	14.2	27.5	283,680
4				42.4	32.8	14.6	27.9	277,100
5				47.1	34.5	14.6	29.6	277,790
6				41.8	31.6	13.8	27.3	287,100
7				42.2	32.0	14.1	27.5	285,390
8				46.3	33.6	13.9	27.3	285,570
9				52.1	35.9	13.8	27.4	287,170
10				53.8	36.3	13.6	27.3	286,150

RF = 1.214

$\frac{203.8}{3} \times N = 82.5$

$N = 1.214$

5 Injections per Test
2 Injections per min.

U. S. Steel-Gary Works
March 14, 2007
Sinter Plant-Windbox Stack No. 1

Test	Start Time	End Time	THC as Propane ppmv	Methane as Methane ppmv	Methane as Propane ppmv	NMHC as Propane ppmv	Air Flow scfm	NMHC lbs/hr as Propane
1	10:44	11:04	33.6	47.3	19.1	14.5	299338	29.65
2	11:28	11:48	34.2	46.6	18.9	15.3	287976	30.27
3	12:15	12:35	36.0	48.5	19.6	16.4	287060	32.20
4	12:58	13:18	34.1	44.6	18.0	16.1	289527	31.84
5	13:36	13:56	35.4	50.8	20.6	14.8	295698	30.07
6	14:18	14:38	33.6	45.5	18.4	15.2	294265	30.62
7	14:57	15:17	33.1	46.4	18.8	14.3	288618	28.32
8	15:36	15:56	34.5	47.7	19.3	15.2	289188	30.11
9	16:18	16:38	37.4	56.5	22.9	14.5	285861	28.47
10	16:58	17:18	36.0	56.0	22.7	13.3	287725	26.29

Methane Response Factor=1.214

	Chan 1 THC	Chan 2 Methane
Time	ppm THC	ppm THC
10:44	32.1	45.3
10:45	34.3	45.3
10:46	34.3	46.2
10:47	35.6	51.2
10:48	35.4	51.2
10:49	32.6	50.8
10:50	36.2	48.7
10:51	34.6	48.7
10:52	33.2	48.1
10:53	33.6	45.2
10:54	32.5	45.2
10:55	32.5	45.3
10:56	34.4	45.7
10:57	32.2	45.7
10:58	31.8	45.6
10:59	32.2	44.8
11:00	32.6	44.8
11:01	33.6	45.6
11:02	33.0	49.5
11:03	34.6	49.5
11:04	35.2	50.6
Average	33.6	47.3

Test #1

	Chan 1 THC	Chan 2 Methane
Time	ppm THC	ppm THC
11:28	30.7	45.3
11:29	30.6	41.8
11:30	31.1	41.8
11:31	31.2	41.8
11:32	30.2	42.0
11:33	32.1	42.0
11:34	32.8	42.3
11:35	34.7	43.8
11:36	34.1	43.8
11:37	35.0	44.4
11:38	35.8	47.6
11:39	35.6	47.6
11:40	36.4	48.5
11:41	35.2	52.7
11:42	33.8	52.7
11:43	35.3	51.6
11:44	36.1	46.9
11:45	36.8	46.9
11:46	37.7	48.0
11:47	36.4	53.6
11:48	37.0	53.6
Average	34.2	46.6

Test #2

Test #3

Time	Chan 1 THC 3 ppm THC	Chan 2 Methane ppm THC
12:15	33.7	49.1
12:16	34.2	48.6
12:17	34.8	46.8
12:18	35.5	46.8
12:19	34.7	47.0
12:20	34.4	47.9
12:21	34.8	47.9
12:22	34.3	47.5
12:23	33.4	45.9
12:24	32.7	45.9
12:25	33.8	45.7
12:26	34.5	44.9
12:27	34.5	44.9
12:28	34.2	45.0
12:29	37.2	45.7
12:30	39.2	45.7
12:31	40.3	47.7
12:32	41.9	56.1
12:33	39.0	56.1
12:34	40.1	56.4
12:35	39.0	57.6
Average	36.0	48.5

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
12:57	33.8	50.6
12:58	32.3	48.6
12:59	33.1	44.8
13:00	33.4	44.8
13:01	32.6	44.4
13:02	32.4	43.2
13:03	32.9	43.2
13:04	32.9	43.5
13:05	32.3	44.6
13:06	31.6	44.6
13:07	33.1	44.4
13:08	34.4	43.7
13:09	34.1	43.7
13:10	34.6	44.2
13:11	34.1	46.1
13:12	33.0	46.1
13:13	34.4	46.3
13:14	35.3	47.3
13:15	36.7	47.3
13:16	33.1	45.5
13:17	37.9	39.0
13:18	38.2	39.0
13:19	37.4	41.9
Average	34.1	44.6

Test #4

Test #5

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
13:36	33.2	48.4
13:37	34.0	48.0
13:38	35.5	46.5
13:39	35.0	46.5
13:40	35.4	46.6
13:41	36.5	47.0
13:42	34.2	47.0
13:43	35.0	47.3
13:44	36.4	48.2
13:45	34.6	48.2
13:46	40.0	50.4
13:47	36.1	58.3
13:48	34.7	58.3
13:49	35.9	57.2
13:50	34.4	53.4
13:51	35.1	53.4
13:52	36.8	53.6
13:53	36.2	54.5
13:54	34.2	54.5
13:55	35.1	52.7
13:56	35.6	46.9
Average	35.4	50.8

	Chan 1 THC	Chan 2 Methane
Time	ppm THC	ppm THC
14:18	35.7	52.6
14:19	36.8	53.4
14:20	33.6	55.9
14:21	34.6	55.9
14:22	32.6	53.2
14:23	32.2	45.1
14:24	33.4	45.1
14:25	32.9	44.9
14:26	34.4	44.0
14:27	33.1	44.0
14:28	32.6	43.4
14:29	34.0	41.6
14:30	33.2	41.6
14:31	31.3	41.2
14:32	32.5	40.0
14:33	31.8	40.0
14:34	33.5	40.6
14:35	35.6	42.4
14:36	33.6	42.4
14:37	34.5	43.2
14:38	34.1	45.6
Average	33.6	45.5

Test #6

Test #7

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
14:57	32.2	49.1
14:58	32.4	48.6
14:59	30.8	47.4
15:00	30.8	47.4
15:01	30.6	45.5
15:02	31.1	40.5
15:03	32.8	40.5
15:04	33.1	41.9
15:05	32.9	45.6
15:06	33.0	45.6
15:07	33.9	46.4
15:08	33.3	48.6
15:09	34.1	48.6
15:10	34.3	48.9
15:11	34.0	49.6
15:12	34.8	49.6
15:13	33.4	48.5
15:14	34.1	45.4
15:15	35.2	45.4
15:16	33.8	45.6
15:17	33.6	46.3
Average	33.1	46.4

Test #8

	Chan 1 THC	Chan 2 Methane
Time	ppm THC	ppm THC
15:36	32.7	46.8
15:37	33.8	47.2
15:38	35.2	48.6
15:39	32.3	47.8
15:40	33.0	48.1
15:41	34.3	46.8
15:42	33.3	46.8
15:43	32.7	46.8
15:44	36.0	47.0
15:45	33.4	47.0
15:46	33.8	47.0
15:47	35.8	46.9
15:48	34.5	46.9
15:49	33.1	47.0
15:50	33.6	47.4
15:51	36.4	47.4
15:52	33.8	47.4
15:53	35.3	47.5
15:54	37.1	47.5
15:55	37.4	49.4
15:56	38.0	54.5
Average	34.5	47.7

Test #9

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
16:18	37.2	49.3
16:19	35.9	50.5
16:20	37.1	53.6
16:21	38.0	53.6
16:22	38.5	55.2
16:23	37.7	59.2
16:24	38.6	59.2
16:25	37.5	58.6
16:26	35.6	57.2
16:27	35.9	57.2
16:28	36.3	56.3
16:29	38.0	54.0
16:30	38.2	53.1
16:31	38.6	55.3
16:32	37.5	58.4
16:33	38.0	58.4
16:34	37.3	58.8
16:35	36.6	59.8
16:36	39.1	59.8
16:37	38.0	59.5
16:38	36.3	58.7
Average	37.4	56.5

Test #10

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
16:58	32.5	54.0
16:59	34.5	52.7
17:00	33.3	52.7
17:01	34.3	53.4
17:02	33.7	54.8
17:03	36.1	54.8
17:04	34.9	54.8
17:05	34.6	54.9
17:06	36.4	54.9
17:07	36.0	54.8
17:08	37.0	54.6
17:09	36.8	54.6
17:10	36.2	55.7
17:11	36.9	58.3
17:12	35.6	58.3
17:13	35.7	57.3
17:14	39.1	55.0
17:15	38.6	55.0
17:16	39.4	57.7
17:17	37.3	63.4
17:18	36.3	63.4
Average	36.0	56.0

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	1
Plant:	Gary Works	Date:	3/14/2007
Source:	#1 Sinter Stack	Start Time:	10:40
Pitot ID:	25A	End Time:	10:55
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.33
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.46
t_s - Average stack temperature, °F	220.6
% CO_2	2.0
% O_2	17.0
% N_2	81.0
Md - dry basis lb/lb mole	29.00
Ms - wet basis lb/lb mole	27.89
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	0.000
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	
Condensate Final Vol:	
Wet Bulb Temp(t'):	126.000
Dry Bulb Temp(t):	222.000
Bws - Moisture content fraction	0.101

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.20	1.0954	221.0	71.61
A 02	1.15	1.0724	222.0	70.16
A 03	1.10	1.0488	222.0	68.61
A 04	1.10	1.0488	221.0	68.56
A 05	1.10	1.0488	221.0	68.56
A 06	0.97	0.9849	219.0	64.29
B 01	1.40	1.1832	222.0	77.41
B 02	1.25	1.1180	222.0	73.14
B 03	1.20	1.0954	221.0	71.61
B 04	1.10	1.0488	221.0	68.56
B 05	1.05	1.0247	220.0	66.94
B 06	0.84	0.9165	218.0	59.78

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.10	1.0488	221.0	68.56
C 02	1.15	1.0724	222.0	70.16
C 03	1.20	1.0954	221.0	71.61
C 04	1.20	1.0954	220.0	71.56
C 05	1.10	1.0488	220.0	68.51
C 06	0.94	0.9695	218.0	63.24
D 01	1.10	1.0488	221.0	68.56
D 02	1.05	1.0247	221.0	66.99
D 03	1.15	1.0724	221.0	70.10
D 04	1.15	1.0724	220.0	70.05
D 05	1.10	1.0488	220.0	68.51
D 06	0.92	0.9592	219.0	62.61

Method 2 Results	
Average ΔP	1.1092
Average Sqrt ΔP	1.0518
Average Velocity Vs (ft/sec)	68.719
Average Velocity Accounting for WAF	68.392
Q - ACFM	391,835
Qsd - DSCFM	269,189
Qs - SCFM	299,338
Qs - SCFH	17,960,296
Qs - SCFH, accounting for Wall Effects	17,870,494
Wall Effects Adjustment Factor	0.9950

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	2
Plant:	Gary Works	Date:	3/14/2007
Source:	#1 Sinter Stack	Start Time:	11:30
Pitot ID:	25A	End Time:	11:45
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.33
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.46
t_s - Average stack temperature, °F	220.4
% CO_2	2.0
% O_2	17.0
% N_2	81.0
Md - dry basis lb/lb mole	29.00
Ms - wet basis lb/lb mole	27.92825958
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	125.000
Dry Bulb Temp(t):	220.000
Bws - Moisture content fraction	0.097

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.00	1.0000	220.0	65.28
A 02	0.98	0.9899	221.0	64.67
A 03	1.00	1.0000	220.0	65.28
A 04	1.00	1.0000	220.0	65.28
A 05	0.99	0.9950	220.0	64.95
A 06	0.83	0.9110	218.0	59.39
B 01	1.10	1.0488	221.0	68.52
B 02	1.10	1.0488	221.0	68.52
B 03	1.10	1.0488	221.0	68.52
B 04	1.10	1.0488	220.0	68.47
B 05	1.00	1.0000	220.0	65.28
B 06	0.94	0.9695	218.0	63.20

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.10	1.0488	220.0	68.47
C 02	1.10	1.0488	220.0	68.47
C 03	1.00	1.0000	220.0	65.28
C 04	1.10	1.0488	219.0	68.42
C 05	1.00	1.0000	219.0	65.23
C 06	0.86	0.9274	218.0	60.45
D 01	1.20	1.0954	220.0	71.51
D 02	1.10	1.0488	224.0	68.67
D 03	1.00	1.0000	225.0	65.52
D 04	1.00	1.0000	223.0	65.43
D 05	1.10	1.0488	222.0	68.57
D 06	0.94	0.9695	220.0	63.29

Method 2 Results	
Average ΔP	1.0267
Average Sqrt ΔP	1.0124
Average Velocity Vs (ft/sec)	66.094
Average Velocity Accounting for WAF	65.780
Q - ACFM	376,870
Qsd - DSCFM	259,918
Qs - SCFM	287,976
Qs - SCFH	17,278,560
Qs - SCFH, accounting for Wall Effects	17,192,167
Wall Effects Adjustment Factor	0.9950

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	3
Plant:	Gary Works	Date:	3/14/2007
Source:	#1 Sinter Stack	Start Time:	12:20
Pitot ID:	25A	End Time:	12:35
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.33
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.46
t_s - Average stack temperature, °F	219.4
% CO_2	1.9
% O_2	17.3
% N_2	80.8
Md - dry basis lb/lb mole	29.00
Ms - wet basis lb/lb mole	27.83
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	127.000
Dry Bulb Temp(t):	218.000
Bws - Moisture content fraction	0.106

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.10	1.0488	220.0	68.59
A 02	1.05	1.0247	220.0	67.02
A 03	0.98	0.9899	220.0	64.74
A 04	0.99	0.9950	219.0	65.03
A 05	0.99	0.9950	219.0	65.03
A 06	0.90	0.9487	218.0	61.95
B 01	1.10	1.0488	220.0	68.59
B 02	1.00	1.0000	220.0	65.40
B 03	1.05	1.0247	220.0	67.02
B 04	1.05	1.0247	221.0	67.07
B 05	1.00	1.0000	219.0	65.35
B 06	0.96	0.9798	217.0	63.94

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.10	1.0488	220.0	68.59
C 02	1.00	1.0000	220.0	65.40
C 03	1.05	1.0247	220.0	67.02
C 04	1.00	1.0000	220.0	65.40
C 05	1.00	1.0000	220.0	65.40
C 06	0.83	0.9110	217.0	59.45
D 01	1.10	1.0488	220.0	68.59
D 02	1.10	1.0488	220.0	68.59
D 03	1.05	1.0247	220.0	67.02
D 04	1.10	1.0488	220.0	68.59
D 05	1.00	1.0000	219.0	65.35
D 06	0.85	0.9220	217.0	60.16

Method 2 Results	
Average ΔP	1.0146
Average Sqrt ΔP	1.0066
Average Velocity Vs (ft/sec)	65.787
Average Velocity Accounting for WAF	65.474
Q - ACFM	375,119
Qsd - DSCFM	256,516
Qs - SCFM	287,060
Qs - SCFH	17,223,620
Qs - SCFH, accounting for Wall Effects	17,137,502
Wall Effects Adjustment Factor	0.9950

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	4
Plant:	Gary Works	Date:	3/14/2007
Source:	#1 Sinter Stack	Start Time:	13:00
Pitot ID:	25A	End Time:	13:15
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.33
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.46
t_s - Average stack temperature, °F	225.6
% CO_2	1.9
% O_2	17.3
% N_2	80.8
Md - dry basis lb/lb mole	29.00
Ms - wet basis lb/lb mole	27.90
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	126.000
Dry Bulb Temp(t):	225.000
Bws - Moisture content fraction	0.100

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.05	1.0247	220.0	66.93
A 02	1.00	1.0000	229.0	65.74
A 03	1.05	1.0247	228.0	67.32
A 04	0.99	0.9950	226.0	65.27
A 05	0.93	0.9644	226.0	63.26
A 06	0.83	0.9110	220.0	59.50
B 01	1.20	1.0954	228.0	71.97
B 02	1.15	1.0724	228.0	70.45
B 03	1.10	1.0488	228.0	68.90
B 04	1.00	1.0000	228.0	65.70
B 05	0.96	0.9798	226.0	64.28
B 06	0.82	0.9055	220.0	59.14

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.10	1.0488	228.0	68.90
C 02	1.20	1.0954	228.0	71.97
C 03	1.20	1.0954	227.0	71.91
C 04	1.20	1.0954	226.0	71.86
C 05	1.05	1.0247	224.0	67.12
C 06	0.88	0.9381	220.0	61.27
D 01	1.15	1.0724	228.0	70.45
D 02	1.15	1.0724	228.0	70.45
D 03	1.10	1.0488	227.0	68.85
D 04	1.10	1.0488	226.0	68.80
D 05	1.05	1.0247	225.0	67.17
D 06	0.85	0.9220	220.0	60.22

Method 2 Results	
Average ΔP	1.0463
Average Sqrt ΔP	1.0212
Average Velocity Vs (ft/sec)	66.955
Average Velocity Accounting for WAF	66.636
Q - ACFM	381,777
Qsd - DSCFM	260,702
Qs - SCFM	289,527
Qs - SCFH	17,371,649
Qs - SCFH, accounting for Wall Effects	17,284,791
Wall Effects Adjustment Factor	0.9950

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	5
Plant:	Gary Works	Date:	3/14/2007
Source:	#1 Sinter Stack	Start Time:	13:40
Pitot ID:	25A	End Time:	13:55
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.33
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.46
t_s - Average stack temperature, °F	225.0
% CO_2	2.0
% O_2	17.1
% N_2	80.9
Md - dry basis lb/lb mole	29.00
Ms - wet basis lb/lb mole	27.94
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	125.000
Dry Bulb Temp(t):	223.000
Bws - Moisture content fraction	0.096

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.15	1.0724	222.0	70.09
A 02	1.15	1.0724	228.0	70.40
A 03	1.10	1.0488	227.0	68.80
A 04	1.05	1.0247	226.0	67.17
A 05	1.15	1.0724	223.0	70.14
A 06	1.00	1.0000	222.0	65.36
B 01	1.20	1.0954	228.0	71.91
B 02	1.15	1.0724	227.0	70.35
B 03	1.15	1.0724	223.0	70.14
B 04	1.15	1.0724	223.0	70.14
B 05	1.10	1.0488	222.0	68.55
B 06	0.92	0.9592	220.0	62.60

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.20	1.0954	223.0	71.65
C 02	1.15	1.0724	228.0	70.40
C 03	1.10	1.0488	229.0	68.90
C 04	1.15	1.0724	225.0	70.24
C 05	1.15	1.0724	223.0	70.14
C 06	0.92	0.9592	222.0	62.69
D 01	1.15	1.0724	225.0	70.24
D 02	1.00	1.0000	231.0	65.79
D 03	1.10	1.0488	232.0	69.05
D 04	1.10	1.0488	227.0	68.80
D 05	1.00	1.0000	224.0	65.45
D 06	0.88	0.9381	220.0	61.22

Method 2 Results	
Average ΔP	1.0904
Average Sqrt ΔP	1.0433
Average Velocity Vs (ft/sec)	68.324
Average Velocity Accounting for WAF	67.999
Q - ACFM	389,582
Qsd - DSCFM	267,231
Qs - SCFM	295,698
Qs - SCFH	17,741,880
Qs - SCFH, accounting for Wall Effects	17,653,171
Wall Effects Adjustment Factor	0.9950

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	6
Plant:	Gary Works	Date:	3/14/2007
Source:	#1 Sinter Stack	Start Time:	14:20
Pitot ID:	25A	End Time:	14:35
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.33
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.46
t_s - Average stack temperature, °F	224.3
% CO_2	2.0
% O_2	17.1
% N_2	80.9
Md - dry basis lb/lb mole	29.00
Ms - wet basis lb/lb mole	27.91
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	126.000
Dry Bulb Temp(t'):	226.000
Bws - Moisture content fraction	0.099

Port Point	ΔP (In. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.00	1.0000	226.0	65.59
A 02	1.10	1.0488	228.0	68.89
A 03	1.05	1.0247	229.0	67.35
A 04	1.10	1.0488	227.0	68.84
A 05	1.00	1.0000	226.0	65.59
A 06	0.89	0.9434	224.0	61.78
B 01	1.20	1.0954	227.0	71.90
B 02	1.20	1.0954	227.0	71.90
B 03	1.20	1.0954	225.0	71.80
B 04	1.20	1.0954	223.0	71.69
B 05	1.10	1.0488	223.0	68.64
B 06	0.84	0.9165	221.0	59.89

Port Point	ΔP (In. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.20	1.0954	225.0	71.80
C 02	1.15	1.0724	225.0	70.28
C 03	1.10	1.0488	223.0	68.64
C 04	1.05	1.0247	222.0	67.01
C 05	1.00	1.0000	222.0	65.40
C 06	0.86	0.9274	220.0	60.56
D 01	1.20	1.0954	225.0	71.80
D 02	1.20	1.0954	224.0	71.74
D 03	1.20	1.0954	224.0	71.74
D 04	1.20	1.0954	223.0	71.69
D 05	1.00	1.0000	223.0	65.44
D 06	0.86	0.9274	220.0	60.56

Method 2 Results	
Average ΔP	1.0792
Average Sqrt ΔP	1.0371
Average Velocity Vs (ft/sec)	67.918
Average Velocity Accounting for WAF	67.595
Q - ACFM	387,270
Qsd - DSCFM	265,082
Qs - SCFM	294,265
Qs - SCFH	17,655,913
Qs - SCFH, accounting for Wall Effects	17,567,634
Wall Effects Adjustment Factor	0.9950

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	7
Plant:	Gary Works	Date:	3/14/2007
Source:	#1 Sinter Stack	Start Time:	15:00
Pitot ID:	25A	End Time:	15:15
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.33
P_g - Stack Pressure, inches of H_2O	1.60
P_s - Absolute stack pressure, inches Hg	29.46
t_s - Average stack temperature, °F	225.4
% CO_2	2.0
% O_2	17.0
% N_2	81.0
Md - dry basis lb/lb mole	29.00
Ms - wet basis lb/lb mole	27.90
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	126.000
Dry Bulb Temp(t):	225.000
Bws - Moisture content fraction	0.100

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.15	1.0724	225.0	70.29
A 02	1.10	1.0488	226.0	68.80
A 03	1.10	1.0488	226.0	68.80
A 04	1.05	1.0247	225.0	67.17
A 05	0.97	0.9849	225.0	64.56
A 06	0.87	0.9327	220.0	60.92
B 01	1.20	1.0954	226.0	71.86
B 02	1.15	1.0724	227.0	70.40
B 03	1.05	1.0247	227.0	67.27
B 04	1.05	1.0247	226.0	67.22
B 05	1.00	1.0000	225.0	65.55
B 06	0.84	0.9165	220.0	59.86

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.15	1.0724	226.0	70.34
C 02	1.05	1.0247	226.0	67.22
C 03	1.05	1.0247	227.0	67.27
C 04	1.20	1.0954	226.0	71.86
C 05	1.00	1.0000	225.0	65.55
C 06	0.85	0.9220	220.0	60.21
D 01	1.15	1.0724	226.0	70.34
D 02	1.10	1.0488	229.0	68.95
D 03	1.00	1.0000	229.0	65.74
D 04	1.00	1.0000	228.0	65.69
D 05	0.96	0.9798	226.0	64.27
D 06	0.89	0.9434	223.0	61.75

Method 2 Results	
Average ΔP	1.0388
Average Sqrt ΔP	1.0179
Average Velocity Vs (ft/sec)	66.725
Average Velocity Accounting for WAF	66.407
Q - ACFM	380,463
Qsd - DSCFM	259,884
Qs - SCFM	288,618
Qs - SCFH	17,317,093
Qs - SCFH, accounting for Wall Effects	17,230,507
Wall Effects Adjustment Factor	0.9950

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	8
Plant:	Gary Works	Date:	3/14/2007
Source:	#1 Sinter Stack	Start Time:	15:40
Pitot ID:	25A	End Time:	15:55
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.33
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.46
t_s - Average stack temperature, °F	222.8
% CO_2	2.0
% O_2	17.0
% N_2	81.0
Md - dry basis lb/lb mole	29.00
Ms - wet basis lb/lb mole	27.86
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	127.000
Dry Bulb Temp(t):	226.000
Bws - Moisture content fraction	0.103

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.15	1.0724	224.0	70.29
A 02	1.05	1.0247	227.0	67.32
A 03	1.00	1.0000	230.0	65.84
A 04	1.10	1.0488	227.0	68.90
A 05	0.93	0.9644	224.0	63.21
A 06	0.82	0.9055	220.0	59.18
B 01	1.15	1.0724	225.0	70.35
B 02	1.15	1.0724	225.0	70.35
B 03	1.10	1.0488	223.0	68.70
B 04	1.10	1.0488	222.0	68.65
B 05	1.00	1.0000	220.0	65.36
B 06	0.83	0.9110	219.0	59.50

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.20	1.0954	222.0	71.70
C 02	1.20	1.0954	222.0	71.70
C 03	1.20	1.0954	222.0	71.70
C 04	1.15	1.0724	223.0	70.24
C 05	1.10	1.0488	222.0	68.65
C 06	0.80	0.8944	220.0	58.46
D 01	1.00	1.0000	222.0	65.45
D 02	1.05	1.0247	222.0	67.07
D 03	1.05	1.0247	223.0	67.12
D 04	1.05	1.0247	222.0	67.07
D 05	0.95	0.9747	222.0	63.80
D 06	0.80	0.8944	220.0	58.46

Method 2 Results	
Average ΔP	1.0388
Average Sqrt ΔP	1.0173
Average Velocity Vs (ft/sec)	66.608
Average Velocity Accounting for WAF	66.291
Q - ACFM	379,800
Qsd - DSCFM	259,314
Qs - SCFM	289,188
Qs - SCFH	17,351,258
Qs - SCFH, accounting for Wall Effects	17,264,502
Wall Effects Adjustment Factor	0.9950

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	9
Plant:	Gary Works	Date:	3/14/2007
Source:	#1 Sinter Stack	Start Time:	16:20
Pitot ID:	25A	End Time:	16:35
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.33
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.46
t_s - Average stack temperature, °F	222.1
% CO_2	1.8
% O_2	17.4
% N_2	80.8
Md - dry basis lb/lb mole	28.98
Ms - wet basis lb/lb mole	27.88
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	126.000
Dry Bulb Temp(t):	222.000
Bws - Moisture content fraction	0.101

Port	Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A	01	1.10	1.0488	223.0	68.68
A	02	1.00	1.0000	223.0	65.49
A	03	1.05	1.0247	223.0	67.10
A	04	1.00	1.0000	222.0	65.44
A	05	0.97	0.9849	221.0	64.40
A	06	0.80	0.8944	220.0	58.44
B	01	1.10	1.0488	222.0	68.63
B	02	1.10	1.0488	222.0	68.63
B	03	1.00	1.0000	222.0	65.44
B	04	1.00	1.0000	222.0	65.44
B	05	1.00	1.0000	222.0	65.44
B	06	0.83	0.9110	220.0	59.53

Port	Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C	01	1.10	1.0488	222.0	68.63
C	02	1.05	1.0247	222.0	67.05
C	03	1.05	1.0247	222.0	67.05
C	04	1.05	1.0247	223.0	67.10
C	05	1.00	1.0000	223.0	65.49
C	06	0.91	0.9539	221.0	62.38
D	01	1.15	1.0724	222.0	70.17
D	02	1.10	1.0488	223.0	68.68
D	03	1.15	1.0724	224.0	70.28
D	04	1.00	1.0000	223.0	65.49
D	05	1.00	1.0000	223.0	65.49
D	06	0.80	0.8944	220.0	58.44

Method 2 Results	
Average ΔP	1.0129
Average Sqrt ΔP	1.0053
Average Velocity Vs (ft/sec)	65.770
Average Velocity Accounting for WAF	65.457
Q - ACFM	375,018
Qsd - DSCFM	257,069
Qs - SCFM	285,861
Qs - SCFH	17,151,650
Qs - SCFH, accounting for Wall Effects	17,065,892
Wall Effects Adjustment Factor	0.9950

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	10
Plant:	Gary Works	Date:	3/14/2007
Source:	#1 Sinter Stack	Start Time:	17:00
Pitot ID:	25A	End Time:	17:15
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.33
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.46
t_s - Average stack temperature, °F	221.3
% CO_2	1.8
% O_2	17.4
% N_2	80.8
Md - dry basis lb/lb mole	28.98
Ms - wet basis lb/lb mole	27.87
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	126.000
Dry Bulb Temp(t):	221.000
Bws - Moisture content fraction	0.101

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.05	1.0247	223.0	67.11
A 02	1.05	1.0247	223.0	67.11
A 03	1.00	1.0000	223.0	65.49
A 04	1.05	1.0247	223.0	67.11
A 05	1.05	1.0247	223.0	67.11
A 06	0.80	0.8944	220.0	58.45
B 01	1.15	1.0724	222.0	70.18
B 02	1.10	1.0488	222.0	68.64
B 03	1.05	1.0247	222.0	67.06
B 04	1.15	1.0724	221.0	70.13
B 05	1.00	1.0000	220.0	65.35
B 06	0.80	0.8944	218.0	58.36

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.15	1.0724	222.0	70.18
C 02	1.10	1.0488	222.0	68.64
C 03	1.10	1.0488	222.0	68.64
C 04	1.10	1.0488	222.0	68.64
C 05	0.97	0.9849	221.0	64.41
C 06	0.80	0.8944	220.0	58.45
D 01	1.15	1.0724	222.0	70.18
D 02	1.10	1.0488	221.0	68.59
D 03	1.10	1.0488	221.0	68.59
D 04	1.00	1.0000	221.0	65.39
D 05	1.00	1.0000	220.0	65.35
D 06	0.80	0.8944	218.0	58.36

Method 2 Results	
Average ΔP	1.0258
Average Sqrt ΔP	1.0112
Average Velocity Vs (ft/sec)	66.126
Average Velocity Accounting for WAF	65.811
Q - ACFM	377,049
Qsd - DSCFM	258,634
Qs - SCFM	287,725
Qs - SCFH	17,263,503
Qs - SCFH, accounting for Wall Effects	17,177,185
Wall Effects Adjustment Factor	0.9950

PART 75 AND 60 GASEOUS FIELD DATA SHEET

Project Number: M071107 Date: 3/15/07
Client: Operator: JMC
Test Location: Stack 2 Fuel Factor:

	Time		Reference Method Data			Volumetric Flow Data		
Test	Start	End	[redacted]	[redacted]	[redacted]	[redacted]	scfh, RM Data	scfh, CEM Data
			THC as C3H8	CH4 as CH4	CH4 as C3H8	NMHC	scfm	NMHC lb/hr
1	1040	1100	29.5	30.5	12.3	17.2	292,635	34.49
2	1121	1141	27.5	29.1	11.8	15.7	297,759	32.03
3	1202	1222	27.7	30.3	12.3	15.4	308,478	32.55
4	1242	1302	25.7	28.0	11.3	14.4	302,154	29.81
5	1323	1343	27.9	31.0	12.5	15.4	306,899	32.38
6	1404	1424	28.0	31.7	12.8	15.2	308,067	32.08
7	1444	1504	27.4	30.6	12.4	15.0	304,926	31.34
8	1523	1543	30.8	33.0	13.4	17.4	298,824	35.62
9	1603	1623	28.2	30.8	12.5	15.1	298,349	32.09
10	1644	1704	27.8	30.8	12.5	15.3	308,870	32.28

	Calibration Corrected RM Data				CEM Data			
Test	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	scfm				NMHC lbs/hr
1				303,940				34.48
2				308,530				32.28
3				307,490				31.37
4				301,430				29.61
5				304,830				30.64
6								30.52
7				305,990				30.37
8				300,340				33.62
9				307,710				32.49
10				309,620				31.59

Calculate RATIOS in
VOC lb/hr
Flow scfm

U. S. Steel-Gary Works
March 15, 2007
Sinter Plant-Windbox Stack No. 2

Test	Start Time	End Time	THC as Propane ppmv	Methane as Methane ppmv	Methane as Propane ppmv	NMHC as Propane ppmv	Air Flow scfm	NMHC lbs/hr as Propane
1	10:40	11:00	29.5	30.5	12.3	17.2	292635	34.40
2	11:21	11:41	27.5	29.1	11.8	15.7	297759	32.08
3	12:02	12:22	27.7	30.3	12.3	15.4	308478	32.63
4	12:42	13:02	25.7	28.0	11.3	14.4	302154	29.75
5	13:23	13:43	27.9	31.0	12.5	15.4	306899	32.29
6	14:04	14:24	28.0	31.7	12.8	15.2	308067	32.02
7	14:44	15:04	27.4	30.6	12.4	15.0	304926	31.37
8	15:23	15:43	30.8	33.0	13.4	17.4	298824	35.72
9	16:03	16:23	28.2	30.8	12.5	15.7	298349	32.17
10	16:44	17:04	27.8	30.8	12.5	15.3	308870	32.45

Methane Response Factor=1.214

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
10:40	26.0	29.6
10:41	25.8	29.5
10:42	25.9	29.5
10:43	25.8	27.7
10:44	27.0	27.5
10:45	27.9	27.5
10:46	28.2	29.0
10:47	28.4	29.6
10:48	28.5	29.6
10:49	29.1	29.6
10:50	30.7	29.6
10:51	30.6	29.6
10:52	30.4	30.9
10:53	30.8	31.5
10:54	31.1	31.5
10:55	31.6	32.7
10:56	31.8	33.2
10:57	31.8	33.2
10:58	32.7	33.1
10:59	32.9	33.0
11:00	32.6	33.0
Average	29.5	30.5

Test #1

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
11:21	28.3	30.3
11:22	28.7	30.8
11:23	28.1	31.0
11:24	28.6	31.0
11:25	28.2	30.2
11:26	28.2	29.8
11:27	28.6	29.8
11:28	28.3	29.6
11:29	27.6	29.5
11:30	27.8	29.5
11:31	27.0	29.5
11:32	26.9	29.5
11:33	26.7	29.5
11:34	26.1	27.4
11:35	26.0	26.6
11:36	26.0	26.6
11:37	25.9	27.6
11:38	26.8	28.0
11:39	27.6	28.0
11:40	28.3	28.6
11:41	28.7	28.8
Average	27.5	29.1

Test #2

EPA-R5-2012-0005960000321

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
12:02	27.9	30.6
12:03	28.0	30.6
12:04	27.8	31.4
12:05	27.6	31.7
12:06	27.8	31.7
12:07	26.9	31.0
12:08	26.8	30.7
12:09	26.9	30.7
12:10	27.1	29.7
12:11	27.4	29.3
12:12	27.5	29.3
12:13	27.1	29.5
12:14	27.8	29.6
12:15	28.4	29.6
12:16	27.4	30.0
12:17	27.5	29.6
12:18	28.2	30.1
12:19	28.3	30.3
12:20	28.0	30.4
12:21	28.0	30.4
12:22	28.9	29.6
Average	27.7	30.3

Test #3

EPA-USS-0325857

Test #4

	Chan 1 THC	Chan 2 Methane
Time	ppm THC	ppm THC
12:42	25.1	28.9
12:43	25.2	28.5
12:44	24.6	28.4
12:45	25.1	28.4
12:46	24.4	28.1
12:47	24.8	28.0
12:48	24.3	28.0
12:49	25.3	27.2
12:50	24.5	26.9
12:51	24.8	26.9
12:52	25.4	27.1
12:53	25.6	27.1
12:54	25.1	27.1
12:55	25.7	27.0
12:56	26.7	26.9
12:57	26.3	26.9
12:58	26.7	28.6
12:59	26.7	29.1
13:00	27.7	29.1
13:01	27.7	30.1
13:02	27.6	30.4
Average	25.7	28.0

EPA-R5-2012-0005960000321

Test #5

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
13:23	26.3	30.3
13:24	26.3	30.3
13:25	26.1	31.0
13:26	26.3	31.2
13:27	25.7	30.7
13:28	26.2	29.5
13:29	26.7	29.0
13:30	27.3	29.0
13:31	28.1	29.2
13:32	28.1	29.3
13:33	27.8	29.3
13:34	28.7	31.4
13:35	28.9	32.1
13:36	29.5	32.1
13:37	28.7	32.9
13:38	28.7	33.2
13:39	28.6	32.6
13:40	29.8	32.4
13:41	29.4	31.6
13:42	29.4	32.2
13:43	29.8	32.5
Average	27.9	31.0

EPA-USS-0325859

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
14:04	28.5	32.8
14:05	27.9	32.6
14:06	27.2	32.6
14:07	27.1	31.3
14:08	26.4	30.9
14:09	26.2	30.9
14:10	27.1	28.6
14:11	28.1	27.9
14:12	27.7	27.9
14:13	28.6	31.4
14:14	28.4	32.4
14:15	28.3	32.4
14:16	27.6	34.1
14:17	28.2	34.6
14:18	28.2	34.6
14:19	28.4	32.7
14:20	28.2	32.2
14:21	28.1	32.2
14:22	28.0	31.3
14:23	29.1	31.0
14:24	30.2	31.0
Average	28.0	31.7

Test #6

time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
14:44	27.1	30.7
14:45	27.1	30.7
14:46	27.2	30.8
14:47	26.8	30.8
14:48	26.5	30.8
14:49	26.8	30.3
14:50	27.3	30.2
14:51	27.4	30.2
14:52	27.0	31.8
14:53	26.5	32.2
14:54	26.3	32.2
14:55	26.8	30.0
14:56	27.0	29.4
14:57	27.2	29.4
14:58	26.6	29.0
14:59	27.4	28.9
15:00	28.2	28.9
15:01	28.6	31.3
15:02	28.8	31.9
15:03	28.8	31.9
15:04	29.4	32.0
Average	27.4	30.6

Test #7

Test #8

Time	Chan 1 THC ppm THC	Chan 2 Methane TOTAL ppm THC
15:23	28.1	31.6
15:24	29.3	31.6
15:25	29.9	32.7
15:26	31.0	33.0
15:27	31.1	33.0
15:28	31.7	34.4
15:29	31.0	34.7
15:30	31.9	34.7
15:31	32.3	34.6
15:32	32.1	34.5
15:33	31.9	34.5
15:34	31.9	34.0
15:35	31.5	33.8
15:36	31.0	33.8
15:37	31.2	33.4
15:38	31.0	33.3
15:39	30.5	33.3
15:40	30.1	30.7
15:41	30.1	30.2
15:42	29.4	30.2
15:43	29.2	30.8
Average	30.8	33.0

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
16:03	29.3	32.1
16:04	28.8	32.7
16:05	29.2	32.8
16:06	29.5	32.8
16:07	28.0	32.4
16:08	28.5	32.3
16:09	28.4	32.3
16:10	27.9	30.2
16:11	27.9	29.9
16:12	27.9	30.4
16:13	27.7	30.3
16:14	27.6	30.3
16:15	27.8	30.3
16:16	27.8	28.9
16:17	27.9	28.6
16:18	28.0	28.6
16:19	28.5	30.2
16:20	28.4	30.5
16:21	28.0	30.5
16:22	28.0	30.4
16:23	28.0	30.4
Average	28.2	30.8

Test #9

Test #10

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
16:44	27.2	30.4
16:45	27.7	30.9
16:46	27.0	31.3
16:47	27.2	31.4
16:48	27.8	31.4
16:49	28.0	31.0
16:50	27.9	30.9
16:51	28.4	30.9
16:52	27.1	30.8
16:53	27.5	30.8
16:54	28.4	30.8
16:55	28.4	30.5
16:56	27.4	30.4
16:57	28.4	30.4
16:58	28.8	31.0
16:59	27.7	31.1
17:00	28.2	31.1
17:01	27.7	30.7
17:02	28.0	30.7
17:03	28.1	30.7
17:04	27.7	30.5
Average	27.8	30.8

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	1
Plant:	Gary Works	Date:	3/15/2007
Source:	#2 Sinter Stack	Start Time:	10:43
Pitot ID:	25A	End Time:	10:58
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.37
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.50
t_s - Average stack temperature, °F	220.7
% CO_2	2.0
% O_2	17.0
% N_2	81.0
Md - dry basis lb/lb mole	29.00
Ms - wet basis lb/lb mole	27.93
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	0.000
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	
Condensate Final Vol:	
Wet Bulb Temp(t'):	125.000
Dry Bulb Temp(t):	220.000
Bws - Moisture content fraction	**0.097**

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.15	1.0724	220.0	69.96
A 02	1.20	1.0954	223.0	71.62
A 03	1.00	1.0000	222.0	65.33
A 04	1.15	1.0724	221.0	70.01
A 05	1.10	1.0488	221.0	68.47
A 06	1.10	1.0488	222.0	68.52
B 01	1.00	1.0000	222.0	65.33
B 02	0.97	0.9849	222.0	64.34
B 03	1.00	1.0000	221.0	65.28
B 04	1.05	1.0247	220.0	66.85
B 05	1.00	1.0000	219.0	65.19
B 06	0.80	0.8944	219.0	58.31

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.30	1.1402	222.0	74.49
C 02	1.20	1.0954	222.0	71.57
C 03	1.20	1.0954	221.0	71.51
C 04	1.20	1.0954	221.0	71.51
C 05	1.20	1.0954	220.0	71.46
C 06	0.82	0.9055	218.0	58.99
D 01	1.00	1.0000	221.0	65.28
D 02	1.05	1.0247	221.0	66.90
D 03	1.00	1.0000	221.0	65.28
D 04	1.00	1.0000	220.0	65.24
D 05	1.00	1.0000	220.0	65.24
D 06	0.97	0.9849	217.0	64.11

Method 2 Results	
Average ΔP	1.0608

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	2
Plant:	Gary Works	Date:	3/15/2007
Source:	#2 Sinter Stack	Start Time:	11:22
Pitot ID:	25A	End Time:	11:37
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.37
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.50
t_s - Average stack temperature, °F	220.6
% CO_2	2.0
% O_2	17.0
% N_2	81.0
Md - dry basis lb/lb mole	29.00
Ms - wet basis lb/lb mole	27.9302636
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	125.000
Dry Bulb Temp(t):	220.000
Bws - Moisture content fraction	0.097

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.30	1.1402	221.0	74.43
A 02	1.25	1.1180	221.0	72.99
A 03	1.20	1.0954	221.0	71.51
A 04	1.20	1.0954	221.0	71.51
A 05	1.25	1.1180	220.0	72.94
A 06	0.86	0.9274	219.0	60.45
B 01	1.00	1.0000	221.0	65.28
B 02	1.00	1.0000	221.0	65.28
B 03	1.00	1.0000	221.0	65.28
B 04	1.00	1.0000	221.0	65.28
B 05	1.05	1.0247	220.0	66.85
B 06	0.84	0.9165	219.0	59.75

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.10	1.0488	221.0	68.47
C 02	1.25	1.1180	221.0	72.99
C 03	1.25	1.1180	221.0	72.99
C 04	1.25	1.1180	221.0	72.99
C 05	1.25	1.1180	220.0	72.94
C 06	1.00	1.0000	219.0	65.19
D 01	1.05	1.0247	220.0	66.85
D 02	1.00	1.0000	222.0	65.33
D 03	1.20	1.0954	222.0	71.57
D 04	1.10	1.0488	222.0	68.52
D 05	1.05	1.0247	220.0	66.85
D 06	0.92	0.9592	219.0	62.53

Method 2 Results	
Average ΔP	1.0988

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	3
Plant:	Gary Works	Date:	3/15/2007
Source:	#2 Sinter Stack	Start Time:	12:03
Pitot ID:	25A	End Time:	12:18
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.37
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.50
t_s - Average stack temperature, °F	219.4
% CO_2	2.0
% O_2	17.0
% N_2	81.0
Md - dry basis lb/lb mole	29.00
Ms - wet basis lb/lb mole	27.81
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	127.000
Dry Bulb Temp(t):	212.000
Bws - Moisture content fraction	0.109

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.05	1.0247	220.0	67.00
A 02	1.20	1.0954	220.0	71.62
A 03	1.15	1.0724	219.0	70.06
A 04	1.05	1.0247	219.0	66.95
A 05	1.20	1.0954	219.0	71.57
A 06	0.82	0.9055	218.0	59.12
B 01	1.20	1.0954	220.0	71.62
B 02	1.05	1.0247	220.0	67.00
B 03	1.20	1.0954	220.0	71.62
B 04	1.30	1.1402	220.0	74.55
B 05	1.20	1.0954	220.0	71.62
B 06	1.20	1.0954	220.0	71.62

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.05	1.0247	220.0	67.00
C 02	1.30	1.1402	220.0	74.55
C 03	1.20	1.0954	220.0	71.62
C 04	1.20	1.0954	218.0	71.52
C 05	1.30	1.1402	218.0	74.44
C 06	0.82	0.9055	217.0	59.07
D 01	1.30	1.1402	220.0	74.55
D 02	1.20	1.0954	220.0	71.62
D 03	1.30	1.1402	221.0	74.60
D 04	1.40	1.1832	220.0	77.36
D 05	1.40	1.1832	219.0	77.30
D 06	1.05	1.0247	218.0	66.90

Method 2 Results	
Average ΔP	1.1725

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107
Company:	US Steel
Plant:	Gary Works
Source:	#2 Sinter Stack
Pitot ID:	25A
Pitot Coefficient:	0.84

Operating Level:	High (Normal)
Run No.:	4
Date:	3/15/2007
Start Time:	12:43
End Time:	12:58
RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.37
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.50
t_s - Average stack temperature, °F	222.0
% CO_2	2.0
% O_2	17.0
% N_2	81.0
Md - dry basis lb/lb mole	29.00
Ms - wet basis lb/lb mole	27.89
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	126.000
Dry Bulb Temp(t):	220.000
Bws - Moisture content fraction	0.101

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.10	1.0488	219.0	68.42
A 02	1.15	1.0724	221.0	70.06
A 03	1.05	1.0247	221.0	66.95
A 04	1.10	1.0488	222.0	68.57
A 05	1.20	1.0954	218.0	71.41
A 06	1.10	1.0488	217.0	68.32
B 01	1.20	1.0954	220.0	71.52
B 02	1.20	1.0954	220.0	71.52
B 03	1.20	1.0954	222.0	71.62
B 04	1.20	1.0954	226.0	71.83
B 05	1.10	1.0488	223.0	68.63
B 06	1.05	1.0247	222.0	67.00

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.10	1.0488	224.0	68.68
C 02	1.20	1.0954	228.0	71.94
C 03	1.10	1.0488	226.0	68.78
C 04	1.30	1.1402	224.0	74.66
C 05	1.30	1.1402	219.0	74.38
C 06	1.00	1.0000	219.0	65.24
D 01	1.05	1.0247	222.0	67.00
D 02	1.10	1.0488	227.0	68.83
D 03	1.10	1.0488	225.0	68.73
D 04	1.00	1.0000	222.0	65.38
D 05	1.00	1.0000	221.0	65.34
D 06	1.20	1.0954	219.0	71.47

Method 2 Results	
Average ΔP	1.1292

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	5
Plant:	Gary Works	Date:	3/15/2007
Source:	#2 Sinter Stack	Start Time:	13:25
Pitot ID:	25A	End Time:	13:40
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.37
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.50
t_s - Average stack temperature, °F	222.8
% CO_2	2.0
% O_2	16.5
% N_2	81.5
Md - dry basis lb/lb mole	28.98
Ms - wet basis lb/lb mole	27.91
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	124.000
Dry Bulb Temp(t):	210.000
Bws - Moisture content fraction	0.097

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.10	1.0488	219.0	68.39
A 02	1.10	1.0488	219.0	68.39
A 03	1.30	1.1402	218.0	74.29
A 04	1.15	1.0724	218.0	69.88
A 05	1.30	1.1402	218.0	74.29
A 06	1.20	1.0954	217.0	71.33
B 01	1.10	1.0488	219.0	68.39
B 02	1.10	1.0488	219.0	68.39
B 03	1.25	1.1180	219.0	72.90
B 04	1.15	1.0724	218.0	69.88
B 05	1.30	1.1402	218.0	74.29
B 06	1.20	1.0954	224.0	71.69

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.05	1.0247	229.0	67.31
C 02	1.30	1.1402	234.0	75.16
C 03	1.20	1.0954	232.0	72.11
C 04	1.20	1.0954	224.0	71.69
C 05	1.20	1.0954	221.0	71.54
C 06	1.10	1.0488	219.0	68.39
D 01	1.00	1.0000	231.0	65.78
D 02	1.20	1.0954	230.0	72.01
D 03	1.15	1.0724	233.0	70.64
D 04	1.05	1.0247	224.0	67.06
D 05	1.15	1.0724	221.0	70.03
D 06				

Method 2 Results	
Average ΔP	1.1674

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	6
Plant:	Gary Works	Date:	3/15/2007
Source:	#2 Sinter Stack	Start Time:	14:04
Pitot ID:	25A	End Time:	14:19
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.37
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.50
t_s - Average stack temperature, °F	215.0
% CO_2	2.0
% O_2	16.5
% N_2	81.5
Md - dry basis lb/lb mole	28.98
Ms - wet basis lb/lb mole	27.89
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	125.000
Dry Bulb Temp(t'):	214.000
Bws - Moisture content fraction	0.100

Port	Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A	01	1.20	1.0954	215.0	71.25
A	02	1.20	1.0954	215.0	71.25
A	03	1.20	1.0954	215.0	71.25
A	04	1.30	1.1402	214.0	74.11
A	05	1.15	1.0724	214.0	69.70
A	06	1.05	1.0247	213.0	66.55
B	01	1.15	1.0724	216.0	69.81
B	02	1.20	1.0954	216.0	71.31
B	03	1.20	1.0954	218.0	71.41
B	04	1.20	1.0954	218.0	71.41
B	05	1.30	1.1402	217.0	74.27
B	06	1.15	1.0724	215.0	69.75

Port	Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C	01	1.00	1.0000	215.0	65.05
C	02	1.00	1.0000	215.0	65.05
C	03	1.05	1.0247	215.0	66.65
C	04	1.20	1.0954	216.0	71.31
C	05	1.30	1.1402	215.0	74.16
C	06	1.15	1.0724	214.0	69.70
D	01	1.00	1.0000	215.0	65.05
D	02	1.30	1.1402	215.0	74.16
D	03	1.15	1.0724	215.0	69.75
D	04	1.30	1.1402	215.0	74.16
D	05	1.15	1.0724	213.0	69.65
D	06	1.00	1.0000	212.0	64.90

Method 2 Results	
Average ΔP	1.1625

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	7
Plant:	Gary Works	Date:	3/15/2007
Source:	#2 Sinter Stack	Start Time:	14:45
Pitot ID:	25A	End Time:	15:00
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.37
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.50
t_s - Average stack temperature, °F	215.2
% CO_2	1.8
% O_2	17.4
% N_2	80.8
Md - dry basis lb/lb mole	28.98
Ms - wet basis lb/lb mole	27.89
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	125.000
Dry Bulb Temp(t):	215.000
Bws - Moisture content fraction	0.099

Port	Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A	01	1.20	1.0954	215.0	71.24
A	02	1.05	1.0247	215.0	66.64
A	03	1.20	1.0954	214.0	71.19
A	04	1.30	1.1402	216.0	74.21
A	05	1.30	1.1402	217.0	74.26
A	06	1.15	1.0724	213.0	69.64
B	01	1.00	1.0000	215.0	65.04
B	02	1.15	1.0724	215.0	69.74
B	03	1.20	1.0954	216.0	71.30
B	04	1.25	1.1180	217.0	72.82
B	05	1.30	1.1402	215.0	74.15
B	06	1.15	1.0724	214.0	69.69

Port	Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C	01	1.00	1.0000	215.0	65.04
C	02	1.00	1.0000	214.0	64.99
C	03	1.00	1.0000	215.0	65.04
C	04	1.20	1.0954	217.0	71.35
C	05	1.25	1.1180	215.0	72.71
C	06	1.05	1.0247	213.0	66.54
D	01	1.05	1.0247	215.0	66.64
D	02	1.20	1.0954	215.0	71.24
D	03	1.10	1.0488	215.0	68.21
D	04	1.10	1.0488	215.0	68.21
D	05	1.15	1.0724	216.0	69.80
D	06	1.00	1.0000	217.0	65.13

Method 2 Results	
Average ΔP	1.1396

EPA-R5-2012-0005960000321

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	8
Plant:	Gary Works	Date:	3/15/2007
Source:	#2 Sinter Stack	Start Time:	15:25
Pitot ID:	25A	End Time:	15:40
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.37
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.50
t_s - Average stack temperature, °F	214.8
% CO_2	1.8
% O_2	17.4
% N_2	80.8
Md - dry basis lb/lb mole	28.98
Ms - wet basis lb/lb mole	27.85
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	126.000
Dry Bulb Temp(t):	214.000
Bws - Moisture content fraction	0.104

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A 01	1.05	1.0247	215.0	66.70
A 02	1.00	1.0000	214.0	65.05
A 03	1.00	1.0000	215.0	65.09
A 04	1.10	1.0488	215.0	68.27
A 05	1.10	1.0488	215.0	68.27
A 06				
B 01	1.00	1.0000	215.0	65.09
B 02	1.00	1.0000	215.0	65.09
B 03	1.00	1.0000	215.0	65.09
B 04	1.10	1.0488	215.0	68.27
B 05	1.10	1.0488	215.0	68.27
B 06	1.10	1.0488	214.0	68.22

Port Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C 01	1.00	1.0000	215.0	65.09
C 02	1.20	1.0954	215.0	71.31
C 03	1.30	1.1402	215.0	74.22
C 04	1.05	1.0247	215.0	66.70
C 05	1.00	1.0000	215.0	65.09
C 06	1.05	1.0247	214.0	66.65
D 01	1.20	1.0954	215.0	71.31
D 02	1.15	1.0724	215.0	69.81
D 03	1.20	1.0954	215.0	71.31
D 04	1.15	1.0724	215.0	69.81
D 05	1.15	1.0724	215.0	69.81
D 06	1.10	1.0488	214.0	68.22

Method 2 Results	
Average ΔP	1.0913

EPA-USS-0325872

EPA-R5-2012-000596000321

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	9
Plant:	Gary Works	Date:	3/15/2007
Source:	#2 Sinter Stack	Start Time:	16:03
Pitot ID:	25A	End Time:	16:18
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.37
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.50
t_s - Average stack temperature, °F	214.8
% CO_2	1.7
% O_2	17.3
% N_2	81.0
Md - dry basis lb/lb mole	28.96
Ms - wet basis lb/lb mole	27.83
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	126.000
Dry Bulb Temp(t):	214.000
Bws - Moisture content fraction	0.104

Port	Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A	01	1.05	1.0247	215.0	66.72
A	02	1.10	1.0488	217.0	68.39
A	03	1.05	1.0247	215.0	66.72
A	04	1.10	1.0488	214.0	68.24
A	05	1.20	1.0954	214.0	71.28
A	06	1.20	1.0954	214.0	71.28
B	01	1.00	1.0000	215.0	65.11
B	02	1.10	1.0488	214.0	68.24
B	03	1.00	1.0000	215.0	65.11
B	04	1.20	1.0954	215.0	71.33
B	05	1.10	1.0488	215.0	68.29
B	06	1.05	1.0247	214.0	66.67

Port	Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C	01	1.00	1.0000	215.0	65.11
C	02	1.20	1.0954	215.0	71.33
C	03	0.98	0.9899	215.0	64.46
C	04	1.05	1.0247	215.0	66.72
C	05	1.10	1.0488	214.0	68.24
C	06	1.10	1.0488	215.0	68.29
D	01	1.00	1.0000	215.0	65.11
D	02	1.00	1.0000	213.0	65.02
D	03	1.10	1.0488	216.0	68.34
D	04	1.10	1.0488	215.0	68.29
D	05	1.10	1.0488	215.0	68.29
D	06	1.20	1.0954	214.0	71.28

Method 2 Results	
Average ΔP	1.0867

EPA-USS-0325873

METHOD 2 VOLUMETRIC FLOW DATA

Project No:	M071107	Operating Level:	High (Normal)
Company:	US Steel	Run No.:	10
Plant:	Gary Works	Date:	3/15/2007
Source:	#2 Sinter Stack	Start Time:	16:45
Pitot ID:	25A	End Time:	17:00
Pitot Coefficient:	0.84	RM Testers:	CT

Test Parameters	
P_{bar} - Barometric pressure, inches Hg	29.37
P_g - Stack Pressure, inches of H_2O	1.80
P_s - Absolute stack pressure, inches Hg	29.50
t_s - Average stack temperature, °F	214.8
% CO_2	1.7
% O_2	17.3
% N_2	81.0
Md - dry basis lb/lb mole	28.96
Ms - wet basis lb/lb mole	27.83
Stack Diameter, Feet	11.00
Cross Sectional Area of Stack, Ft^2	95.03

Moisture Determination	Use Moisture from previous test run?
Meter Calibration:	0.000
Initial Meter Volume:	
Final Meter Volume:	
Meter Temperature:	
Meter Volume Vm(std):	
Meter Volume Vw(std):	#VALUE!
Delta H:	
Train Initial Wt:	
Train Final Wt:	0.000
Condensate Initial Vol:	0.000
Condensate Final Vol:	0.000
Wet Bulb Temp(t'):	126.000
Dry Bulb Temp(t):	214.000
Bws - Moisture content fraction	0.104

Port	Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
A	01	1.00	1.0000	214.0	65.07
A	02	1.20	1.0954	216.0	71.38
A	03	1.15	1.0724	215.0	69.83
A	04	1.15	1.0724	214.0	69.78
A	05	1.20	1.0954	214.0	71.28
A	06	1.15	1.0724	214.0	69.78
B	01	1.15	1.0724	215.0	69.83
B	02	1.10	1.0488	215.0	68.29
B	03	1.20	1.0954	216.0	71.38
B	04	1.15	1.0724	216.0	69.88
B	05	1.20	1.0954	216.0	71.38
B	06	1.25	1.1180	214.0	72.75

Port	Point	ΔP (in. H_2O)	Sqrt. ΔP	Temp (°F)	Velocity (V)
C	01	1.15	1.0724	215.0	69.83
C	02	1.10	1.0488	215.0	68.29
C	03	1.20	1.0954	215.0	71.33
C	04	1.15	1.0724	215.0	69.83
C	05	1.25	1.1180	215.0	72.80
C	06	1.30	1.1402	214.0	74.19
D	01	1.10	1.0488	215.0	68.29
D	02	1.10	1.0488	215.0	68.29
D	03	1.10	1.0488	215.0	68.29
D	04	1.10	1.0488	215.0	68.29
D	05	1.30	1.1402	214.0	74.19
D	06	1.20	1.0954	214.0	71.28

Method 2 Results	
Average ΔP	1.1646

Run 1

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	THC STACK1 1 MIN PPMC3 AVG	FLOW STACK 1 1 MIN KSCFM AVG	TOTAL VOC 1 1 MIN LBS/HR AVG
3/14/2007 10:44:00	19.1	13.3	32.2	284.48	25.9
3/14/2007 10:45:00	20.0	14.4	34.3	283.48	28.0
3/14/2007 10:46:00	21.4	12.4	33.6	284.27	24.2
3/14/2007 10:47:00	20.5	14.8	35.2	292.37	29.8
3/14/2007 10:48:00	23.2	12.1	35.0	292.07	24.2
3/14/2007 10:49:00	21.1	13.4	34.3	289.58	26.7
3/14/2007 10:50:00	21.7	15.0	36.6	285.04	29.4
3/14/2007 10:51:00	23.0	11.7	34.4	281.06	22.6
3/14/2007 10:52:00	20.5	13.6	34.0	283.84	26.5
3/14/2007 10:53:00	20.9	13.6	34.3	287.28	26.8
3/14/2007 10:54:00	19.9	13.2	32.9	286.59	25.9
3/14/2007 10:55:00	19.5	13.3	32.7	284.57	26.0
3/14/2007 10:56:00	20.2	14.1	34.2	280.53	27.1
3/14/2007 10:57:00	19.7	12.1	31.6	283.80	23.7
3/14/2007 10:58:00	18.0	13.1	31.0	284.94	25.6
3/14/2007 10:59:00	18.2	13.4	31.5	290.69	26.7
3/14/2007 11:00:00	18.7 C	13.5 C	32.2	286.74 C	26.6 C
3/14/2007 11:01:00	19.6	14.0	32.8	243.81	22.5
3/14/2007 11:02:00	19.9	12.8	32.5	282.24	24.8
3/14/2007 11:03:00	20.0	13.9	33.8	287.73	27.5
3/14/2007 11:04:00	21.5	14.3	35.7	294.22	28.9
Average	20.3	13.4	33.6	284.25	26.2

Test #1

Corrected CH4 47.5
RF=1.2821

EPA-R5-2012-0005960000321

EPA-USS-0325875

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	THC STACK1 1 MIN PPMC3 AVG	FLOW STACK 1 1 MIN KSCFM AVG	TOTAL VOC 1 1 MIN LBS/HR AVG
3/14/2007 11:28:00	17.3	13.1	30.3	285.70	25.6
3/14/2007 11:29:00	17.1	13.1	30.1	287.84	25.8
3/14/2007 11:30:00	16.9	13.9	30.7	274.93	26.2
3/14/2007 11:31:00	17.3	13.4	30.6	278.41	25.6
3/14/2007 11:32:00	17.0	13.7	30.6	285.59	26.8
3/14/2007 11:33:00	17.5	14.5	32.0	280.93	27.9
3/14/2007 11:34:00	18.1	14.1	32.1	277.48	26.8
3/14/2007 11:35:00	18.4	14.8	33.1	289.77	29.4
3/14/2007 11:36:00	19.0	13.9	32.9	288.03	27.4
3/14/2007 11:37:00	18.8	14.7	33.4	285.79	28.8
3/14/2007 11:38:00	19.6	14.5	34.0	283.53	28.2
3/14/2007 11:39:00	19.9	14.0	33.7	285.55	27.4
3/14/2007 11:40:00	20.1	14.4	34.3	281.95	27.8
3/14/2007 11:41:00	19.3	13.9	33.1	287.33	27.4
3/14/2007 11:42:00	18.5	14.6	33.0	288.05	28.8
3/14/2007 11:43:00	19.0	14.8	33.7	284.86	28.9
3/14/2007 11:44:00	19.7	15.0	34.6	283.66	29.2
3/14/2007 11:45:00	20.2	15.2	35.4	284.90	29.7
3/14/2007 11:46:00	21.2	15.0	36.1	287.20	29.5
3/14/2007 11:47:00	19.9	15.2	35.0	286.77	29.9
3/14/2007 11:48:00	19.8	15.6	35.4	288.76	30.9
Average	18.8	14.4	33.1	284.62	27.99

Corrected CH4 44.0
RF=1.2821

Test # 2

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	THC STACK1 1 MIN PPMC3 AVG	FLOW STACK 1 1 MIN KSCFM AVG	TOTAL VOC 1 1 MIN LBS/HR AVG
3/14/2007 12:15:00	18.7	13.7	32.2	285.75	26.8
3/14/2007 12:16:00	18.5	14.1	32.6	284.01	27.4
3/14/2007 12:17:00	19.1	13.9	33.0	283.52	27.0
3/14/2007 12:18:00	19.1	14.6	33.5	285.63	28.6
3/14/2007 12:19:00	19.2	13.6	32.6	282.30	26.3
3/14/2007 12:20:00	18.4	14.0	32.4	285.65	27.4
3/14/2007 12:21:00	18.5	14.4	32.8	284.46	28.1
3/14/2007 12:22:00	18.7	13.8	32.4	283.95	26.8
3/14/2007 12:23:00	18.7	13.8	32.3	279.32	26.4
3/14/2007 12:24:00	18.3	13.7	31.9	274.16	25.7
3/14/2007 12:25:00	17.9	14.0	31.8	279.54	26.8
3/14/2007 12:26:00	18.2	14.1	32.2	279.40	27.0
3/14/2007 12:27:00	18.1	14.1	32.1	286.89	27.7
3/14/2007 12:28:00	18.2	14.4	32.6	287.27	28.3
3/14/2007 12:29:00	19.9	14.9	34.7	288.34	29.4
3/14/2007 12:30:00	21.4	15.1	36.3	286.19	29.6
3/14/2007 12:31:00	22.9	14.6	37.3	287.91	28.8
3/14/2007 12:32:00	23.6	15.4	38.7	283.70	29.9
3/14/2007 12:33:00	24.3	13.0	37.0	282.52	25.2
3/14/2007 12:34:00	22.8	14.5	37.1	284.99	28.3
3/14/2007 12:35:00	23.0	13.7	36.4	281.82	26.5
Average	19.9	14.2	33.9	283.68	27.5

Test 3

Corrected CH4 46.5
RF=1.2821

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	THC STACK1 1 MIN PPMC3 AVG	FLOW STACK 1 1 MIN KSCFM AVG	TOTAL VOC 1 1 MIN LBS/HR AVG
3/14/2007 12:57:00	18.3	14.2	32.4	284.96	27.7
3/14/2007 12:58:00	17.3	14.0	31.2	278.81	26.7
~~3/14/2007 12:59:00~~	~~16.4~~	~~14.8~~	~~31.5~~	~~189.45~~	~~19.3~~
3/14/2007 13:00:00	17.4	14.4	31.4	237.09	23.1
3/14/2007 13:01:00	16.4	14.1	30.5	263.85	25.7
3/14/2007 13:02:00	16.1	14.6	30.8	282.77	28.4
3/14/2007 13:03:00	16.8	14.5	31.3	281.59	28.1
3/14/2007 13:04:00	16.9	14.5	31.4	236.32	23.8
3/14/2007 13:05:00	16.6	14.0	31.2	261.89	25.6
3/14/2007 13:06:00	17.0	15.1	32.2	286.43	29.8
3/14/2007 13:07:00	17.7	14.6	32.3	278.87	28.0
3/14/2007 13:08:00	18.2	14.7	32.9	281.88	28.5
3/14/2007 13:09:00	18.0	14.8	32.7	287.62	29.2
3/14/2007 13:10:00	18.3	14.8	33.0	286.19	29.1
3/14/2007 13:11:00	18.3	14.5	32.8	283.31	28.2
3/14/2007 13:12:00	18.1	14.7	32.7	286.16	28.9
3/14/2007 13:13:00	18.7	15.0	33.6	284.84	29.4
3/14/2007 13:14:00	19.0	14.8	33.7	280.56	28.5
~~3/14/2007 13:15:00~~	~~19.1~~	~~15.4~~	~~35.2~~	~~191.40~~	~~20.4~~
3/14/2007 13:16:00	19.9	14.6	34.3	285.93	28.7
3/14/2007 13:17:00	19.9	15.7	35.6	281.88	30.4
3/14/2007 13:18:00	20.6	15.7	36.2	282.58	30.5
3/14/2007 13:19:00	20.8	14.2	35.6	286.62	27.9
Average	18.1	14.6	32.8	277.1	27.9

Test 4

Corrected CH4 42.4
RF=1.2821

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	THC STACK1 1 MIN PPMC3 AVG	FLOW STACK 1 1 MIN KSCFM AVG	TOTAL VOC 1 1 MIN LBS/HR AVG
3/14/2007 13:36:00	17.8	15.3	33.1	282.14	29.7
3/14/2007 13:37:00	18.6	15.1	33.7	287.76	29.8
3/14/2007 13:38:00	19.6	15.1	34.5	240.44	36.7
3/14/2007 13:39:00	20.1	13.5	33.7	235.30	34.7
3/14/2007 13:40:00	19.0	15.5	33.3	236.60	38.9
3/14/2007 13:41:00	21.0	14.6	35.4	285.02	28.6
3/14/2007 13:42:00	19.7	13.7	33.3	279.25	26.3
3/14/2007 13:43:00	19.4	15.6	35.1	287.90	30.9
3/14/2007 13:44:00	21.5	14.1	35.4	286.68	27.8
3/14/2007 13:45:00	19.7	15.1	34.7	281.16	29.1
3/14/2007 13:46:00	22.4	16.5	38.9	288.37	32.6
3/14/2007 13:47:00	23.6	12.0	35.2	283.87	23.3
3/14/2007 13:48:00	19.5	15.0	34.5	279.38	28.8
3/14/2007 13:49:00	21.1	14.2	35.2	284.02	27.8
3/14/2007 13:50:00	20.0	13.8	33.7	287.25	27.2
3/14/2007 13:51:00	19.7	14.6	34.3	289.66	29.0
3/14/2007 13:52:00	20.6	14.8	35.3	284.21	28.9
3/14/2007 13:53:00	21.1	14.4	35.3	284.32	28.0
3/14/2007 13:54:00	19.7	13.3	32.8	284.15	26.0
3/14/2007 13:55:00	18.7	15.3	33.9	284.31	29.8
3/14/2007 13:56:00	20.2	14.1	34.1	281.77	27.2
Average	20.1	14.6	34.5	277.79	29.6

Test #5

Corrected CH4 47.1
RF=1.2821

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	THC STACK1 1 MIN PPMC3 AVG	FLOW STACK 1 1 MIN KSCFM AVG	TOTAL VOC 1 1 MIN LBS/HR AVG
3/14/2007 14:18:00	19.3	14.2	33.5	284.29	27.8
3/14/2007 14:19:00	20.5	14.1	34.4	282.84	27.4
3/14/2007 14:20:00	18.6	12.9	31.4	286.76	25.4
3/14/2007 14:21:00	17.9	15.2	33.1	281.77	29.5
3/14/2007 14:22:00	18.4	12.8	31.0	283.91	25.0
3/14/2007 14:23:00	16.8	14.0	30.8	288.46	27.7
3/14/2007 14:24:00	17.3	14.5	31.8	287.85	28.7
3/14/2007 14:25:00	17.4	14.3	31.6	279.05	27.4
3/14/2007 14:26:00	18.1	15.2	33.3	295.77	30.9
3/14/2007 14:27:00	18.6	12.6	31.0	286.98	24.8
3/14/2007 14:28:00	16.5	14.2	30.7	291.05	28.4
3/14/2007 14:29:00	17.5	14.4	31.8	286.25	28.3
3/14/2007 14:30:00	18.1	13.1	31.1	286.18	25.8
3/14/2007 14:31:00	16.1	13.4	29.5	285.85	26.3
3/14/2007 14:32:00	16.3	14.2	30.5	280.62	27.4
3/14/2007 14:33:00	17.0	13.1	30.0	279.67	25.1
3/14/2007 14:34:00	16.9	14.4	31.3	289.58	28.7
3/14/2007 14:35:00	19.0	14.2	33.1	294.02	28.7
3/14/2007 14:36:00	18.9	12.3	31.0	296.04	25.0
3/14/2007 14:37:00	17.4	14.5	31.9	289.61	28.9
3/14/2007 14:38:00	18.9	12.9	31.7	292.45	25.9
Average	17.9	13.8	31.6	287.10	27.3

Corrected CH4 41.8
RF=1.2821

Test #6

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	THC STACK1 1 MIN PPMC3 AVG	FLOW STACK 1 1 MIN KSCFM AVG	TOTAL VOC 1 1 MIN LBS/HR AVG
3/14/2007 14:57:00	18.4	13.3	31.7	289.44	26.5
3/14/2007 14:58:00	18.1	13.6	31.5	292.58	27.3
3/14/2007 14:59:00	16.7	13.5	30.1	283.21	26.1
3/14/2007 15:00:00	16.3	13.8	30.0	285.27	27.0
3/14/2007 15:01:00	16.1	13.6	29.7	284.52	26.7
3/14/2007 15:02:00	16.4	14.3	30.7	286.14	28.1
3/14/2007 15:03:00	17.8	14.1	31.8	286.34	27.6
3/14/2007 15:04:00	17.8	14.7	32.5	285.65	28.9
3/14/2007 15:05:00	18.8	13.1	31.7	284.57	25.5
3/14/2007 15:06:00	17.2	15.1	32.3	283.03	29.3
3/14/2007 15:07:00	19.1	13.8	32.7	286.03	27.0
3/14/2007 15:08:00	17.8	14.4	32.1	283.04	28.0
3/14/2007 15:09:00	18.9	14.2	32.9	290.01	28.3
3/14/2007 15:10:00	18.7	14.5	33.1	285.32	28.3
3/14/2007 15:11:00	18.4	14.1	32.4	284.24	27.6
3/14/2007 15:12:00	19.2	14.4	33.5	282.58	28.0
3/14/2007 15:13:00	18.5	13.9	32.3	277.64	26.6
3/14/2007 15:14:00	18.7	14.4	33.0	282.92	28.0
3/14/2007 15:15:00	19.5	13.9	33.3	286.02	27.3
3/14/2007 15:16:00	18.6	13.8	32.3	288.81	27.4
3/14/2007 15:17:00	17.7	14.6	32.3	285.73	28.6
Average	18.0	14.1	32.0	285.39	27.5

Corrected CH4 42.2
RF=1.2821

Test #7

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	THC STACK1 1 MIN PPMC3 AVG	FLOW STACK 1 1 MIN KSCFM AVG	TOTAL VOC 1 1 MIN LBS/HR AVG
3/14/2007 15:36:00	17.7	14.5	32.1	288.45	28.7
3/14/2007 15:37:00	18.8	14.3	33.0	292.79	28.7
3/14/2007 15:38:00	20.1	14.2	34.1	289.23	28.1
3/14/2007 15:39:00	19.4	12.6	31.8	288.60	24.9
3/14/2007 15:40:00	17.9	14.3	32.2	285.45	28.1
3/14/2007 15:41:00	19.1	14.4	33.4	281.54	27.8
3/14/2007 15:42:00	20.4	12.5	32.6	282.97	24.3
3/14/2007 15:43:00	18.3	14.1	32.4	289.57	28.1
3/14/2007 15:44:00	21.0	14.5	35.3	286.78	28.5
3/14/2007 15:45:00	20.5	12.3	32.5	281.95	23.7
3/14/2007 15:46:00	19.0	13.9	32.8	285.04	27.2
3/14/2007 15:47:00	20.3	14.8	35.0	283.03	28.9
3/14/2007 15:48:00	21.1	12.7	33.5	285.16	24.9
3/14/2007 15:49:00	19.1	13.2	32.2	285.91	26.0
3/14/2007 15:50:00	18.9	13.9	32.7	286.73	27.3
3/14/2007 15:51:00	20.7	14.5	35.1	286.25	28.4
3/14/2007 15:52:00	20.1	13.9	33.9	284.15	27.1
3/14/2007 15:53:00	20.5	13.6	33.8	280.82	26.1
3/14/2007 15:54:00	20.4	15.0	35.3	278.60	28.7
3/14/2007 15:55:00	21.3	14.5	35.6	288.10	28.6
3/14/2007 15:56:00	21.3	14.6	35.8	285.91	28.7
Average	19.8	13.9	33.6	285.57	27.3

Test #8

Corrected CH4 46.3
RF=1.2821

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	THC STACK1 1 MIN PPMC3 AVG	FLOW STACK 1 1 MIN KSCFM AVG	TOTAL VOC 1 1 MIN LBS/HR AVG
3/14/2007 16:18:00	22.2	13.8	35.8	282.45	26.8
3/14/2007 16:19:00	21.4	13.3	34.5	276.96	25.3
3/14/2007 16:20:00	20.6	15.1	35.7	287.12	29.8
3/14/2007 16:21:00	23.7	13.9	37.3	288.15	27.5
3/14/2007 16:22:00	23.0	14.3	37.1	288.77	28.4
3/14/2007 16:23:00	23.0	13.6	36.3	284.45	26.5
3/14/2007 16:24:00	23.3	14.6	37.6	287.33	28.7
3/14/2007 16:25:00	22.6	13.7	36.0	291.02	27.3
3/14/2007 16:26:00	21.8	13.6	35.3	288.22	27.0
3/14/2007 16:27:00	21.4	13.8	35.0	286.13	27.0
3/14/2007 16:28:00	20.9	14.2	34.9	287.57	28.0
3/14/2007 16:29:00	22.3	14.5	36.7	288.99	28.8
3/14/2007 16:30:00	23.1	14.3	37.2	288.35	28.4
3/14/2007 16:31:00	23.3	14.1	37.1	283.95	27.4
3/14/2007 16:32:00	22.6	12.9	35.3	287.70	25.5
3/14/2007 16:33:00	21.8	14.8	36.5	287.78	29.4
3/14/2007 16:34:00	23.5	12.9	36.0	289.57	25.8
3/14/2007 16:35:00	21.1	13.6	34.5	290.48	27.4
3/14/2007 16:36:00	22.8	14.0	36.5	287.40	28.3
3/14/2007 16:37:00	22.6	13.1	35.5	292.41	26.8
3/14/2007 16:38:00	21.0	12.7	33.4	285.75	25.5
Average	22.3	13.8	35.9	287.17	27.4

Corrected CH4 52.1
RF=1.2821

Tst #9

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	THC STACK1 1 MIN PPMC3 AVG	FLOW STACK 1 1 MIN KSCFM AVG	TOTAL VOC 1 1 MIN LBS/HR AVG
3/14/2007 16:58:00	19.0	13.5	32.4	289.46	27.4
3/14/2007 16:59:00	21.0	13.1	33.9	290.54	26.8
3/14/2007 17:00:00	20.6	13.2	33.6	293.30	27.1
3/14/2007 17:01:00	21.8	13.1	34.6	239.42	22.2
3/14/2007 17:02:00	21.7	12.5	34.0	282.77	24.9
3/14/2007 17:03:00	22.5	12.9	35.1	288.90	26.2
3/14/2007 17:04:00	21.4	13.5	34.7	285.59	27.1
3/14/2007 17:05:00	22.2	13.0	35.1	287.08	26.4
3/14/2007 17:06:00	23.3	14.0	37.0	288.79	28.5
3/14/2007 17:07:00	23.1	13.8	36.8	283.91	27.5
3/14/2007 17:08:00	23.9	14.3	38.0	290.36	29.3
3/14/2007 17:09:00	24.3	13.7	37.7	284.55	27.5
3/14/2007 17:10:00	24.0	13.3	37.0	286.77	26.9
3/14/2007 17:11:00	23.5	13.6	36.8	292.40	28.0
3/14/2007 17:12:00	22.8	14.1	36.7	289.81	28.6
3/14/2007 17:13:00	23.6	13.5	36.8	290.77	27.5
3/14/2007 17:14:00	24.9	15.0	39.6	293.13	30.7
3/14/2007 17:15:00	26.1	13.5	39.2	291.92	27.7
3/14/2007 17:16:00	25.7	13.8	39.1	293.39	28.4
3/14/2007 17:17:00	24.5	13.2	37.3	285.77	26.6
3/14/2007 17:18:00	23.1	14.0	36.9	280.62	27.9
Average	23.0	13.6	36.3	286.15	27.3

Test #10

Corrected CH4 53.8
RF=1.2821

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 10:30:00	1830
3/14/2007 10:31:00	1832
3/14/2007 10:32:00	1834
3/14/2007 10:33:00	1837
3/14/2007 10:34:00	1839
3/14/2007 10:35:00	1841
3/14/2007 10:36:00	1844
3/14/2007 10:37:00	1846
3/14/2007 10:38:00	1848
3/14/2007 10:39:00	1850
3/14/2007 10:40:00	1853
3/14/2007 10:41:00	1855
3/14/2007 10:42:00	1858
3/14/2007 10:43:00	1860
3/14/2007 10:44:00	1862
3/14/2007 10:45:00	1865
3/14/2007 10:46:00	1867
3/14/2007 10:47:00	1870
3/14/2007 10:48:00	1872
3/14/2007 10:49:00	1875
3/14/2007 10:50:00	1877
3/14/2007 10:51:00	1880
3/14/2007 10:52:00	1882
3/14/2007 10:53:00	1884
Average	1857

EPA-USS-0325885

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 10:54:00	1886
3/14/2007 10:55:00	1889
3/14/2007 10:56:00	1891
3/14/2007 10:57:00	1893
3/14/2007 10:58:00	1895
3/14/2007 10:59:00	1898
3/14/2007 11:00:00	1900
3/14/2007 11:01:00	1902
3/14/2007 11:02:00	1904
3/14/2007 11:03:00	1906
3/14/2007 11:04:00	1908
3/14/2007 11:05:00	1911
3/14/2007 11:06:00	1913
3/14/2007 11:07:00	1915
3/14/2007 11:08:00	1917
3/14/2007 11:09:00	1920
3/14/2007 11:10:00	1922
3/14/2007 11:11:00	1925
3/14/2007 11:12:00	1927
3/14/2007 11:13:00	1929
3/14/2007 11:14:00	1931
3/14/2007 11:15:00	1934
3/14/2007 11:16:00	1936
3/14/2007 11:17:00	1939
Average	1912

EPA-USS-0325886

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 11:18:00	1941
3/14/2007 11:19:00	1943
3/14/2007 11:20:00	1946
3/14/2007 11:21:00	1948
3/14/2007 11:22:00	1951
3/14/2007 11:23:00	1953
3/14/2007 11:24:00	1955
3/14/2007 11:25:00	1957
3/14/2007 11:26:00	1960
3/14/2007 11:27:00	1962
3/14/2007 11:28:00	1965
3/14/2007 11:29:00	1967
3/14/2007 11:30:00	1970
3/14/2007 11:31:00	1972
3/14/2007 11:32:00	1975
3/14/2007 11:33:00	1978
3/14/2007 11:34:00	1980
3/14/2007 11:35:00	1982
3/14/2007 11:36:00	1985
3/14/2007 11:37:00	1988
3/14/2007 11:38:00	1990
3/14/2007 11:39:00	1993
3/14/2007 11:40:00	1995
3/14/2007 11:41:00	1998
Average	1969

EPA-USS-0325887

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 11:42:00	1999
3/14/2007 11:43:00	2001
3/14/2007 11:44:00	2002
3/14/2007 11:45:00	2004
3/14/2007 11:46:00	2005
3/14/2007 11:47:00	2006
3/14/2007 11:48:00	2008
3/14/2007 11:49:00	2010
3/14/2007 11:50:00	2011
3/14/2007 11:51:00	2013
3/14/2007 11:52:00	2015
3/14/2007 11:53:00	2016
3/14/2007 11:54:00	2018
3/14/2007 11:55:00	2019
3/14/2007 11:56:00	2021
3/14/2007 11:57:00	2022
3/14/2007 11:58:00	2024
3/14/2007 11:59:00	2025
3/14/2007 12:00:00	2027
3/14/2007 12:01:00	2028
3/14/2007 12:02:00	2030
3/14/2007 12:03:00	2031
3/14/2007 12:04:00	2033
3/14/2007 12:05:00	2034
Average	2017

EPA-USS-0325888

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 12:06:00	2035
3/14/2007 12:07:00	2037
3/14/2007 12:08:00	2038
3/14/2007 12:09:00	2040
3/14/2007 12:10:00	2041
3/14/2007 12:11:00	2043
3/14/2007 12:12:00	2044
3/14/2007 12:13:00	2045
3/14/2007 12:14:00	2047
3/14/2007 12:15:00	2048
3/14/2007 12:16:00	2050
3/14/2007 12:17:00	2052
3/14/2007 12:18:00	2055
3/14/2007 12:19:00	2057
3/14/2007 12:20:00	2059
3/14/2007 12:21:00	2062
3/14/2007 12:22:00	2064
3/14/2007 12:23:00	2067
3/14/2007 12:24:00	2069
3/14/2007 12:25:00	2071
3/14/2007 12:26:00	2074
3/14/2007 12:27:00	2076
3/14/2007 12:28:00	2078
3/14/2007 12:29:00	2081
Average	2056

EPA-USS-0325889

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 12:30:00	2084
3/14/2007 12:31:00	2086
3/14/2007 12:32:00	2089
3/14/2007 12:33:00	2092
3/14/2007 12:34:00	2094
3/14/2007 12:35:00	2097
3/14/2007 12:36:00	2099
3/14/2007 12:37:00	2102
3/14/2007 12:38:00	2104
3/14/2007 12:39:00	2107
3/14/2007 12:40:00	2109
3/14/2007 12:41:00	2112
3/14/2007 12:42:00	2114
3/14/2007 12:43:00	2117
3/14/2007 12:44:00	2119
3/14/2007 12:45:00	2122
3/14/2007 12:46:00	2124
3/14/2007 12:47:00	2126
3/14/2007 12:48:00	2128
3/14/2007 12:49:00	2131
3/14/2007 12:50:00	2133
3/14/2007 12:51:00	2136
3/14/2007 12:52:00	2139
3/14/2007 12:53:00	2141
Average	2113

EPA-USS-0325890

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 12:54:00	2143
3/14/2007 12:55:00	2146
3/14/2007 12:56:00	2148
3/14/2007 12:57:00	2151
3/14/2007 12:58:00	2153
3/14/2007 12:59:00	2156
3/14/2007 13:00:00	2158
3/14/2007 13:01:00	2160
3/14/2007 13:02:00	2163
3/14/2007 13:03:00	2165
3/14/2007 13:04:00	2168
3/14/2007 13:05:00	2170
3/14/2007 13:06:00	2173
3/14/2007 13:07:00	2175
3/14/2007 13:08:00	2178
3/14/2007 13:09:00	2180
3/14/2007 13:10:00	2182
3/14/2007 13:11:00	2185
3/14/2007 13:12:00	2187
3/14/2007 13:13:00	2190
3/14/2007 13:14:00	2193
3/14/2007 13:15:00	2195
3/14/2007 13:16:00	2198
3/14/2007 13:17:00	2200
Average	2172

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 13:18:00	2202
3/14/2007 13:19:00	2205
3/14/2007 13:20:00	2207
3/14/2007 13:21:00	2210
3/14/2007 13:22:00	2212
3/14/2007 13:23:00	2215
3/14/2007 13:24:00	2217
3/14/2007 13:25:00	2219
3/14/2007 13:26:00	2222
3/14/2007 13:27:00	2224
3/14/2007 13:28:00	2226
3/14/2007 13:29:00	2229
3/14/2007 13:30:00	2231
3/14/2007 13:31:00	2234
3/14/2007 13:32:00	2236
3/14/2007 13:33:00	2238
3/14/2007 13:34:00	2241
3/14/2007 13:35:00	2243
3/14/2007 13:36:00	2245
3/14/2007 13:37:00	2248
3/14/2007 13:38:00	2250
3/14/2007 13:39:00	2253
3/14/2007 13:40:00	2255
3/14/2007 13:41:00	2258
Average	2230

EPA-USS-0325892

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 13:42:00	2260
3/14/2007 13:43:00	2263
3/14/2007 13:44:00	2265
3/14/2007 13:45:00	2268
3/14/2007 13:46:00	2270
3/14/2007 13:47:00	2273
3/14/2007 13:48:00	2275
3/14/2007 13:49:00	2278
3/14/2007 13:50:00	2280
3/14/2007 13:51:00	2282
3/14/2007 13:52:00	2285
3/14/2007 13:53:00	2287
3/14/2007 13:54:00	2289
3/14/2007 13:55:00	2292
3/14/2007 13:56:00	2294
3/14/2007 13:57:00	2297
3/14/2007 13:58:00	2299
3/14/2007 13:59:00	2302
3/14/2007 14:00:00	2304
3/14/2007 14:01:00	2306
3/14/2007 14:02:00	2309
3/14/2007 14:03:00	2311
3/14/2007 14:04:00	2314
3/14/2007 14:05:00	2316
Average	2288

EPA-USS-0325893

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 14:06:00	2319
3/14/2007 14:07:00	2321
3/14/2007 14:08:00	2324
3/14/2007 14:09:00	2326
3/14/2007 14:10:00	2328
3/14/2007 14:11:00	2331
3/14/2007 14:12:00	2334
3/14/2007 14:13:00	2336
3/14/2007 14:14:00	2339
3/14/2007 14:15:00	2341
3/14/2007 14:16:00	2343
3/14/2007 14:17:00	2346
3/14/2007 14:18:00	2349
3/14/2007 14:19:00	2351
3/14/2007 14:20:00	2353
3/14/2007 14:21:00	2356
3/14/2007 14:22:00	2358
3/14/2007 14:23:00	2360
3/14/2007 14:24:00	2363
3/14/2007 14:25:00	2365
3/14/2007 14:26:00	2368
3/14/2007 14:27:00	2370
3/14/2007 14:28:00	2373
3/14/2007 14:29:00	2376
Average	2347

EPA-USS-0325894

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 14:30:00	2378
3/14/2007 14:31:00	2380
3/14/2007 14:32:00	2382
3/14/2007 14:33:00	2385
3/14/2007 14:34:00	2388
3/14/2007 14:35:00	2390
3/14/2007 14:36:00	2392
3/14/2007 14:37:00	2395
3/14/2007 14:38:00	2398
3/14/2007 14:39:00	2400
3/14/2007 14:40:00	2403
3/14/2007 14:41:00	2405
3/14/2007 14:42:00	2407
3/14/2007 14:43:00	2409
3/14/2007 14:44:00	2412
3/14/2007 14:45:00	2414
3/14/2007 14:46:00	2416
3/14/2007 14:47:00	2418
3/14/2007 14:48:00	2419
3/14/2007 14:49:00	2421
3/14/2007 14:50:00	2422
3/14/2007 14:51:00	2423
3/14/2007 14:52:00	2425
3/14/2007 14:53:00	2426
Average	2405

EPA-USS-0325895

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 14:54:00	2428
3/14/2007 14:55:00	2429
3/14/2007 14:56:00	2431
3/14/2007 14:57:00	2432
3/14/2007 14:58:00	2434
3/14/2007 14:59:00	2435
3/14/2007 15:00:00	2436
3/14/2007 15:01:00	2438
3/14/2007 15:02:00	2439
3/14/2007 15:03:00	2440
3/14/2007 15:04:00	2442
3/14/2007 15:05:00	2444
3/14/2007 15:06:00	2445
3/14/2007 15:07:00	2446
3/14/2007 15:08:00	2448
3/14/2007 15:09:00	2449
3/14/2007 15:10:00	2451
3/14/2007 15:11:00	2452
3/14/2007 15:12:00	2454
3/14/2007 15:13:00	2455
3/14/2007 15:14:00	2457
3/14/2007 15:15:00	2458
3/14/2007 15:16:00	2460
3/14/2007 15:17:00	2461
Average	2444

EPA-USS-0325896

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 15:18:00	2462
3/14/2007 15:19:00	2464
3/14/2007 15:20:00	2465
3/14/2007 15:21:00	2468
3/14/2007 15:22:00	2470
3/14/2007 15:23:00	2473
3/14/2007 15:24:00	2476
3/14/2007 15:25:00	2478
3/14/2007 15:26:00	2481
3/14/2007 15:27:00	2483
3/14/2007 15:28:00	2485
3/14/2007 15:29:00	2488
3/14/2007 15:30:00	2490
3/14/2007 15:31:00	2493
3/14/2007 15:32:00	2495
3/14/2007 15:33:00	2497
3/14/2007 15:34:00	2500
3/14/2007 15:35:00	2502
3/14/2007 15:36:00	2504
3/14/2007 15:37:00	2507
3/14/2007 15:38:00	2510
3/14/2007 15:39:00	2512
3/14/2007 15:40:00	2514
3/14/2007 15:41:00	2517
Average	2489

EPA-USS-0325897

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 15:42:00	2519
3/14/2007 15:43:00	2522
3/14/2007 15:44:00	2524
3/14/2007 15:45:00	2526
3/14/2007 15:46:00	2528
3/14/2007 15:47:00	2531
3/14/2007 15:48:00	2533
3/14/2007 15:49:00	2536
3/14/2007 15:50:00	2538
3/14/2007 15:51:00	2540
3/14/2007 15:52:00	2543
3/14/2007 15:53:00	2546
3/14/2007 15:54:00	2548
3/14/2007 15:55:00	2550
3/14/2007 15:56:00	2552
3/14/2007 15:57:00	2554
3/14/2007 15:58:00	2557
3/14/2007 15:59:00	2559
3/14/2007 16:00:00	2562
3/14/2007 16:01:00	2564
3/14/2007 16:02:00	2567
3/14/2007 16:03:00	2569
3/14/2007 16:04:00	2572
3/14/2007 16:05:00	2574
Average	2546

EPA-USS-0325898

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 16:06:00	2576
3/14/2007 16:07:00	2578
3/14/2007 16:08:00	2581
3/14/2007 16:09:00	2583
3/14/2007 16:10:00	2586
3/14/2007 16:11:00	2588
3/14/2007 16:12:00	2590
3/14/2007 16:13:00	2593
3/14/2007 16:14:00	2595
3/14/2007 16:15:00	2597
3/14/2007 16:16:00	2600
3/14/2007 16:17:00	2602
3/14/2007 16:18:00	2605
3/14/2007 16:19:00	2607
3/14/2007 16:20:00	2610
3/14/2007 16:21:00	2612
3/14/2007 16:22:00	2615
3/14/2007 16:23:00	2617
3/14/2007 16:24:00	2619
3/14/2007 16:25:00	2622
3/14/2007 16:26:00	2624
3/14/2007 16:27:00	2626
3/14/2007 16:28:00	2629
3/14/2007 16:29:00	2631
Average	2604

EPA-USS-0325899

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 16:30:00	2634
3/14/2007 16:31:00	2636
3/14/2007 16:32:00	2638
3/14/2007 16:33:00	2641
3/14/2007 16:34:00	2644
3/14/2007 16:35:00	2646
3/14/2007 16:36:00	2648
3/14/2007 16:37:00	2651
3/14/2007 16:38:00	2653
3/14/2007 16:39:00	2655
3/14/2007 16:40:00	2658
3/14/2007 16:41:00	2660
3/14/2007 16:42:00	2663
3/14/2007 16:43:00	2665
3/14/2007 16:44:00	2668
3/14/2007 16:45:00	2670
3/14/2007 16:46:00	2673
3/14/2007 16:47:00	2675
3/14/2007 16:48:00	2677
3/14/2007 16:49:00	2679
3/14/2007 16:50:00	2682
3/14/2007 16:51:00	2684
3/14/2007 16:52:00	2687
3/14/2007 16:53:00	2689
Average	2662

EPA-USS-0325900

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 16:54:00	2692
3/14/2007 16:55:00	2694
3/14/2007 16:56:00	2697
3/14/2007 16:57:00	2699
3/14/2007 16:58:00	2701
3/14/2007 16:59:00	2704
3/14/2007 17:00:00	2706
3/14/2007 17:01:00	2709
3/14/2007 17:02:00	2711
3/14/2007 17:03:00	2713
3/14/2007 17:04:00	2716
3/14/2007 17:05:00	2718
3/14/2007 17:06:00	2721
3/14/2007 17:07:00	2722
3/14/2007 17:08:00	2725
3/14/2007 17:09:00	2728
3/14/2007 17:10:00	2730
3/14/2007 17:11:00	2732
3/14/2007 17:12:00	2735
3/14/2007 17:13:00	2737
3/14/2007 17:14:00	2739
3/14/2007 17:15:00	2742
3/14/2007 17:16:00	2744
3/14/2007 17:17:00	2746
Average	2719

EPA-USS-0325901

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 1 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/14/2007 17:18:00	2748
3/14/2007 17:19:00	2751
3/14/2007 17:20:00	2753
3/14/2007 17:21:00	2756
3/14/2007 17:22:00	2758
3/14/2007 17:23:00	2761
3/14/2007 17:24:00	2763
3/14/2007 17:25:00	2765
3/14/2007 17:26:00	2768
3/14/2007 17:27:00	2769
3/14/2007 17:28:00	2772
3/14/2007 17:29:00	2774
3/14/2007 17:30:00	2777
Average	2763

EPA-USS-0325902

Date/Time	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG	THC STACK 2 1 MIN PPMC3 AVG	FLOW STACK 2 1 MIN KSCFM AVG	VOC STACK 2 1 MIN LBS/HR AVG
3/15/2007 10:40:00	11.0	14.9	25.7	304.50	31.09
3/15/2007 10:41:00	10.7	14.9	25.4	313.37	31.96
3/15/2007 10:42:00	10.8	14.9	25.5	295.35	30.11
3/15/2007 10:43:00	10.9	15.1	25.7	298.58	30.86
3/15/2007 10:44:00	11.2	15.3	26.3	305.67	32.06
3/15/2007 10:45:00	11.7	15.4	27.0	303.02	32.11
3/15/2007 10:46:00	11.9	15.6	27.4	293.14	31.48
3/15/2007 10:47:00	11.8	15.5	27.2	311.57	33.20
3/15/2007 10:48:00	11.7	16.1	27.6	309.98	34.35
3/15/2007 10:49:00	12.0	16.6	28.4	309.94	35.32
3/15/2007 10:50:00	13.2	16.4	29.5	305.37	34.45
3/15/2007 10:51:00	12.7	16.9	29.4	294.70	34.24
3/15/2007 10:52:00	12.4	17.0	29.3	315.66	36.85
3/15/2007 10:53:00	12.4	17.3	29.6	304.71	36.27
3/15/2007 10:54:00	12.9	17.4	30.2	295.02	35.29
3/15/2007 10:55:00	13.1	17.5	30.4	294.75	35.44
3/15/2007 10:56:00	13.0	17.8	30.7	301.98	36.88
3/15/2007 10:57:00	13.1	17.9	30.8	308.73	37.89
3/15/2007 10:58:00	13.4	18.2	31.5	308.92	38.59
3/15/2007 10:59:00	13.6	17.9	31.4	296.61	36.55
3/15/2007 11:00:00	13.4	18.3	31.6	311.23	39.18
Average	12.2	16.5	28.6	303.94	34.48

Test #1

Corrected CH4 28.92
RF= 1.269

Date/Time	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG	THC STACK 2 1 MIN PPMC3 AVG	FLOW STACK 2 1 MIN KSCFM AVG	VOC STACK 2 1 MIN LBS/HR AVG
3/15/2007 11:21:00	11.9	16.3	28.1	313.91	35.16
3/15/2007 11:22:00	12.0	16.3	28.2	313.69	35.11
3/15/2007 11:23:00	12.2	16.1	28.1	296.02	32.71
3/15/2007 11:24:00	12.3	16.0	28.1	291.81	31.96
3/15/2007 11:25:00	12.3	15.8	27.9	292.35	31.64
3/15/2007 11:26:00	12.4	15.8	28.0	298.02	32.29
3/15/2007 11:27:00	12.4	15.6	27.8	303.48	32.54
3/15/2007 11:28:00	12.2	15.4	27.5	306.33	32.43
3/15/2007 11:29:00	12.0	14.7	27.1	319.08	32.22
3/15/2007 11:30:00	12.0	15.2	27.0	301.54	31.47
3/15/2007 11:31:00	11.9	15.0	26.8	299.91	30.97
3/15/2007 11:32:00	11.7	14.9	26.4	313.09	32.01
3/15/2007 11:33:00	11.5	14.7	26.0	309.55	31.18
3/15/2007 11:34:00	11.3	14.5	25.6	308.14	30.61
3/15/2007 11:35:00	11.1	14.5	25.4	314.16	31.21
3/15/2007 11:36:00	11.1	14.5	25.4	321.00	31.95
3/15/2007 11:37:00	11.2	14.6	25.6	314.80	31.65
3/15/2007 11:38:00	11.4	14.8	26.1	314.32	32.04
3/15/2007 11:39:00	11.7	15.0	26.6	308.07	31.72
3/15/2007 11:40:00	12.0	15.4	27.2	319.30	33.74
3/15/2007 11:41:00	12.4	15.1	27.4	320.50	33.29
Average	11.9	15.2	27.0	308.53	32.28

Corrected CH4 28.03
RF= 1.269

Test #2

Date/Time	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG	THC STACK 2 1 MIN PPMC3 AVG	FLOW STACK 2 1 MIN KSCFM AVG	VOC STACK 2 1 MIN LBS/HR AVG
3/15/2007 12:02:00	12.2	15.3	27.3	302.51	31.72
3/15/2007 12:03:00	12.2	15.2	27.2	319.28	33.32
3/15/2007 12:04:00	12.3	15.2	27.3	307.41	32.01
3/15/2007 12:05:00	12.4	14.9	27.1	289.95	29.62
3/15/2007 12:06:00	12.3	14.7	26.8	315.42	31.79
3/15/2007 12:07:00	12.0	14.5	26.3	301.70	29.96
3/15/2007 12:08:00	11.8	14.6	26.2	293.37	29.47
3/15/2007 12:09:00	11.7	14.6	26.2	315.28	31.65
3/15/2007 12:10:00	11.7	14.6	26.1	309.78	30.96
3/15/2007 12:11:00	11.8	14.6	26.2	304.48	30.51
3/15/2007 12:12:00	11.8	14.7	26.3	315.31	31.77
3/15/2007 12:13:00	11.9	14.7	26.4	299.25	30.24
3/15/2007 12:14:00	11.9	14.7	26.4	304.84	30.77
3/15/2007 12:15:00	11.9	14.9	26.6	307.20	31.34
3/15/2007 12:16:00	11.9	14.9	26.6	313.91	32.15
3/15/2007 12:17:00	12.0	14.9	26.8	302.59	30.99
3/15/2007 12:18:00	12.0	15.0	26.9	319.01	32.89
3/15/2007 12:19:00	12.1	15.0	26.9	315.46	32.44
3/15/2007 12:20:00	11.9	15.0	26.8	315.12	32.44
3/15/2007 12:21:00	11.9	15.1	26.9	311.04	32.20
3/15/2007 12:22:00	11.9	15.1	26.8	294.37	30.52
Average	12.0	14.9	26.7	307.49	31.37

Test #3

Corrected CH4 28.32
RF= 1.269

Date/Time	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG	THC STACK 2 1 MIN PPMC3 AVG	FLOW STACK 2 1 MIN KSCFM AVG	VOC STACK 2 1 MIN LBS/HR AVG
3/15/2007 12:42:00	10.9	13.9	24.7	301.61	28.83
3/15/2007 12:43:00	10.9	13.8	24.5	298.93	28.31
3/15/2007 12:44:00	10.9	13.6	24.3	286.62	26.72
3/15/2007 12:45:00	11.0	13.4	24.2	295.42	27.20
3/15/2007 12:46:00	11.0	13.3	24.1	301.90	27.60
3/15/2007 12:47:00	10.9	13.1	23.9	311.48	28.08
3/15/2007 12:48:00	11.0	13.3	24.1	301.04	27.46
3/15/2007 12:49:00	11.0	13.3	24.1	288.89	26.34
3/15/2007 12:50:00	11.0	13.2	24.0	296.87	26.96
3/15/2007 12:51:00	10.9	13.3	24.1	293.42	26.83
3/15/2007 12:52:00	11.0	13.4	24.3	317.35	29.27
3/15/2007 12:53:00	11.1	13.5	24.5	307.55	28.49
3/15/2007 12:54:00	11.2	13.7	24.7	306.84	28.79
3/15/2007 12:55:00	11.3	13.9	25.0	310.34	29.69
3/15/2007 12:56:00	11.4	14.1	25.3	294.47	28.44
3/15/2007 12:57:00	11.4	14.1	25.4	296.21	28.73
3/15/2007 12:58:00	11.5	14.4	25.8	289.09	28.58
3/15/2007 12:59:00	11.7	14.6	26.1	290.53	29.15
3/15/2007 13:00:00	11.8	14.5 C	26.2	315.91	31.54
3/15/2007 13:01:00	11.8	14.7	26.3	309.67	31.33
3/15/2007 13:02:00	11.8	15.0	26.6	315.92	32.54
Average	11.2	13.8	24.9	301.43	28.61

Test #4

Corrected CH4 26.51
RF= 1.269

EPA-R5-2012-0005960000321

Date/Time	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG	THC STACK 2 1 MIN PPMC3 AVG	FLOW STACK 2 1 MIN KSCFM AVG	VOC STACK 2 1 MIN LBS/HR AVG
3/15/2007 13:23:00	11.3	14.2	25.4	319.35	31.14
3/15/2007 13:24:00	11.7	14.0	25.6	297.25	28.62
3/15/2007 13:25:00	11.8	14.1	25.7	312.59	30.20
3/15/2007 13:26:00	11.8	13.9	25.5	313.67	29.99
3/15/2007 13:27:00	11.3	13.9	25.0	292.91	27.96
3/15/2007 13:28:00	11.0	14.3	25.2	304.22	29.97
3/15/2007 13:29:00	11.0	14.7	25.5	309.03	31.17
3/15/2007 13:30:00	11.5	14.8	26.1	310.69	31.57
3/15/2007 13:31:00	12.0	14.6	26.4	301.78	30.19
3/15/2007 13:32:00	12.3	14.6	26.8	307.95	30.97
3/15/2007 13:33:00	12.5	14.5	26.9	304.68	30.41
3/15/2007 13:34:00	12.6	14.5	26.9	311.95	31.01
3/15/2007 13:35:00	12.5	14.7	27.1	302.37	30.46
3/15/2007 13:36:00	12.8	14.9	27.5	309.78	31.64
3/15/2007 13:37:00	12.9	14.8	27.5	298.62	30.37
3/15/2007 13:38:00	12.7	14.8	27.3	303.95	30.80
3/15/2007 13:39:00	12.5	15.1	27.5	292.42	30.42
3/15/2007 13:40:00	12.9	15.3	28.1	309.35	32.59
3/15/2007 13:41:00	13.1	15.1	28.1	305.12	31.62
3/15/2007 13:42:00	12.8	15.0	27.6	299.80	30.89
3/15/2007 13:43:00	12.7	15.5	28.1	293.94	31.35
Average	12.2	14.6	26.7	304.83	30.64

Test #5

Corrected CH4 28.79
RF= 1.269

EPA-USS-0325907

EPA-R5-2012-0005960000321

Date/Time	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG	THC STACK 2 1 MIN PPMC3 AVG	FLOW STACK 2 1 MIN KSCFM AVG	VOC STACK 2 1 MIN LBS/HR AVG
3/15/2007 14:04:00	12.4	14.7	26.9	311.70	31.41
3/15/2007 14:05:00	12.4	14.5	26.7	304.68	30.28
3/15/2007 14:06:00	12.0	14.3	26.1	302.85	29.66
3/15/2007 14:07:00	11.6	14.3	25.7	299.41	29.43
3/15/2007 14:08:00	11.5	14.3	25.6	299.07	29.40
3/15/2007 14:09:00	11.4	14.5	25.7	317.70	31.67
3/15/2007 14:10:00	11.8	14.4	26.0	315.35	31.11
3/15/2007 14:11:00	12.0	14.4	26.3	306.39	30.30
3/15/2007 14:12:00	11.9	14.8	26.5	294.88	29.94
3/15/2007 14:13:00	12.7	14.6	27.2	302.94	30.47
3/15/2007 14:14:00	13.0	13.6	26.4	301.44	28.23
3/15/2007 14:15:00	12.3	14.8	26.9	305.04	30.91
3/15/2007 14:16:00	12.1	14.7	26.7	284.24	28.62
3/15/2007 14:17:00	12.4	14.5	26.7	308.34	30.63
3/15/2007 14:18:00	11.9	15.1	26.9	303.34	31.43
3/15/2007 14:19:00	12.0	15.1	26.9	297.20	30.72
3/15/2007 14:20:00	11.8	14.9	26.6	296.70	30.38
3/15/2007 14:21:00	11.7	14.8	26.3	315.38	32.10
3/15/2007 14:22:00	11.6	14.9	26.3	300.87	30.69
3/15/2007 14:23:00	12.2	16.0	28.1	300.06	32.97
3/15/2007 14:24:00	14.2	14.3	28.3	312.61	30.54
Average	12.1	14.6	26.6	303.82	30.52

Test #6

Corrected CH4 28.70
RF= 1.269

EPA-USS-0325908

Date/Time	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG	THC STACK 2 1 MIN PPMC3 AVG	FLOW STACK 2 1 MIN KSCFM AVG	VOC STACK 2 1 MIN LBS/HR AVG
3/15/2007 14:44:00	11.7	14.7	26.2	309.51	31.17
3/15/2007 14:45:00	11.6	14.5	26.0	305.39	30.45
3/15/2007 14:46:00	11.7	14.6	26.1	303.26	30.29
3/15/2007 14:47:00	11.7	14.5	26.0	311.93	31.07
3/15/2007 14:48:00	11.7	14.3	25.8	312.50	30.73
3/15/2007 14:49:00	11.7	14.6	26.1	318.71	31.91
3/15/2007 14:50:00	12.2	14.2	26.2	307.32	29.88
3/15/2007 14:51:00	12.1	14.5	26.5	313.98	31.33
3/15/2007 14:52:00	12.2	13.6	25.7	305.21	28.60
3/15/2007 14:53:00	11.6	13.9	25.3	314.36	30.04
3/15/2007 14:54:00	11.4	13.9	25.2	291.23	27.85
3/15/2007 14:55:00	11.5	14.2	25.5	303.00	29.48
3/15/2007 14:56:00	11.8	14.4	26.0	302.97	29.92
3/15/2007 14:57:00	12.1	14.2	26.1	302.60	29.52
3/15/2007 14:58:00	11.8	14.3	26.0	307.52	30.17
3/15/2007 14:59:00	11.9	14.8	26.5	306.73	31.11
3/15/2007 15:00:00	12.1 C	14.4 C	26.8	302.80 C	29.98 C
3/15/2007 15:01:00	12.2 C	14.9 C	26.9	301.95 C	30.80 C
3/15/2007 15:02:00	12.3 C	15.2 C	27.3	306.97 C	31.93 C
3/15/2007 15:03:00	12.2 C	15.5 C	27.5	293.20 C	31.12 C
3/15/2007 15:04:00	12.9 C	14.5 C	27.3	304.59 C	30.42 C
Average	11.9	14.5	26.2	305.99	30.37

Test #7

Corrected CH4 28.19
RF= 1.269

Date/Time	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG	THC STACK 2 1 MIN PPMC3 AVG	FLOW STACK 2 1 MIN KSCFM AVG	VOC STACK 2 1 MIN LBS/HR AVG
3/15/2007 15:23:00	12.6	15.4	27.8	304.05	32.13
3/15/2007 15:24:00	12.7	15.8	28.4	295.84	32.15
3/15/2007 15:25:00	13.0	16.2	29.0	297.48	33.09
3/15/2007 15:26:00	13.2	16.5	29.5	300.92	34.12
3/15/2007 15:27:00	13.3	16.6	29.8	308.42	35.20
3/15/2007 15:28:00	13.4	17.0	30.2	294.46	34.27
3/15/2007 15:29:00	13.5	16.8	30.1	298.04	34.35
3/15/2007 15:30:00	13.3	16.8	30.0	295.17	34.08
3/15/2007 15:31:00	13.3	16.9	30.1	288.98	33.46
3/15/2007 15:32:00	13.2	16.7	29.8	305.43	35.07
3/15/2007 15:33:00	13.1	16.7	29.6	304.53	34.89
3/15/2007 15:34:00	13.1	16.7	29.6	298.11	34.14
3/15/2007 15:35:00	12.9	16.4	29.1	294.22	33.14
3/15/2007 15:36:00	12.7	16.3	28.9	310.26	34.81
3/15/2007 15:37:00	12.6	16.3	28.8	307.11	34.38
3/15/2007 15:38:00	12.5	16.2	28.5	307.24	34.08
3/15/2007 15:39:00	12.4	16.0	28.2	283.65	31.21
3/15/2007 15:40:00	12.2	15.9	27.9	293.98	32.09
3/15/2007 15:41:00	12.1	15.8	27.7	312.16	33.86
3/15/2007 15:42:00	11.9	15.7	27.5	292.28	31.60
3/15/2007 15:43:00	11.8	15.7	27.4	314.75	33.86
Average	12.8	16.3	28.9	300.34	33.62

Test #8

Corrected CH4 30.26
RF= 1.269

EPA-R5-2012-0005960000321

Date/Time	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG	THC STACK 2 1 MIN PPMC3 AVG	FLOW STACK 2 1 MIN KSCFM AVG	VOC STACK 2 1 MIN LBS/HR AVG
3/15/2007 16:03:00	12.5	15.8	28.2	305.34	33.15
3/15/2007 16:04:00	12.5	15.9	28.3	309.04	33.81
3/15/2007 16:05:00	12.5	16.1	28.4	314.13	34.80
3/15/2007 16:06:00	12.4	15.8	28.1	306.94	33.39
3/15/2007 16:07:00	12.2	15.8	27.8	302.48	32.82
3/15/2007 16:08:00	12.1	15.7	27.6	294.44	31.73
3/15/2007 16:09:00	12.0	15.6	27.3	307.30	32.81
3/15/2007 16:10:00	11.8	15.4	27.0	314.84	33.27
3/15/2007 16:11:00	11.6	15.2	26.6	292.95	30.49
3/15/2007 16:12:00	11.5	15.2	26.6	302.79	31.63
3/15/2007 16:13:00	11.5	15.0	26.3	304.30	31.42
3/15/2007 16:14:00	11.4	15.1	26.3	298.49	30.91
3/15/2007 16:15:00	11.4	15.1	26.3	306.58	31.73
3/15/2007 16:16:00	11.4	15.1	26.3	306.97	31.77
3/15/2007 16:17:00	11.5	15.1	26.4	318.91	33.04
3/15/2007 16:18:00	11.6	15.0	26.4	302.16	31.16
3/15/2007 16:19:00	11.6	15.1	26.4	328.35	34.00
3/15/2007 16:20:00	11.7	15.3	26.8	314.67	33.02
3/15/2007 16:21:00	11.6	15.1	26.5	299.21	30.96
3/15/2007 16:22:00	11.4	15.3	26.5	308.72	32.33
3/15/2007 16:23:00	11.3	15.3	26.5	323.23	33.99
Average	11.8	15.4	27.0	307.71	32.49

Test #9

Corrected CH4 27.86
RF= 1.269

EPA-USS-0325911

EPA-R5-2012-0005960000321

Date/Time	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG	THC STACK 2 1 MIN PPMC3 AVG	FLOW STACK 2 1 MIN KSCFM AVG	VOC STACK 2 1 MIN LBS/HR AVG
3/15/2007 16:44:00	11.6	15.2	26.7	303.68	31.73
3/15/2007 16:45:00	11.7	15.1	26.6	321.49	33.38
3/15/2007 16:46:00	11.7	14.9	26.5	316.52	32.44
3/15/2007 16:47:00	11.7	14.9	26.5	302.84	31.04
3/15/2007 16:48:00	11.8	15.0	26.7	317.79	32.68
3/15/2007 16:49:00	12.0	14.8	26.6	307.18	31.31
3/15/2007 16:50:00	12.0	14.9	26.7	319.91	32.82
3/15/2007 16:51:00	12.0	14.8	26.6	305.41	31.05
3/15/2007 16:52:00	11.9	14.7	26.5	320.00	32.36
3/15/2007 16:53:00	11.9	14.7	26.4	307.13	31.03
3/15/2007 16:54:00	11.9	14.8	26.5	320.21	32.47
3/15/2007 16:55:00	12.0	14.8	26.5	305.59	30.96
3/15/2007 16:56:00	12.0	14.7	26.6	319.28	32.30
3/15/2007 16:57:00	12.1	14.9	26.9	289.75	29.70
3/15/2007 16:58:00	12.2	14.9	26.9	303.70	31.12
3/15/2007 16:59:00	12.0	14.8	26.7	305.15	31.07
3/15/2007 17:00:00	12.0 C	14.8 C	26.6	310.61 C	31.58 C
3/15/2007 17:01:00	12.0 C	14.8 C	26.6	303.62 C	30.93 C
3/15/2007 17:02:00	11.9 C	14.8 C	26.6	313.47 C	31.90 C
3/15/2007 17:03:00	11.9 C	14.9 C	26.7	304.02 C	31.08 C
3/15/2007 17:04:00	11.9 C	14.6 C	26.4	304.62 C	30.54 C
Average	11.9	14.8	26.6	309.62	31.59

Test #10

Corrected CH4 28.17
RF= 1.269

EPA-USS-0325912

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 10:30:00	1814
3/15/2007 10:31:00	1817
3/15/2007 10:32:00	1820
3/15/2007 10:33:00	1822
3/15/2007 10:34:00	1825
3/15/2007 10:35:00	1828
3/15/2007 10:36:00	1831
3/15/2007 10:37:00	1833
3/15/2007 10:38:00	1835
3/15/2007 10:39:00	1838
3/15/2007 10:40:00	1840
3/15/2007 10:41:00	1843
3/15/2007 10:42:00	1845
3/15/2007 10:43:00	1848
3/15/2007 10:44:00	1850
3/15/2007 10:45:00	1853
3/15/2007 10:46:00	1855
3/15/2007 10:47:00	1857
3/15/2007 10:48:00	1860
3/15/2007 10:49:00	1862
3/15/2007 10:50:00	1865
3/15/2007 10:51:00	1867
3/15/2007 10:52:00	1869
3/15/2007 10:53:00	1872
Average	1844

EPA-USS-0325913

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 10:54:00	1874
3/15/2007 10:55:00	1876
3/15/2007 10:56:00	1878
3/15/2007 10:57:00	1880
3/15/2007 10:58:00	1882
3/15/2007 10:59:00	1884
3/15/2007 11:00:00	1887
3/15/2007 11:01:00	1889
3/15/2007 11:02:00	1892
3/15/2007 11:03:00	1895
3/15/2007 11:04:00	1897
3/15/2007 11:05:00	1899
3/15/2007 11:06:00	1902
3/15/2007 11:07:00	1905
3/15/2007 11:08:00	1907
3/15/2007 11:09:00	1909
3/15/2007 11:10:00	1912
3/15/2007 11:11:00	1914
3/15/2007 11:12:00	1916
3/15/2007 11:13:00	1918
3/15/2007 11:14:00	1921
3/15/2007 11:15:00	1923
3/15/2007 11:16:00	1925
3/15/2007 11:17:00	1928
Average	1901

EPA-USS-0325914

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 11:18:00	1930
3/15/2007 11:19:00	1932
3/15/2007 11:20:00	1935
3/15/2007 11:21:00	1937
3/15/2007 11:22:00	1940
3/15/2007 11:23:00	1942
3/15/2007 11:24:00	1945
3/15/2007 11:25:00	1947
3/15/2007 11:26:00	1950
3/15/2007 11:27:00	1952
3/15/2007 11:28:00	1955
3/15/2007 11:29:00	1957
3/15/2007 11:30:00	1959
3/15/2007 11:31:00	1962
3/15/2007 11:32:00	1964
3/15/2007 11:33:00	1966
3/15/2007 11:34:00	1969
3/15/2007 11:35:00	1971
3/15/2007 11:36:00	1973
3/15/2007 11:37:00	1975
3/15/2007 11:38:00	1976
3/15/2007 11:39:00	1977
3/15/2007 11:40:00	1979
3/15/2007 11:41:00	1981
Average	1957

EPA-USS-0325915

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 11:42:00	1982
3/15/2007 11:43:00	1984
3/15/2007 11:44:00	1985
3/15/2007 11:45:00	1987
3/15/2007 11:46:00	1988
3/15/2007 11:47:00	1990
3/15/2007 11:48:00	1991
3/15/2007 11:49:00	1993
3/15/2007 11:50:00	1994
3/15/2007 11:51:00	1996
3/15/2007 11:52:00	1997
3/15/2007 11:53:00	1999
3/15/2007 11:54:00	2001
3/15/2007 11:55:00	2002
3/15/2007 11:56:00	2004
3/15/2007 11:57:00	2005
3/15/2007 11:58:00	2006
3/15/2007 11:59:00	2007
3/15/2007 12:00:00	2009
3/15/2007 12:01:00	2010
3/15/2007 12:02:00	2012
3/15/2007 12:03:00	2013
3/15/2007 12:04:00	2014
3/15/2007 12:05:00	2016
Average	1999

EPA-USS-0325916

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 12:06:00	2017
3/15/2007 12:07:00	2019
3/15/2007 12:08:00	2020
3/15/2007 12:09:00	2021
3/15/2007 12:10:00	2022
3/15/2007 12:11:00	2024
3/15/2007 12:12:00	2026
3/15/2007 12:13:00	2029
3/15/2007 12:14:00	2031
3/15/2007 12:15:00	2034
3/15/2007 12:16:00	2036
3/15/2007 12:17:00	2038
3/15/2007 12:18:00	2041
3/15/2007 12:19:00	2043
3/15/2007 12:20:00	2045
3/15/2007 12:21:00	2047
3/15/2007 12:22:00	2049
3/15/2007 12:23:00	2051
3/15/2007 12:24:00	2053
3/15/2007 12:25:00	2055
3/15/2007 12:26:00	2058
3/15/2007 12:27:00	2060
3/15/2007 12:28:00	2062
3/15/2007 12:29:00	2065
Average	2039

EPA-USS-0325917

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 12:30:00	2066
3/15/2007 12:31:00	2069
3/15/2007 12:32:00	2071
3/15/2007 12:33:00	2074
3/15/2007 12:34:00	2076
3/15/2007 12:35:00	2079
3/15/2007 12:36:00	2081
3/15/2007 12:37:00	2083
3/15/2007 12:38:00	2086
3/15/2007 12:39:00	2088
3/15/2007 12:40:00	2091
3/15/2007 12:41:00	2093
3/15/2007 12:42:00	2095
3/15/2007 12:43:00	2098
3/15/2007 12:44:00	2101
3/15/2007 12:45:00	2103
3/15/2007 12:46:00	2106
3/15/2007 12:47:00	2108
3/15/2007 12:48:00	2111
3/15/2007 12:49:00	2113
3/15/2007 12:50:00	2116
3/15/2007 12:51:00	2118
3/15/2007 12:52:00	2121
3/15/2007 12:53:00	2123
Average	2095

EPA-USS-0325918

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 12:54:00	2126
3/15/2007 12:55:00	2128
3/15/2007 12:56:00	2130
3/15/2007 12:57:00	2133
3/15/2007 12:58:00	2135
3/15/2007 12:59:00	2138
3/15/2007 13:00:00	2140
3/15/2007 13:01:00	2142
3/15/2007 13:02:00	2145
3/15/2007 13:03:00	2147
3/15/2007 13:04:00	2150
3/15/2007 13:05:00	2152
3/15/2007 13:06:00	2155
3/15/2007 13:07:00	2157
3/15/2007 13:08:00	2160
3/15/2007 13:09:00	2162
3/15/2007 13:10:00	2164
3/15/2007 13:11:00	2167
3/15/2007 13:12:00	2169
3/15/2007 13:13:00	2171
3/15/2007 13:14:00	2174
3/15/2007 13:15:00	2176
3/15/2007 13:16:00	2179
3/15/2007 13:17:00	2181
Average	2153

EPA-USS-0325919

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 13:18:00	2184
3/15/2007 13:19:00	2186
3/15/2007 13:20:00	2189
3/15/2007 13:21:00	2192
3/15/2007 13:22:00	2194
3/15/2007 13:23:00	2196
3/15/2007 13:24:00	2199
3/15/2007 13:25:00	2201
3/15/2007 13:26:00	2204
3/15/2007 13:27:00	2206
3/15/2007 13:28:00	2209
3/15/2007 13:29:00	2211
3/15/2007 13:30:00	2213
3/15/2007 13:31:00	2215
3/15/2007 13:32:00	2218
3/15/2007 13:33:00	2220
3/15/2007 13:34:00	2223
3/15/2007 13:35:00	2225
3/15/2007 13:36:00	2228
3/15/2007 13:37:00	2230
3/15/2007 13:38:00	2233
3/15/2007 13:39:00	2235
3/15/2007 13:40:00	2237
3/15/2007 13:41:00	2239
Average	2212

EPA-USS-0325920

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 13:42:00	2242
3/15/2007 13:43:00	2244
3/15/2007 13:44:00	2246
3/15/2007 13:45:00	2248
3/15/2007 13:46:00	2251
3/15/2007 13:47:00	2253
3/15/2007 13:48:00	2256
3/15/2007 13:49:00	2258
3/15/2007 13:50:00	2261
3/15/2007 13:51:00	2263
3/15/2007 13:52:00	2266
3/15/2007 13:53:00	2266
3/15/2007 13:54:00	2268
3/15/2007 13:55:00	2270
3/15/2007 13:56:00	2273
3/15/2007 13:57:00	2275
3/15/2007 13:58:00	2277
3/15/2007 13:59:00	2279
3/15/2007 14:00:00	2281
3/15/2007 14:01:00	2284
3/15/2007 14:02:00	2286
3/15/2007 14:03:00	2288
3/15/2007 14:04:00	2290
3/15/2007 14:05:00	2293
Average	2267

EPA-USS-0325921

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 14:06:00	2295
3/15/2007 14:07:00	2298
3/15/2007 14:08:00	2300
3/15/2007 14:09:00	2302
3/15/2007 14:10:00	2305
3/15/2007 14:11:00	2307
3/15/2007 14:12:00	2310
3/15/2007 14:13:00	2312
3/15/2007 14:14:00	2314
3/15/2007 14:15:00	2316
3/15/2007 14:16:00	2319
3/15/2007 14:17:00	2321
3/15/2007 14:18:00	2323
3/15/2007 14:19:00	2326
3/15/2007 14:20:00	2328
3/15/2007 14:21:00	2331
3/15/2007 14:22:00	2333
3/15/2007 14:23:00	2335
3/15/2007 14:24:00	2338
3/15/2007 14:25:00	2340
3/15/2007 14:26:00	2342
3/15/2007 14:27:00	2345
3/15/2007 14:28:00	2347
3/15/2007 14:29:00	2349
Average	2322

EPA-USS-0325922

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 14:30:00	2351
3/15/2007 14:31:00	2354
3/15/2007 14:32:00	2357
3/15/2007 14:33:00	2359
3/15/2007 14:34:00	2361
3/15/2007 14:35:00	2362
3/15/2007 14:36:00	2363
3/15/2007 14:37:00	2364
3/15/2007 14:38:00	2366
3/15/2007 14:39:00	2367
3/15/2007 14:40:00	2369
3/15/2007 14:41:00	2371
3/15/2007 14:42:00	2372
3/15/2007 14:43:00	2374
3/15/2007 14:44:00	2375
3/15/2007 14:45:00	2377
3/15/2007 14:46:00	2379
3/15/2007 14:47:00	2381
3/15/2007 14:48:00	2382
3/15/2007 14:49:00	2384
3/15/2007 14:50:00	2385
3/15/2007 14:51:00	2387
3/15/2007 14:52:00	2389
3/15/2007 14:53:00	2390
Average	2372

EPA-USS-0325923

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 14:54:00	2391
3/15/2007 14:55:00	2393
3/15/2007 14:56:00	2395
3/15/2007 14:57:00	2396
3/15/2007 14:58:00	2398
3/15/2007 14:59:00	2399
3/15/2007 15:00:00	2400
3/15/2007 15:01:00	2402
3/15/2007 15:02:00	2404
3/15/2007 15:03:00	2405
3/15/2007 15:04:00	2407
3/15/2007 15:05:00	2409
3/15/2007 15:06:00	2412
3/15/2007 15:07:00	2414
3/15/2007 15:08:00	2417
3/15/2007 15:09:00	2419
3/15/2007 15:10:00	2422
3/15/2007 15:11:00	2424
3/15/2007 15:12:00	2426
3/15/2007 15:13:00	2428
3/15/2007 15:14:00	2431
3/15/2007 15:15:00	2434
3/15/2007 15:16:00	2436
3/15/2007 15:17:00	2438
Average	2413

EPA-USS-0325924

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 15:18:00	2440
3/15/2007 15:19:00	2443
3/15/2007 15:20:00	2446
3/15/2007 15:21:00	2448
3/15/2007 15:22:00	2451
3/15/2007 15:23:00	2453
3/15/2007 15:24:00	2455
3/15/2007 15:25:00	2458
3/15/2007 15:26:00	2460
3/15/2007 15:27:00	2463
3/15/2007 15:28:00	2465
3/15/2007 15:29:00	2468
3/15/2007 15:30:00	2470
3/15/2007 15:31:00	2472
3/15/2007 15:32:00	2475
3/15/2007 15:33:00	2477
3/15/2007 15:34:00	2480
3/15/2007 15:35:00	2482
3/15/2007 15:36:00	2484
3/15/2007 15:37:00	2486
3/15/2007 15:38:00	2489
3/15/2007 15:39:00	2491
3/15/2007 15:40:00	2494
3/15/2007 15:41:00	2497
Average	2469

EPA-USS-0325925

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 15:42:00	2500
3/15/2007 15:43:00	2502
3/15/2007 15:44:00	2505
3/15/2007 15:45:00	2507
3/15/2007 15:46:00	2509
3/15/2007 15:47:00	2512
3/15/2007 15:48:00	2514
3/15/2007 15:49:00	2517
3/15/2007 15:50:00	2519
3/15/2007 15:51:00	2521
3/15/2007 15:52:00	2524
3/15/2007 15:53:00	2527
3/15/2007 15:54:00	2529
3/15/2007 15:55:00	2531
3/15/2007 15:56:00	2534
3/15/2007 15:57:00	2536
3/15/2007 15:58:00	2538
3/15/2007 15:59:00	2541
3/15/2007 16:00:00	2543
3/15/2007 16:01:00	2546
3/15/2007 16:02:00	2549
3/15/2007 16:03:00	2551
3/15/2007 16:04:00	2554
3/15/2007 16:05:00	2556
Average	2528

EPA-USS-0325926

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 16:06:00	2558
3/15/2007 16:07:00	2561
3/15/2007 16:08:00	2563
3/15/2007 16:09:00	2565
3/15/2007 16:10:00	2567
3/15/2007 16:11:00	2569
3/15/2007 16:12:00	2572
3/15/2007 16:13:00	2574
3/15/2007 16:14:00	2576
3/15/2007 16:15:00	2578
3/15/2007 16:16:00	2581
3/15/2007 16:17:00	2583
3/15/2007 16:18:00	2585
3/15/2007 16:19:00	2588
3/15/2007 16:20:00	2591
3/15/2007 16:21:00	2594
3/15/2007 16:22:00	2596
3/15/2007 16:23:00	2599
3/15/2007 16:24:00	2601
3/15/2007 16:25:00	2604
3/15/2007 16:26:00	2606
3/15/2007 16:27:00	2608
3/15/2007 16:28:00	2611
3/15/2007 16:29:00	2613
Average	2585

EPA-USS-0325927

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 16:30:00	2616
3/15/2007 16:31:00	2618
3/15/2007 16:32:00	2620
3/15/2007 16:33:00	2623
3/15/2007 16:34:00	2625
3/15/2007 16:35:00	2628
3/15/2007 16:36:00	2631
3/15/2007 16:37:00	2633
3/15/2007 16:38:00	2635
3/15/2007 16:39:00	2637
3/15/2007 16:40:00	2640
3/15/2007 16:41:00	2642
3/15/2007 16:42:00	2645
3/15/2007 16:43:00	2647
3/15/2007 16:44:00	2650
3/15/2007 16:45:00	2652
3/15/2007 16:46:00	2654
3/15/2007 16:47:00	2657
3/15/2007 16:48:00	2659
3/15/2007 16:49:00	2661
3/15/2007 16:50:00	2664
3/15/2007 16:51:00	2666
3/15/2007 16:52:00	2669
3/15/2007 16:53:00	2672
Average	2644

EPA-USS-0325928

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 16:54:00	2674
3/15/2007 16:55:00	2677
3/15/2007 16:56:00	2680
3/15/2007 16:57:00	2682
3/15/2007 16:58:00	2685
3/15/2007 16:59:00	2687
3/15/2007 17:00:00	2689
3/15/2007 17:01:00	2692
3/15/2007 17:02:00	2694
3/15/2007 17:03:00	2697
3/15/2007 17:04:00	2699
3/15/2007 17:05:00	2701
3/15/2007 17:06:00	2704
3/15/2007 17:07:00	2707
3/15/2007 17:08:00	2709
3/15/2007 17:09:00	2711
3/15/2007 17:10:00	2714
3/15/2007 17:11:00	2716
3/15/2007 17:12:00	2719
3/15/2007 17:13:00	2722
3/15/2007 17:14:00	2724
3/15/2007 17:15:00	2727
3/15/2007 17:16:00	2729
3/15/2007 17:17:00	2731
Average	2703

EPA-USS-0325929

EPA-R5-2012-0005960000321

US Steel Sinterplant
Stack 2 Data

Report Printed 4/16/2007

Date/Time	TOTAL SINTER DAY TONS CUM
3/15/2007 17:18:00	2734
3/15/2007 17:19:00	2736
3/15/2007 17:20:00	2739
3/15/2007 17:21:00	2741
3/15/2007 17:22:00	2744
3/15/2007 17:23:00	2746
3/15/2007 17:24:00	2748
3/15/2007 17:25:00	2751
3/15/2007 17:26:00	2753
3/15/2007 17:27:00	2756
3/15/2007 17:28:00	2759
3/15/2007 17:29:00	2760
3/15/2007 17:30:00	2763
Average	2748

EPA-USS-0325930

EPA-R5-2012-0005960000321

PLATT ENVIRONMENTAL SERVICES, INC.

Procedures for Calibration

Temperature Sensing Devices

The potentiometer and thermocouples are calibrated utilizing a NBS traceable millivolt source.

Pitot Tubes

The pitot tubes utilized during this test program are manufactured according to the specification described and illustrated in the *Code of Federal Regulations*, Title 40, Part 60, Appendix A, Methods 1 and 2. The pitot tubes comply with the alignment specifications in Method 2, Section 4; and the pitot tube assemblies are in compliance with specifications in the same section.

EPA-USS-0325931

EPA-R5-2012-000596000321

Propane Calibration Summary

Project: USX- Sinter Plant
Client: USX
Location: Sinter Plant
Stack #1
0-110 ppm Span

Date: 3/14/07
Operator: JWC
Analyzer ID: VIG Model 200
Analyzer Range:

Cal Run	Cal Level	Test Location	Cylinder ID Serial Number	Cal Gas Type	Cal Time	Expected Cal Value	Actual Response	Difference (% of value)	Drift (% of span)	Cylinder Pressure	
Pre 1	Zero		CC245138		805	0	0.0	0.0	N/A		
	Low		CC57040		816	29.87	30.4	1.77	N/A		
	Mid		CC419323		809	59.47	59.5	0.05	N/A		
	High		CC113939		813	91.2	90.6	0.66	N/A		
Pre 1	Zero				1019	0	0.1	0.09	0.09		Pre
	Low										
	Mid				1023	59.47	59.0	0.79	0.45		
	High										
Post 1/ Pre 2	Zero				1110	0	✓ 0.0	0.0	0.09		Post
	Low										
	Mid				1113	59.47	✓58.9	0.96	0.29		
	High										
Post 2/ Pre 3	Zero				1155	0	✓ 0.0	0.0	0.0		
	Low										Post
	Mid				1159	59.47	58.9	0.96	0.0		
	High										
Post 3	Zero				1240	0	0.0	0.0	0.0		
	Low										Post
	Mid				1242	59.47	59.1	0.62	0.18		
	High										
Post 4	Zero				1322	0	0.2	0.18	0.18		
	Low										Post
	Mid				1325	59.47	59.6	0.22	0.45		
	High										

EPA-USS-0325932

Propane Method 25A Calibration Summary

Project: USX - Sinter Plant
Client: USX
Location: Sinter Plant Stack #1

Date: 3/14/07
Operator: JMC
Analyzer ID: VIG Model 200
Analyzer Range:

Cal Run	Cal Level	Test Location	Cylinder ID Serial Number	Cal Gas Type	Cal Time	Expected Cal Value	Actual Response	Difference (% of cal value)	Drift (% of span)	Cylinder Pressure
Post 10	Zero				1725	0	0.0	0.00	0.00	
	Low									
	Mid				1729	59.47	59.1	0.62	0.55	
	High									
Post 1/ Pre 2	Zero									
	Low									
	Mid									
	High									
Post 2/ Pre 3	Zero									
	Low									
	Mid									
	High									
Post 3	Zero									
	Low									
	Mid									
	High									
	Zero									
	Low									
	Mid									
	High									
	Zero									
	Low									
	Mid									
	High									

Methane Calibration Summary

Project: USX- Sinter Plant
Client: USX
Location: Sinter Plant Stack #1

Date: 3/14/07
Operator: JMC
Analyzer ID: VIG Model 200
Analyzer Range: 0-110 ppm

Cal Run	Cal Level	Test Location	Cylinder ID Serial Number	Cal Gas Type	Cal Time	Expected Cal Value	Actual Response	Difference (% of value)	Drift (% of span)	Cylinder Pressure	
Pre 1	Zero		CC245138		0818	0	1.2	1.09	N/A		
	Low		CC 37304		0842	31.78	32.1	1.26	N/A		
	Mid		SG9149921 BAL		0836	58.82	58.4	0.71	N/A		
	High		SG871385 NB		0830	91.55	90.7	0.93	N/A		
Pre 1	Zero				1024	0	1.7	1.55	0.45		Pre
	Low										
	Mid				1033	58.82	58.3	0.88	0.09		
	High										
Post 1/ Pre 2	Zero				1114	0	✓✓0.5	0.45	1.09		Post
	Low										
	Mid				1120	58.82	✓✓57.6	2.07	0.55		
	High										
Post 2/ Pre 3	Zero				1201	0	✓✓0.2	0.18	0.27		
	Low										
	Mid				1209	58.82	✓✓57.6	2.07	0.00		Post
	High										
Post 3	Zero				1242	0	0.1	0.09	0.09		
	Low										
	Mid				1252	58.82	59.4	0.99	1.09		Post
	High										
Post 4	Zero				1323	0	0.1	0.09	0.00		
	Low										
	Mid				1332	58.82	59.1	0.48	0.27		Post
	High										

methane

[redacted] Calibration Summary

Project: USX - Sinter Plant
Client: USX
Location: Sinter Plant Stack #1

Date: 3/14/07
Operator: JMC
Analyzer ID: VIG model 200
Analyzer Range: 0-110 ppm

Cal Run	Cal Level	Test Location	Cylinder ID Serial Number	Cal Gas Type	Cal Time	Expected Cal Value	Actual Response	Difference (% of cal value)	Drift (% of span)	Cylinder Pressure
[redacted] Post 10	Zero				1733	0	0.0	0.0	[redacted] 0.0	
	Low								[redacted]	
	Mid				1735	58.82	58.9	0.14	[redacted] 1.27	
	High								[redacted]	
Post 1/ Pre 2	Zero									
	Low									
	Mid									
	High									
Post 2/ Pre 3	Zero									
	Low									
	Mid									
	High									
Post 3	Zero									
	Low									
	Mid									
	High									
	Zero									
	Low									
	Mid									
	High									
	Zero									
	Low									
	Mid									
	High									

EPA-R5-2012-0005960000321

EPA-USS-0325935

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
08:00	1.0	0.9
08:01	1.1	0.9
08:02	1.8	0.4
08:03	2.5	0.4
08:04	0.0	0.4
08:05	0.0	0.3
08:06	3.4	0.3
08:07	58.3	0.3
08:08	59.5	1.0
08:09	59.5	1.0
08:10	47.4	1.3
08:11	90.3	3.5
08:12	90.6	3.5
08:13	90.6	3.2
08:14	41.2	1.2
08:15	30.5	1.2
08:16	30.4	1.2
08:17	18.7	1.2
08:18	2.0	1.2
08:19	71.9	11.1
08:20	82.5	102.6
08:21	82.5	102.6
08:22	40.9	102.6
08:23	78.8	102.6
08:24	96.6	102.6
08:25	96.6	101.6
08:26	96.6	93.0
08:27	96.6	93.0
08:28	96.6	92.7
08:29	92.6	90.7
08:30	68.2	90.7
08:31	83.5	87.5
08:32	83.4	58.6
08:33	83.4	58.6
08:34	83.3	58.5
08:35	58.6	58.4
08:36	46.3	58.4
08:37	43.4	55.8
08:38	43.3	32.8

Linearity Cals

methane 203.8 ppm reads 82.5 ppm as propane
CC 105162
Response Factor:

$$\frac{203.8 \text{ ppm as } CH_4}{3} \times N = 82.5$$

N = Response Factor = 1.214

Time	Chan 1 P. THC ppm THC	Chan 2 Methane ppm THC
10:15	0.9	62.0
10:16	0.4	54.0
10:17	0.2	1.7
10:18	0.3	1.7
10:19	0.1	1.7
10:20	20.7	1.6
10:21	58.9	1.6
10:22	59.1	1.6
10:23	59.0	1.7
10:24	58.6	1.7
10:25	40.3	8.9
10:26	81.1	50.2
10:27	81.8	50.2
10:28	81.4	51.3
10:29	81.2	58.1
10:30	81.1	58.1
10:31	80.7	58.1
10:32	51.2	58.3
10:33	34.9	58.3
10:34	34.0	57.1
10:35	34.3	50.7
10:36	34.4	50.7
10:37	33.5	50.3

Pre Test #1

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
11:04	35.2	50.6
11:05	36.0	56.0
11:06	0.5	56.0
11:07	0.0	47.7
11:08	0.2	0.7
11:09	0.0	0.7
11:10	0.0	0.6
11:11	13.7	0.5
11:12	51.8	0.5
11:13	58.9	0.5
11:14	58.6	0.5
11:15	53.6	0.5
11:16	81.3	9.9
11:17	81.4	56.9
11:18	81.2	56.9
11:19	81.0	57.0
11:20	80.9	57.6
11:21	80.7	57.6
11:22	65.8	57.6
11:23	32.8	57.7
11:24	33.4	57.7
11:25	31.9	55.7
11:26	31.2	46.0
11:27	31.3	46.0
11:28	30.7	45.3
11:29	30.6	41.8
11:30	31.1	41.8

Post Test #1

Time	Chan 1: THC	Chan 2: Methane
	ppm THC	ppm THC
11:48	37.0	53.6
11:49	36.4	52.6
11:50	12.7	48.0
11:51	0.9	48.0
11:52	0.3	39.2
11:53	0.0	0.3
11:54	0.0	0.3
11:55	0.0	0.3
11:56	21.3	0.2
11:57	58.6	0.2
11:58	58.7	0.2
11:59	58.9	0.3
12:00	58.6	0.3
12:01	43.9	0.2
12:02	78.1	0.2
12:03	81.6	0.2
12:04	81.4	10.7
12:05	81.2	57.5
12:06	81.1	57.5
12:07	80.9	57.5
12:08	80.9	57.6
12:09	80.7	57.6
12:10	53.0	57.6
12:11	32.8	57.7
12:12	33.9	57.7
12:13	34.1	56.2
12:14	33.7	49.1
12:15	33.7	49.1
12:16	34.2	48.6

Post Test #2

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
12:35	39.0	57.6
12:36	15.3	57.6
12:37	0.7	46.1
12:38	0.1	0.3
12:39	0.0	0.3
12:40	0.0	0.3
12:41	35.7	0.1
12:42	59.1	0.1
12:43	59.1	0.1
12:44	50.8	0.1
12:45	57.0	0.1
12:46	82.2	11.4
12:47	82.2	56.8
12:48	82.0	56.8
12:49	81.8	57.3
12:50	81.7	59.0
12:51	81.7	59.0
12:52	81.5	59.1
12:53	63.7	59.4
12:54	34.5	59.4
12:55	34.6	57.6
12:56	35.4	50.6
12:57	33.8	50.6
12:58	32.3	48.6
12:59	33.1	44.8
13:00	33.4	44.8
13:01	32.6	44.4

Post Test #3

time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
13:18	38.2	39.0
13:19	37.4	41.9
13:20	5.6	53.1
13:21	0.8	53.1
13:22	0.2	41.6
13:23	1.6	0.1
13:24	43.0	0.1
13:25	59.6	0.1
13:26	59.2	0.1
13:27	56.6	0.1
13:28	82.4	12.8
13:29	82.3	58.4
13:30	82.0	58.4
13:31	81.6	58.6
13:32	80.6	59.1
13:33	34.7	59.1
13:34	32.1	56.8
13:35	31.5	48.4
13:36	33.2	48.4
13:37	34.0	48.0
13:38	35.5	46.5
13:39	35.0	46.5
13:40	35.4	46.6
13:41	36.5	47.0
13:42	34.2	47.0

Post Test #4

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
13:56	35.6	46.9
13:57	6.5	46.9
13:58	0.6	36.1
13:59	0.1	0.4
14:00	0.0	0.4
14:01	12.2	0.4
14:02	47.9	0.4
14:03	58.9	0.4
14:04	58.8	0.3
14:05	58.5	0.3
14:06	57.3	0.3
14:07	82.0	13.9
14:08	81.7	58.4
14:09	81.5	58.4
14:10	81.3	58.5
14:11	80.8	58.9
14:12	50.2	58.9
14:13	36.0	57.6
14:14	37.5	53.6
14:15	34.5	53.6
14:16	34.3	53.3
14:17	34.8	52.6
14:18	35.7	52.6
14:19	36.8	53.4
14:20	33.6	55.9
14:21	34.6	55.9

Post Test #5

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
14:38	34.1	45.6
14:39	17.8	45.6
14:40	0.5	34.5
14:41	0.0	0.5
14:42	0.0	0.5
14:43	2.0	0.4
14:44	44.1	0.2
14:45	58.9	0.2
14:46	57.7	0.2
14:47	58.3	0.2
14:48	53.5	0.2
14:49	81.6	14.8
14:50	81.6	58.0
14:51	81.3	58.0
14:52	81.2	58.1
14:53	74.0	58.6
14:54	32.6	58.6
14:55	32.9	56.2
14:56	32.8	49.1
14:57	32.2	49.1
14:58	32.4	48.6
14:59	30.8	47.4
15:00	30.8	47.4
15:01	30.6	45.5
15:02	31.1	40.5

Post Test #6

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
15:17	33.6	46.3
15:18	38.7	46.3
15:19	1.2	34.8
15:20	0.0	0.7
15:21	0.0	0.7
15:22	0.0	0.5
15:23	37.6	0.0
15:24	58.7	0.0
15:25	58.6	0.0
15:26	55.3	0.0
15:27	65.0	0.0
15:28	81.8	15.5
15:29	81.6	58.2
15:30	81.4	58.2
15:31	81.1	58.3
15:32	80.7	58.5
15:33	44.7	58.5
15:34	31.1	55.4
15:35	31.1	46.8
15:36	32.7	46.8
15:37	33.8	47.2
15:38	35.2	48.6
15:39	32.3	47.8
15:40	33.0	48.1

Post Test #7

EPA-R5-2012-0005960000321

EPA-USS-0325944

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
15:56	38.0	54.5
15:57	36.8	54.5
15:58	0.6	40.1
15:59	0.0	0.5
16:00	0.0	0.5
16:01	0.0	0.4
16:02	21.3	0.0
16:03	55.7	0.0
16:04	58.7	0.0
16:05	58.5	0.0
16:06	58.1	0.0
16:07	48.0	5.0
16:08	81.6	17.7
16:09	81.7	17.7
16:10	81.5	29.5
16:11	81.3	58.6
16:12	80.9	58.6
16:13	80.5	58.6
16:14	47.0	58.7
16:15	35.0	58.7
16:16	34.4	56.0
16:17	36.2	49.3

Post Test #8

Time	Chan 1 THC	Chan 2 Methane
	ppm THC	ppm THC
16:38	36.3	58.7
16:39	32.4	58.7
16:40	0.2	42.0
16:41	0.0	0.5
16:42	0.0	0.5
16:43	0.0	0.3
16:44	22.8	0.0
16:45	58.5	0.0
16:46	58.5	0.0
16:47	58.2	0.0
16:48	54.8	0.0
16:49	81.7	17.4
16:50	81.5	58.0
16:51	81.2	58.0
16:52	80.8	58.2
16:53	48.8	58.6
16:54	35.5	58.6
16:55	33.1	57.4
16:56	33.8	54.6
16:57	31.0	54.6

Post Test #9

EPA-R5-2012-0005960000321

EPA-USS-0325946

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
17:17	37.3	63.4
17:18	36.3	63.4
17:19	41.3	63.0
17:20	1.3	62.0
17:21	0.0	62.0
17:22	0.0	42.5
17:23	0.0	0.0
17:24	0.0	0.0
17:25	0.0	0.0
17:26	3.6	0.0
17:27	40.2	0.0
17:28	59.2	0.0
17:29	59.1	0.0
17:30	58.8	0.0
17:31	49.1	0.0
17:32	62.7	0.0
17:33	81.9	0.0
17:34	81.9	18.6
17:35	81.7	58.9
17:36	81.6	58.9
17:37	81.2	58.9
17:38	48.9	59.1
17:39	31.3	59.1
17:40	32.0	56.8

Post Test #10

Propane Calibration Summary

Project: USX - Sinter Plant
Client: USX
Location: Stack 2

Date: 3/15/07
Operator: Jmc
Analyzer ID:
Analyzer Range:

0-110 span

Cal Run	Cal Level	Test Location	Cylinder ID Serial Number	Cal Gas Type	Cal Time	Expected Cal Value	Actual Response	Difference (% of value)	Drift (% of span)	Cylinder Pressure
Pre 1 Local	Zero		CC245138		0918	0	0.2	0.18	N/A	
	Low		CC570140		0937	29.87	30.2	1.10	N/A	
	Mid		CC119323		0924	59.47	59.4	0.12	N/A	
	High		CC173939		0932	91.20	90.3	0.99	N/A	
Pre 1 Remote	Zero				1021	0	0.2	0.18	0.00	
	Low									
	Mid				1025	59.47	59.2	0.45	0.18	
	High									
Post 1/ Pre 2	Zero				1105	0	0.8	0.73	0.55	
	Low									
	Mid				1108	59.47	59.2	0.45	0.00	
	High									
Post 2/ Pre 3	Zero				1147	0	0.6	0.55	0.18	
	Low									
	Mid				1149	59.47	60.1	1.06	0.92	
	High									
Post 3	Zero				1227	0	0.7	0.64	0.09	
	Low									
	Mid				1230	59.47	59.8	0.55	0.27	
	High									
Post 4	Zero				1307	0	0.5	0.45	0.18	
	Low									
	Mid				1317	59.47	59.6	0.22	0.18	
	High									

EPA-R5-2012-0005960000321

Propane Calibration Summary

Project: _____ Date: 3/15/07
Client: _____ Operator: JMC
Location: _____ Analyzer ID: _____
Analyzer Range: _____

Cal Run	Cal Level	Test Location	Cylinder ID Serial Number	Cal Gas Type	Cal Time	Expected Cal Value	Actual Response	Difference (% of value)	Drift (% of span)	Cylinder Pressure
Post 5	Zero				1349	0	0.5	0.45	0.00	
	Low									
	Mid				1352	59.47	59.6	0.22	0.00	
	High									
Post 6	Zero				1429	0	0.8	0.72	0.27	
	Low									
	Mid				1434	59.47	59.5	0.05	0.09	
	High									
Post 7	Zero				1509	0	0.3	0.27	0.45	
	Low									
	Mid				1512	59.47	59.6	0.22	0.09	
	High									
Post 8	Zero				1546	0	0.7	0.64	0.36	
	Low									
	Mid				1551	59.47	59.9	0.72	0.27	
	High									
Post 9	Zero				1629	0	0.5	0.45	0.18	
	Low									
	Mid				1632	59.47	59.3	0.29	0.55	
	High									
Post 10	Zero				1711	0	0.3	0.27	0.18	
	Low									
	Mid				1714	59.47	59.4	0.12	0.09	
	High									

EPA-USS-0325949

EPA-R5-2012-0005960000321

Methane Calibration Summary

Project: USX - Sinter Plant
Client: USX
Location: Stack 2

Date: 3/15/07
Operator: JMC
Analyzer ID:
Analyzer Range:

0-110 Span

Cal Run	Cal Level	Test Location	Cylinder ID Serial Number	Cal Gas Type	Cal Time	Expected Cal Value	Actual Response	Difference (% of value)	Drift (% of span)	Cylinder Pressure
Pre 1 Local	Zero		CC 245138		0942	0	0.3	0.31	N/A	
	Low		CC37304		1006	31.71	32.0	4.07	N/A	
	Mid	SG	914B921BAL		0991	58.82	59.6	1.33	N/A	
	High	SG	97B85NB		1000	91.55	93.9	2.57	N/A	
Pre 1 Remote	Zero					0	0.7	0.64	0.36	
	Low									
	Mid				1036	58.82	59.1	0.48	0.45	
	High									
Post 1/ Pre 2	Zero				1110	0	0.8	0.73	0.09	
	Low									
	Mid				1116	58.82	59.1	0.48	0.00	
	High									
Post 2/ Pre 3	Zero				1148	0.0	1.1	1.10	0.27	
	Low									
	Mid				1157	58.82	59.9	1.84	0.73	
	High									
Post 3	Zero				1233	0	1.1	1.10	0.0	
	Low									
	Mid				1237	58.82	59.9	1.84	0.0	
	High									
Post 4	Zero				1308	0	1.3	1.18	0.18	
	Low									
	Mid				1315	58.82	59.9	1.84	0.00	
	High									

EPA-USS-0325950

Methane Calibration Summary

Project: _____ Date: 3/15/07
Client: _____ Operator: JMC
Location: _____ Analyzer ID: _____
Analyzer Range: _____

Cal Run	Cal Level	Test Location	Cylinder ID Serial Number	Cal Gas Type	Cal Time	Expected Cal Value	Actual Response	Difference (% of span)	Drift (% of span)	Cylinder Pressure
Post 5	Zero				1350	0	1.5	1.36	0.18	
	Low									
	Mid				1359	58.82	60.1	2.18	0.18	
	High									
Post 6	Zero				1430	0	1.3	1.18	0.18	
	Low									
	Mid				1439	58.82	59.8	1.67	0.27	
	High									
Post 7	Zero				1512	0	0.7	0.64	0.55	
	Low									
	Mid				1521	58.82	59.5	1.16	0.27	
	High									
Post 8	Zero				1550	0	0.7	0.64	0.00	
	Low									
	Mid				1558	58.82	59.8	1.67	0.27	
	High									
Post 9	Zero				1630	0	0.7	0.64	0.00	
	Low									
	Mid				1641	58.82	59.8	1.67	0.00	
	High									
Post 10	Zero				1712	0	0.5	0.45	0.18	
	Low									
	Mid				1726	58.82	60.2	2.35	0.36	
	High									

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
09:15	0.2	0.0
09:16	0.2	0.0
09:17	0.2	0.0
09:18	0.2	0.0
09:19	0.3	0.0
09:20	0.3	0.0
09:21	1.8	0.0
09:22	59.4	1.1
09:23	59.6	1.8
09:24	59.4	1.8
09:25	59.3	0.6
09:26	59.2	0.0
09:27	28.8	0.0
09:28	85.1	1.3
09:29	89.9	2.0
09:30	90.3	2.0
09:31	90.3	0.6
09:32	90.3	0.0
09:33	31.8	0.0
09:34	30.4	0.0
09:35	30.2	0.1
09:36	30.2	0.1
09:37	30.2	0.1
09:38	7.6	0.2
09:39	0.7	0.2
09:40	0.6	0.3
09:41	0.6	0.3
09:42	10.9	0.3
09:43	83.2	9.5
09:44	83.8	14.4
09:45	83.4	14.4
09:46	83.3	45.6
09:47	83.3	61.4
09:48	83.2	61.4
09:49	83.2	60.0
09:50	83.2	59.3
09:51	83.2	59.3
09:52	83.1	59.5
09:53	46.4	59.6

Linearity Calc

Time	Chan 1 THC	Chan 2 Methane
	ppm THC	ppm THC
10:16	21.2	30.7
10:17	1.7	30.8
10:18	1.1	30.8
10:19	0.6	10.2
10:20	0.4	0.7
10:21	0.2	0.7
10:22	4.4	0.7
10:23	37.9	0.7
10:24	59.1	0.7
10:25	59.2	0.7
10:26	59.0	0.7
10:27	38.0	0.7
10:28	82.0	19.9
10:29	82.7	28.8
10:30	82.7	28.8
10:31	82.7	49.6
10:32	82.7	59.3
10:33	82.6	59.3
10:34	71.7	59.2
10:35	25.2	59.1
10:36	25.9	59.1
10:37	26.4	38.7
10:38	26.6	29.9
10:39	26.6	29.9
10:40	26.0	29.6

Pre Test #1

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
11:00	32.6	33.0
11:01	26.9	33.8
11:02	2.3	34.1
11:03	1.6	34.1
11:04	1.0	10.8
11:05	0.8	0.8
11:06	1.4	0.8
11:07	38.5	0.8
11:08	59.2	0.8
11:09	57.6	0.8
11:10	54.6	0.8
11:11	51.8	0.9
11:12	82.6	0.9
11:13	82.7	41.4
11:14	82.7	58.8
11:15	82.6	58.8
11:16	82.5	59.1
11:17	49.6	59.2
11:18	26.4	59.2
11:19	27.1	39.0
11:20	27.6	30.3
11:21	28.3	30.3
11:22	28.7	30.8

Post Test #1

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
11:41	28.7	28.8
11:42	32.4	28.8
11:43	2.7	31.1
11:44	1.6	32.0
11:45	1.1	32.0
11:46	0.8	10.0
11:47	0.6	1.1
11:48	26.5	1.1
11:49	60.1	9.4
11:50	60.0	12.7
11:51	45.1	12.7
11:52	66.7	25.3
11:53	83.6	30.3
11:54	83.6	30.3
11:55	82.1	51.1
11:56	83.4	59.9
11:57	83.5	59.9
11:58	77.4	59.9
11:59	25.9	59.9
12:00	26.4	59.9
12:01	26.9	38.9
12:02	27.9	30.6
12:03	28.0	30.6

Post Test #2

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
12:22	28.9	29.6
12:23	29.9	28.8
12:24	7.5	29.3
12:25	1.7	9.2
12:26	1.0	1.4
12:27	0.7	1.4
12:28	16.4	1.3
12:29	60.3	1.2
12:30	59.8	1.2
12:31	59.6	1.1
12:32	48.2	1.1
12:33	83.4	1.1
12:34	83.7	43.9
12:35	83.6	59.5
12:36	83.5	59.5
12:37	83.1	59.9
12:38	44.6	60.1
12:39	24.4	60.1
12:40	24.8	37.2
12:41	25.0	28.9
12:42	25.1	28.9
12:43	25.2	28.5
12:44	24.6	28.4
12:45	25.1	28.4

Post Test #3

Time	Chan 1: THC ppm THC	Chan 2: Methane ppm THC
13:02	27.6	30.4
13:03	28.6	30.4
13:04	2.3	51.4
13:05	1.3	59.0
13:06	0.8	59.0
13:07	0.5	15.9
13:08	16.0	1.3
13:09	79.2	1.3
13:10	83.5	44.8
13:11	83.3	59.4
13:12	83.3	59.4
13:13	83.1	59.8
13:14	49.6	59.9
13:15	58.7	59.9
13:16	58.2	15.7
13:17	59.6	1.6
13:18	57.2	1.6
13:19	24.6	1.4
13:20	25.3	1.4
13:21	26.0	1.4
13:22	25.8	23.0
13:23	26.3	30.3
13:24	26.3	30.3

Post Test #4

EPA-R5-2012-0005960000321

Time	Chan 1 THC	Chan 2 Methane
	ppm THC	ppm THC
13:43	29.8	32.5
13:44	24.0	32.6
13:45	2.3	32.6
13:46	1.4	9.0
13:47	1.0	1.5
13:48	0.7	1.5
13:49	0.5	1.5
13:50	23.9	1.5
13:51	59.7	1.5
13:52	59.6	1.5
13:53	56.3	1.5
13:54	56.3	1.5
13:55	83.2	46.0
13:56	83.1	59.6
13:57	83.0	59.6
13:58	82.7	60.0
13:59	36.8	60.1
14:00	27.8	60.1
14:01	27.9	39.6
14:02	27.4	33.3
14:03	28.4	33.3
14:04	28.5	32.8

Post Test #5

EPA-USS-0325958

	Chan 1 THC	Chan 2 Methane
Time	ppm THC	ppm THC
14:24	30.2	31.0
14:25	31.0	33.2
14:26	2.5	33.8
14:27	1.4	33.8
14:28	0.9	8.4
14:29	0.8	1.3
14:30	7.7	1.3
14:31	46.2	15.3
14:32	58.3	19.2
14:33	59.5	19.2
14:34	59.5	5.2
14:35	46.1	1.3
14:36	83.1	1.3
14:37	83.1	46.8
14:38	83.1	59.8
14:39	82.9	59.8
14:40	69.2	60.0
14:41	25.2	59.0
14:42	26.0	60.1
14:43	26.7	37.1
14:44	27.1	30.7
14:45	27.1	30.7

Post Test #6

Time	Chan 1 THC	Chan 2 Methane
	ppm THC	ppm THC
15:04	29.4	32.0
15:05	28.0	32.1
15:06	2.1	32.1
15:07	1.0	7.5
15:08	0.6	1.1
15:09	0.3	1.1
15:10	2.5	0.8
15:11	41.3	0.7
15:12	59.6	0.7
15:13	59.5	0.6
15:14	43.7	0.6
15:15	75.3	0.6
15:16	83.1	46.6
15:17	83.0	59.1
15:18	82.9	59.1
15:19	76.2	59.4
15:20	25.6	59.5
15:21	27.1	59.5
15:22	28.1	37.2
15:23	28.1	31.6
15:24	29.3	31.6

Post Test #7

	Chan 1	Chan 2
	THC	Methane
Time	ppm THC	ppm THC
15:43	29.2	30.8
15:44	26.6	30.9
15:45	2.2	30.4
15:46	1.5	6.7
15:47	1.0	0.7
15:48	0.7	0.7
15:49	8.4	0.7
15:50	49.8	0.7
15:51	59.9	0.7
15:52	59.5	0.7
15:53	45.9	0.7
15:54	83.0	0.7
15:55	82.9	48.7
15:56	82.8	59.5
15:57	82.8	59.5
15:58	82.8	59.8
15:59	63.6	59.9
16:00	27.2	59.9
16:01	28.3	37.2
16:02	28.9	32.1
16:03	29.3	32.1

Post Test #9

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
16:23	28.0	30.4
16:24	30.3	30.4
16:25	2.6	29.6
16:26	1.5	30.1
16:27	1.0	30.1
16:28	0.7	5.7
16:29	0.5	0.7
16:30	0.5	0.7
16:31	34.6	0.7
16:32	59.3	0.7
16:33	59.2	0.7
16:34	41.3	0.6
16:35	81.8	0.6
16:36	83.3	0.6
16:37	83.3	49.0
16:38	83.3	59.5
16:39	83.2	59.5
16:40	66.0	59.7
16:41	26.2	59.8
16:42	26.7	59.8
16:43	27.2	35.7
16:44	27.2	30.4

Post Test #9

Time	Chan 1 THC ppm THC	Chan 2 Methane ppm THC
17:04	27.7	30.5
17:05	21.4	30.5
17:06	2.2	30.0
17:07	1.5	5.5
17:08	1.0	0.7
17:09	0.7	0.7
17:10	0.5	0.5
17:11	0.3	0.5
17:12	10.1	0.5
17:13	51.6	25.0
17:14	59.4	29.3
17:15	59.3	29.3
17:16	59.1	5.2
17:17	58.9	0.4
17:18	48.4	0.4
17:19	82.5	10.4
17:20	80.5	12.2
17:21	82.6	12.2
17:22	82.6	52.9
17:23	82.5	60.0
17:24	82.5	60.0
17:25	82.2	60.2
17:26	56.1	60.2

Post Test #10

EPA-R5-2012-0005960000321

TYPE S PITOT TUBE INSPECTION DATA FORM

Pitot tube assembly level? Y yes ____ no

Pitot tube openings damaged? ____ yes (explain below) N no

α_1 = 2.5 ° (<10°), α_2 = 2 ° (<10°) z = A sin γ = 0.000 (in.); (<0.125 in.)

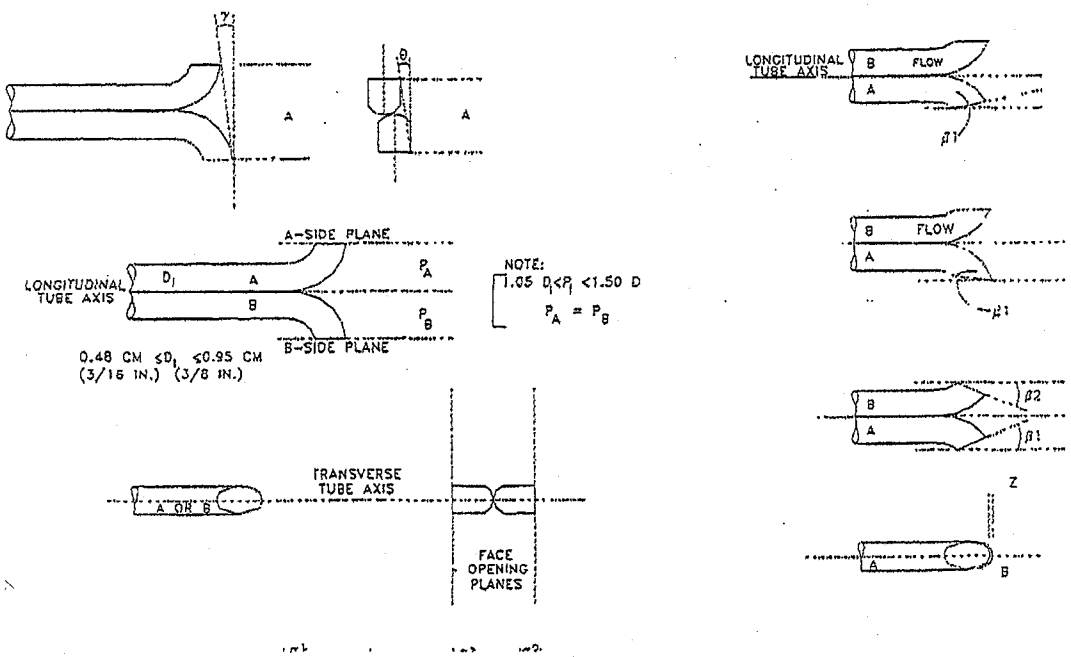
β_1 = 1 ° (<5°), β_2 = 1.5 ° (<5°) w = A sin θ = 0.008 (in.); (<0.03125 in.)

γ = 0 °, θ = 0.5 °, A = 0.940 (in.) P_A = 0.47 (in.), P_B = 0.47 (in.), D_t = 0.375 (in.)

Comments: _____

Calibration required? ____ yes N no

Pitot Tube No.: 25 Date: 1/29/2007 Name: SPD



EPA-USS-0325964

Meter Box Calibration

r No.	CM3	Date:	March 2, 2007
er No.	9605804	Calibrated By:	E Osthus
er (Y)	1.0054	Barometric Pressure:	29.54

)	Standard Meter Gas Volume vr	Dry Gas Meter Gas Volume vd	Standard Meter Temp. F° tr	Dry Gas Meter Inlet Temp. F° tdi	Dry Gas Meter Outlet Temp. F° tdo	Dry Gas Meter Avg. Temp. F° td	Time Min	Time Sec	Y	Chg (H)
	32.782	44.342	63	63	61					
	26.017	37.473	61	64	62					
0	6.765	6.869	62	64	62	63	23	36	0.985	1.361
	25.868	37.332	61	64	62					
	20.078	31.440	61	63	62					
0	5.790	5.892	61	64	62	63	13	18	0.985	1.469
	119.964	31.325	61	64	62					
	113.977	25.277	60	63	61					
0	5.987	6.048	61	64	62	63	11	52	0.992	1.529
	113.368	24.665	60	64	61					
	108.302	19.548	60	63	61					
0	5.066	5.117	60	64	61	62	8	50	0.992	1.519
	108.001	19.244	60	63	61					
	101.526	12.710	60	62	60					
0	6.475	6.534	60	63	61	62	9	34	0.991	1.457
	101.434	12.611	60	62	60					
	95.937	7.076	59	60	59					
0	5.497	5.535	60	61	60	60	6	55	0.990	1.762
							Average		0.989	1.516

Stack Temperature Sensor Calibration

Meter Box # : CM3 Name : E Osthus

Ambient Temperature : 64.5 °F Date : March 2, 2007

Calibrator Model # : CL23A

Serial # : T-249465

Date Of Certification : September 22, 2006

Primary Standards Directly Traceable National Institute of Standards and Technology (NIST)

Reference Source Temperature (°F)	Test Thermometer Temperature (°F)	Temperature Difference %
0	0	0.0
250	249	0.1
600	599	0.1
1200	1201	0.1

$$\frac{(\text{Ref. Temp., °F} + 460) - (\text{Test Therm. Temp., °F} + 460)}{\text{Ref. Temp., °F} + 460} * 100 <= 1.5\ \%$$

EPA-R5-2012-0005960000321

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071104
Date: 3-14-07
Client: US STEEL SINTER
Test Number: #1
Test Location: #7 SINTER STACK
Start Time: 1040
Source Condition: NORMAL
End Time: 1055
Test Engineer: [illegible]
Test Tech: AS

Duct Diameter 11.0 ft
Flue Area 95.03 ft²
Port Length 13 "
P_{bar} 29.93 "Hg
Static +1.50 "H_2O
Static ____ "Hg
P_s 29.46 "Hg

Upstream Disturbance, Diameters ____
Downstream Disturbance, Diameters ____
Pitot ID 022SA Pitot Coefficient (C_p) .84

CO_2 % 2.0
O_2 % 17.0
N_2 % 81.0

Wet Bulb Temp 126
Dry Bulb Temp 222
B_{ws} .101

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.20	221			3-1	1.10	221		
-2	1.15	222			-2	1.15	222		
-3	1.10	222			-3	1.20	221		
-4	1.10	221			-4	1.20	220		
-5	1.10	221			-5	1.10	220		
-6	.97	219			-6	.94	218		
2-1	1.40	222			4-1	1.10	221		
-2	1.25	222			-2	1.05	221		
-3	1.20	221			-3	1.15	221		
-4	1.10	220			-4	1.15	220		
-5	1.05	220			-5	1.10	220		
-6	.84	218			-6	.92	219		
Average									

44 x CO_2 % + 32 x O_2 % + 28 x N_2 % = (Md)

EPA-USS-0325967

EPA-R5-2012-0005960000321

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071104
Client: US STEEL
Test Location: #1 SINTER STACK
Source Condition: NORMAL
Test Engineer: [illegible]

Date: 3-14-07
Test Number: #2
Start Time: 1130
End Time: 1145
Test Tech: AS

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
P_{bar} 29.33 "Hg
Static 1.80 "H_2O
Static ____ "Hg
P_s 29.49 "Hg

CO_2 % ____
O_2 % ✓
N_2 % ____

Upstream Disturbance, Diameters ____
Downstream Disturbance, Diameters ____
Pitot ID 025A Pitot Coefficient (C_p) .84
Wet Bulb Temp 125
Dry Bulb Temp 220
B_{ws} 0.097

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.00	220			3-1	1.10	220		
-2	.98	221			-2	1.10	220		
-3	1.00	220			-3	1.00	220		
-4	1.00	220			-4	1.10	219		
-5	.99	220			-5	1.00	219		
-6	.83	218			-6	.96	218		
2-1	1.10	221			4-1	1.20	220		
-2	1.10	221			-2	1.10	224		
-3	1.10	221			-3	1.00	225		
-4	1.10	220			-4	1.00	223		
-5	1.00	220			-5	1.10	222		
-6	.94	218			-6	.94	220		
Average									

EPA-USS-0325968

EPA-R5-2012-0005960000321

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071104
Client: US STEEL
Test Location: #1 SINTER STACK
Source Condition: NORMAL
Test Engineer: [illegible]

Date: 3-14-07
Test Number: #3
Start Time: 1220
End Time: 1235
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
P_{bar} 29.33 "Hg
Static +1.50 "H_2O
Static _____ "Hg
P_s 29.46 "Hg

CO_2 % 1.9
O_2 % 17.3
N_2 % _____

Upstream Disturbance, Diameters _____
Downstream Disturbance, Diameters _____
Pitot ID 025A Pitot Coefficient (C_p) .84
Wet Bulb Temp 127
Dry Bulb Temp 218
B_{ws} 0.106

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	√ΔP	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	√ΔP	Null Point Angle, Degrees
1-1	1.10	220			3-1	1.10	220		
-2	1.05	220			-2	1.00	220		
-3	.98	220			-3	1.05	220		
-4	.99	219			-4	1.00	220		
-5	.99	219			-5	1.00	220		
-6	.90	218			-6	.83	217		
2-1	1.10	220			4-1	1.10	220		
-2	1.00	220			-2	1.10	220		
-3	1.05	220			-3	1.05	220		
-4	1.05	221			-4	1.10	220		
-5	1.00	219			-5	1.00	219		
-6	.96	217			-6	.85	217		
Average									

44 x CO_2 % + 32 x O_2 % + 28 x N_2 % = _____ (Md)

EPA-USS-0325969

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Client: US STEEL
Test Location: #1 SINTER STACK
Source Condition: NORMAL
Test Engineer: [illegible]

Date: 3-14-07
Test Number: #4
Start Time: 1300
End Time: 1315
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
P_{bar} 29.33 "Hg
Static +1.60 "H_2O
Static ____ "Hg
P_s 29.46 "Hg

CO_2 % 1.9
O_2 % 17.3
N_2 % ____

Upstream Disturbance, Diameters ____
Downstream Disturbance, Diameters ____
Pitot ID 025A Pitot Coefficient (C_p) .840
Wet Bulb Temp 126
Dry Bulb Temp 225
B_{ws} 0.100

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.05	220			3-1	1.10	228		
-2	1.00	229			-2	1.20	228		
-3	1.05	228			-3	1.20	227		
-4	.99	226			-4	1.20	226		
-5	.93	226			-5	1.05	224		
-6	.83	220			-6	.88	220		
2-1	1.20	228			4-1	1.15	228		
-2	1.15	228			-2	1.15	228		
-3	1.10	228			-3	1.10	227		
-4	1.00	228			-4	1.10	226		
-5	.96	226			-5	1.05	225		
-6	.82	220			-6	.85	220		
Average									

44 x CO_2% + 32 x O_2% + 28 x N_2% = ____ (Md)

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Date: 3-14-07
Client: US Steel
Test Number: #5
Test Location: #1 Sinter Stack
Start Time: 1340
Source Condition: Normal
End Time: 1355
Test Engineer: [illegible]
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
P_{bar} 29.33 "Hg
Static +1.60 "H_2O
Static _____ "Hg
P_s 29.46 "Hg

CO_2 % 2.0
O_2 % 17.1
N_2 % 81.0

Upstream Disturbance, Diameters _____
Downstream Disturbance, Diameters _____
Pitot ID 025A Pitot Coefficient (C_p) .840
Wet Bulb Temp 125
Dry Bulb Temp 223
B_{ws} 0.096

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.15	222			3-1	1.20	223		
-2	1.15	228			-2	1.15	228		
-3	1.10	227			-3	1.10	229		
-4	1.05	226			-4	1.15	225		
-5	1.15	223			-5	1.15	223		
-6	1.00	222			-6	.92	222		
2-1	1.20	228			4-1	1.15	225		
-2	1.15	227			-2	1.00	231		
-3	1.15	223			-3	1.10	232		
-4	1.15	223			-4	1.10	227		
-5	1.10	222			-5	1.00	224		
-6	.92	220			-6	.88	220		
Average									

44 x CO_2 % + 32 x O_2 % + 28 x N_2 % = _____ (M)

EPA-R5-2012-0005960000321

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Client: US STEEL
Test Location: #1 SINTER STACK
Source Condition: NORMAL
Test Engineer: [illegible]

Date: 3/14/07
Test Number: #6
Start Time: 1420
End Time: 1435
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 12 "
P_{bar} 29.33 "Hg
Static +1.80 "H_2O
Static _____ "Hg
P_s 29.46 "Hg

CO_2 % 2.0
O_2 % 17.1
N_2 % _____

Upstream Disturbance, Diameters _____
Downstream Disturbance, Diameters _____
Pitot ID 025A Pitot Coefficient (C_p) .840

Wet Bulb Temp 126
Dry Bulb Temp 226
B_{ws} 0.099

Leak Checks ✓
Pre _____
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.00	226			3-1	1.20	225		
-2	1.10	228			-2	1.15	225		
-3	1.05	229			-3	1.10	223		
-4	1.10	227			-4	1.05	222		
-5	1.00	226			-5	1.00	222		
-6	.89	224			-6	.86	220		
2-1	1.20	227			4-1	1.20	225		
-2	1.20	227			-2	1.20	224		
-3	1.20	225			-3	1.20	224		
-4	1.20	223			-4	1.20	223		
-5	1.10	223			-5	1.00	223		
-6	.84	221			-6	.86	220		
Average									

EPA-USS-0325972

EPA-R5-2012-0005960000321

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Client: US STEEL
Test Location: #1 SINTER STACK
Source Condition: NORMAL
Test Engineer: [illegible]

Date: 3/14/07
Test Number: #7
Start Time: 1500
End Time: 1515
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
P_{bar} 29.33 "Hg
Static +1.80 "H_2O
Static ____ "Hg
P_s 29.46 "Hg

CO_2 % 2.0
O_2 % 17.0
N_2 % ____

Upstream Disturbance, Diameters ____
Downstream Disturbance, Diameters ____
Pitot ID 0251 Pitot Coefficient (C_p) .840
Wet Bulb Temp 126
Dry Bulb Temp 225
B_{ws} 0.100

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	√ΔP	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	√ΔP	Null Point Angle, Degrees
1-1	1.15	225			3-1	1.15	226		
-2	1.10	226			-2	1.05	226		
-3	1.10	226			-3	1.05	227		
-4	1.05	225			-4	1.20	226		
-5	.97	225			-5	1.00	225		
-6	.87				-6	.85	220		
2-1	1.20	226			4-1	1.15	226		
-2	1.15	227			-2	1.10	229		
-3	1.05	227			-3	1.00	229		
-4	1.05	226			-4	1.00	228		
-5	1.00	225			-5	.96	226		
-6	.84	220			-6	.89	223		
Average									

EPA-USS-0325973

EPA-R5-2012-0005960000321

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M07L07
Client: US STEEL
Test Location: #1 SINTER STACK
Source Condition: NORMAL
Test Engineer: [illegible]

Date: 3-14-07
Test Number: #8
Start Time: 1540
End Time: 1555
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length ±13 "
P_{bar} 29.33 "Hg
Static ±1.80 "H_2O
Static ____ "Hg
P_s 29.46 "Hg

CO_2 % 2.0
O_2 % 17.0
N_2 % ____

Upstream Disturbance, Diameters ____
Downstream Disturbance, Diameters ____
Pitot ID 025A Pitot Coefficient (C_p) .840
Wet Bulb Temp 127
Dry Bulb Temp 226
B_{ws} 0.103

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.15	224			3-1	1.20	222		
-2	1.05	227			-2	1.20	222		
-3	1.00	231			-3	1.20	222		
-4	1.10	227			-4	1.15	223		
-5	.93	224			-5	1.10	222		
-6	.82	220			-6	.80	220		
2-1	1.15	225			4-1	1.00	222		
-2	1.15	225			-2	1.05	222		
-3	1.10	223			-3	1.05	223		
-4	1.10	222			-4	1.05	222		
-5	1.00	220			-5	.95	222		
-6	.83	219			-6	.80	220		
Average									

EPA-USS-0325974

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Date: 3-14-07
Client: US Steel
Test Number: #9
Test Location: #1 Sinter Stack
Start Time: 1620
Source Condition: Normal
End Time: 1635
Test Engineer: [illegible]
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
Upstream Disturbance, Diameters
Downstream Disturbance, Diameters
Pitot ID 025A Pitot Coefficient (C_p) .840

P_{bar} 29.33 "Hg
Static +1.80 "H_2O
Static "Hg
P_s 29.46 "Hg

CO_2 % 1.8
O_2 % 17.4
N_2 %

Wet Bulb Temp 126
Dry Bulb Temp 222
B_{ws} 0.101

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.10	223			3-1	1.10	222		
-2	1.00	223			-2	1.05	222		
-3	1.05	223			-3	1.05	222		
-4	1.00	222			-4	1.05	223		
-5	.97	221			-5	1.00	223		
-6	.80	220			-6	.91	221		
2-1	1.10	222			4-1	1.15	222		
-2	1.10	222			-2	1.10	223		
-3	1.00	222			-3	1.15	224		
-4	1.00	222			-4	1.00	223		
-5	1.00	222			-5	1.00	223		
-6	.83	220			-6	.80	220		
Average									

EPA-R5-2012-0005960000321

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Client: US Steel
Test Location: #1 Sinter Stack
Source Condition: Normal
Test Engineer: [illegible]

Date: 3-14-07
Test Number: #10
Start Time: 1700
End Time: 1715
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
P_{bar} 29.33 "Hg
Static -1.82 "H_2O
Static ____ "Hg
P_s 29.46 "Hg

CO_2 % 1.8
O_2 % 17.4
N_2 % ____

Upstream Disturbance, Diameters ____
Downstream Disturbance, Diameters ____
Pitot ID 025A Pitot Coefficient (C_p) .840
Wet Bulb Temp 126
Dry Bulb Temp 221
B_{ws} 0.101

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.05	223			3-1	1.15	222		
-2	1.05	223			-2	1.10	222		
-3	1.00	223			-3	1.10	222		
-4	1.05	223			-4	1.10	222		
-5	1.05	223			-5	.97	221		
-6	.80	220			-6	.80	220		
2-1	1.15	222			4-1	1.15	222		
-2	1.10	222			-2	1.10	221		
-3	1.05	222			-3	1.10	221		
-4	1.15	221			-4	1.00	221		
-5	1.00	220			-5	1.00	220		
-6	.80	218			-6	.80	218		
Average									

EPA-USS-0325976

EPA-R5-2012-0005960000321

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Date: 3-15-07
Client: US STEEL
Test Number: #1
Test Location: #2 SINTER STACK
Start Time: 1043
Source Condition: NORMAL
End Time: 1058
Test Engineer: YA
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
P_{bar} 29.37 "Hg
Static +1.80 "H_2O
Static ____ "Hg
P_s 29.50 "Hg

Upstream Disturbance, Diameters ____
Downstream Disturbance, Diameters ____
Pitot ID 025A Pitot Coefficient (C_p) .840

CO_2 % 2.0
O_2 % 17.0
N_2 % 81.0

Wet Bulb Temp 125
Dry Bulb Temp 220
B_{ws} 0.097

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.15	220			3-1	1.30	222		
-2	1.20	223			-2	1.20	222		
-3	1.00	222			-3	1.20	221		
-4	1.15	221			-4	1.20	221		
-5	1.10	221			-5	1.20	220		
-6	1.10	222			-6	.82	218		
2-1	1.00	222			4-1	1.00	221		
-2	.97	222			-2	1.05	221		
-3	1.00	221			-3	1.00	221		
-4	1.05	220			-4	1.00	220		
-5	1.00	219			-5	1.00	220		
-6	.80	219			-6	.97	217		
Average									

EPA-USS-0325977

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Date: 3-15-07
Client: US STEEL
Test Number: #2
Test Location: #2 SINTER STACK
Start Time: 1122
Source Condition: NORMAL
End Time: 1137
Test Engineer: [illegible]
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
Upstream Disturbance, Diameters
Downstream Disturbance, Diameters
Pitot ID 0.85H Pitot Coefficient (C_p) .840

P_{bar} 29.37 "Hg
Static 1.80 "H_2O
Static "Hg
P_s 29.50 "Hg

CO_2 % 2.0
O_2 % 17.0
N_2 %

Wet Bulb Temp 125
Dry Bulb Temp 220
B_{ws} .097

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.30	221			3-1	1.10	221		
-2	1.25	221			-2	1.25	221		
-3	1.20	221			-3	1.25	221		
-4	1.20	221			-4	1.25	221		
-5	1.25	220			-5	1.25	220		
-6	.86	219			-6	1.00	219		
2-1	1.00	221			4-1	1.05	220		
-2	1.00	221			-2	1.00	222		
-3	1.00	221			-3	1.20	222		
-4	1.00	221			-4	1.10	222		
-5	1.05	220			-5	1.05	220		
-6	.84	219			-6	.92	219		
Average									

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Date: 3-15-07
Client: US STEEL
Test Number: #3
Test Location: #2 SINTER STACK
Start Time: 1203
Source Condition: NORMAL
End Time: 1218
Test Engineer: [illegible]
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
Upstream Disturbance, Diameters ____
Downstream Disturbance, Diameters ____
Pitot ID 025A Pitot Coefficient (C_p) .840

P_{bar} 29.37 "Hg
Static +1.80 "H_2O
Static ____ "Hg
P_s 29.50 "Hg

CO_2 % 2.0
O_2 % 17.0
N_2 % ____

Wet Bulb Temp 127
Dry Bulb Temp 212
B_{ws} ____

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.05	220			3-1	1.05	220		
-2	1.20	220			-2	1.30	220		
-3	1.15	219			-3	1.20	220		
-4	1.05	219			-4	1.20	218		
-5	1.20	219			-5	1.30	218		
-6	.82	218			-6	.82	217		
2-1	1.20	220			4-1	1.30	220		
-2	1.05	220			-2	1.20	220		
-3	1.20	220			-3	1.30	221		
-4	1.30	220			-4	1.40	220		
-5	1.20	220			-5	1.40	219		
-6	1.20	220			-6	1.05	218		
Average									

44 x CO_2% + 32 x O_2% + 28 x N_2% = (Md)

EPA-R5-2012-0005960000321

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Date: 3-15-07
Client: US STEEL
Test Number: #4
Test Location: #2 SINTER STACK
Start Time: 1243
Source Condition: NORMAL
End Time: 1258
Test Engineer: [illegible]
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
P_{bar} 29.37 "Hg
Static +1.80 "H_2O
Static ____ "Hg
P_s 29.50 "Hg

CO_2 % 2.0
O_2 % 17.0
N_2 % ____

Upstream Disturbance, Diameters ____
Downstream Disturbance, Diameters ____
Pitot ID 025A Pitot Coefficient (C_p) .840
Wet Bulb Temp 126
Dry Bulb Temp 220
B_{ws} 0.101

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	√ΔP	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	√ΔP	Null Point Angle, Degrees
1-1	1.10	219			3-1	1.10	224		
-2	1.15	221			-2	1.20	225		
-3	1.05	221			-3	1.10	226		
-4	1.10	222			-4	1.30	226		
-5	1.20	218			-5	1.30	222		
-6	1.10	217			-6	1.00	219		
2-1	1.20	220			4-1	1.05	222		
-2	1.20	220			-2	1.10	227		
-3	1.20	222			-3	1.10	225		
-4	1.20	226			-4	1.00	222		
-5	1.10	223			-5	1.00	221		
-6	1.05	222			-6	1.20	219		
Average									

EPA-USS-0325980

EPA-R5-2012-0005960000321

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Date: 3-15-07
Client: US STEEL
Test Number: #5
Test Location: #2 SINTER STACK
Start Time: 1325
Source Condition: NORMAL
End Time: 1340
Test Engineer: [illegible]
Test Tech: YA

Duct Diameter 11 ft
Upstream Disturbance, Diameters
Flue Area 95.03 ft²
Downstream Disturbance, Diameters
Port Length 13 "
Pitot ID 025A Pitot Coefficient (C_p) .840

P_{bar} 29.37 "Hg
CO_2 % 2.0
Wet Bulb Temp 124
Leak Checks
Static +1.80 "H_2O
O_2 % 16.5
Dry Bulb Temp 210
Pre ✓
Static ____ "Hg
N_2 % ____
B_{ws} ____
Post ✓
P_s 29.50 "Hg

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.10	219			3-1	1.05	229		
-2	1.10	219			-2	1.30	234		
-3	1.30	218			-3	1.20	232		
-4	1.15	218			-4	1.20	224		
-5	1.30	218			-5	1.20	221		
-6	1.20	217			-6	1.10	219		
2-1	1.10	219			4-1	1.00	231		
-2	1.10	219			-2	1.20	230		
-3	1.25	219			-3	1.15	233		
-4	1.15	218			-4	1.05	224		
-5	1.30	218			-5	1.15	221		
-6	1.20	224			-6	1.20	220		
Average									

44 x CO_2 % + 32 x O_2 % + 28 x N_2 % = ____ (Md)

EPA-USS-0325981

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Client: US STEEL
Test Location: #2 SINTER STACK
Source Condition: NORMAL
Test Engineer: [illegible]

Date: 3-15-07
Test Number: #6
Start Time: 1404
End Time: 1419
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13"

Upstream Disturbance, Diameters ____
Downstream Disturbance, Diameters ____
Pitot ID 025A Pitot Coefficient (C_p) .840

P_{bar} 29.37 "Hg
Static +1.80 "H_2O
Static ____ "Hg
P_s 29.50 "Hg

CO_2 % 2.0
O_2 % 16.5
N_2 % ____

Wet Bulb Temp 125
Dry Bulb Temp 214
B_{ws} .100

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.20	215			3-1	1.00	215		
-2	1.20	215			-2	1.00	215		
-3	1.20	215			-3	1.05	215		
-4	1.30	214			-4	1.20	216		
-5	1.15	214			-5	1.30	215		
-6	1.05	213			-6	1.15	214		
2-1	1.15	216			4-1	1.00	215		
-2	1.20	216			-2	1.30	215		
-3	1.20	218			-3	1.15	215		
-4	1.20	218			-4	1.30	215		
-5	1.30	217			-5	1.15	213		
-6	1.15	215			-6	1.00	212		
Average									

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Date: 3-15-07
Client: US STEEL
Test Number: #7
Test Location: #2 SINTER STACK
Start Time: 1445
Source Condition: NORMAL
End Time: 1500
Test Engineer: [illegible]
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
Upstream Disturbance, Diameters
Downstream Disturbance, Diameters
Pitot ID 025A Pitot Coefficient (C_p) .840

P_{bar} 29.37 "Hg
Static +1.80 "H_2O
Static ____ "Hg
P_s 29.52 "Hg

CO_2 % 1.80
O_2 % 17.40
N_2 % ____

Wet Bulb Temp 125
Dry Bulb Temp 215
B_{ws} 0.099

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.20	215			2-1	1.00	215		
-2	1.05	215			-2	1.00	214		
-3	1.20	214			-3	1.00	215		
-4	1.30	216			-4	1.20	217		
-5	1.30	217			-5	1.25	215		
-6	1.15	213			-6	1.05	213		
2-1	1.00	215			4-1	1.05	215		
-2	1.15	215			-2	1.20	216		
-3	1.20	216			-3	1.10	215		
-4	1.25	217			-4	1.10	215		
-5	1.30	215			-5	1.15	216		
-6	1.15	214			-6	1.00	217		
Average									

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Date: 3-15-07
Client: US Steel
Test Number: #8
Test Location: #2 Sinter Stack
Start Time: 1525
Source Condition: Normal
End Time: 1540
Test Engineer: [illegible]
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
Upstream Disturbance, Diameters
Downstream Disturbance, Diameters
Pitot ID OSA Pitot Coefficient (C_p) .840

P_{bar} 29.31 "Hg
Static 1.50 "H_2O
Static "Hg
P_s 29.50 "Hg

CO_2 % 1.8
O_2 % 17.4
N_2 %

Wet Bulb Temp 126
Dry Bulb Temp 214
B_{ws}

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.05	215			3-1	1.00	215		
-2	1.00	214			-2	1.20	215		
-3	1.00	215			-3	1.30	215		
-4	1.10	215			-4	1.05	215		
-5	1.10	215			-5	1.00	215		
-6	1.10	213			-6	1.05	214		
2-1	1.00	215			4-1	1.20	215		
-2	1.00	215			-2	1.15	215		
-3	1.00	215			-3	1.20	215		
-4	1.10	215			-4	1.15	215		
-5	1.10	215			-5	1.15	215		
-6	1.10	214			-6	1.10	214		
Average									

EPA-R5-2012-0005960000321

Volumetric Flow Rate Determination Field Data Sheet

Project Number: MC71107
Date: 3-15-07
Client: US STEEL
Test Number: #9
Test Location: #2 SINTER STACK
Start Time: 1603
Source Condition: NORMAL
End Time: 1618
Test Engineer: [illegible]
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13 "
P_{bar} 29.37 "Hg
Static 1.80 "H_2O
Static ____ "Hg
P_s 29.50 "Hg

CO_2 % 1.7
O_2 % 17.3
N_2 % ____

Upstream Disturbance, Diameters ____
Downstream Disturbance, Diameters ____
Pitot ID 025A Pitot Coefficient (C_p) .840
Wet Bulb Temp 126
Dry Bulb Temp 214
B_{ws} .104

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.05	215			3-1	1.00	215		
-2	1.10	217			-2	1.20	215		
-3	1.05	215			-3	.98	215		
-4	1.10	214			-4	1.05	215		
-5	1.20	214			-5	1.10	214		
-6	1.20	214			-6	1.10	215		
2-1	1.00	215			4-1	1.00	215		
-2	1.10	214			-2	1.00	213		
-3	1.00	215			-3	1.10	216		
-4	1.20	215			-4	1.10	215		
-5	1.10	215			-5	1.10	215		
-6	1.05	214			-6	1.20	214		
Average									

44 x CO_2% + 32 x O_2% + 28 x N_2% = (Md)

EPA-USS-0325985

EPA-R5-2012-0005960000321

Volumetric Flow Rate Determination Field Data Sheet

Project Number: M071107
Client: US Steel
Test Location: #2 Sinter Stack
Source Condition: Normal
Test Engineer: [illegible]

Date: 3-15-0
Test Number: #10
Start Time: 1645
End Time: 1700
Test Tech: YA

Duct Diameter 11 ft
Flue Area 95.03 ft²
Port Length 13
P_{bar} 29.37 "Hg
Static +1.60 "H_2O
Static ____ "Hg
P 29.50 "Hg

CO_2 % 1.7
O_2 % 17.3
N_2 % ____

Upstream Disturbance, Diameters ____
Downstream Disturbance, Diameters ____
Pitot ID 025A Pitot Coefficient (C_p) .840
Wet Bulb Temp 126
Dry Bulb Temp 214
B_{ws} 0.104

Leak Checks
Pre ✓
Post ✓

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
1-1	1.00	214			3-1	1.15	215		
-2	1.20	216			-2	1.10	215		
-3	1.15	215			-3	1.20	215		
-4	1.15	214			-4	1.15	215		
-5	1.20	214			-5	1.25	215		
-6	1.15	214			-6	1.30	214		
2-1	1.15	215			4-1	1.10	215		
-2	1.10	215			-2	1.10	215		
-3	1.20	216			-3	1.10	215		
-4	1.15	216			-4	1.10	215		
-5	1.20	216			-5	1.30	214		
-6	1.25	214			-6	1.20	214		
Average									

EPA-USS-0325986

Airgas

Airgas North Central
640 Kimberly Drive
Carol Stream, IL 60188
630-690-3010 Fax: 630-690-8207
www.airgas.com

Certificate of Analysis

Date of Manufacture: 12/14/2005 Record Number 573

Customer: AIRGAS N ORTH CENTRAL PO Number:

Address: Part Number:

City: State: Zip:

CYLINDER TESTI D	COMPONENTS TESTED	SPECIFICATION	ACTUAL
SN: CC235465	OXYGEN	20.0-21.0%	20.6%
LOT#: 2605334-01	MOISTURE	<2.0 PPM	<2.0PPM
PRODUCT:	HYDROCARBON	<0.1 PPM	<0.1PPM
CEM AIR	CO2	<1.0 PPM	<1.0PPM
	CO	<0.5 PPM	<0.5PPM
	NOX	<0.1 PPM	<0.1PPM
	SO2	<0.1 PPM	<0.1PPM

NOTES:

Approval:

CYLINDERS in LOT:
CC235465 CC235461 CC235216 CC235449

EPA-R5-2012-0005960000321

EPA-USS-0325987

Airgas

Airgas Specialty Gases
12722 South Wentworth Avenue
Chicago, IL 60628
www.airgas.com

Certificate of Analysis: EPA Protocol Gas Mixture

Cylinder Number: CC57040 Reference Number: 54-124057816-4
Cylinder Pressure: 2000.6 PSIG Expiration Date: 2/14/2009
Certification Date: 2/14/2006 Laboratory: ASG - Chicago - IL

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
PROPANE	29.87 PPM	+/- 1%	FID	G1
Air	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:
Do not use cylinder below 150 psig.

Approval Signature _____

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
NTRM 00052006	NITROGEN	PROPANE	SG868167NB	50.5 PPM

Analytical Results

1st Component PROPANE
1st Analysis Date: 02/14/2006

R 50.44	S 29.76	Z 0	Conc 29.80 PPM
S 29.92	Z 0	R 50.56	Conc 29.88 PPM
Z 0	R 50.56	S 29.99	Conc 29.95 PPM
			AVG: 29.877 PPM

EPA-R5-2012-000596000321

Airgas

Certificate of Analysis: EPA Protocol Gas Mixture

Airgas Specialty Gases
12722 South Wentworth Avenue
Chicago, IL 60628
www.airgas.com

Cylinder Number: CC119323 Reference Number: 54-124057816-6
Cylinder Pressure: 2000.6 PSIG Expiration Date: 2/14/2009
Certification Date: 2/14/2006 Laboratory: ASG - Chicago - IL

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
PROPANE	59.47 PPM	+/- 1%	FID	G1
Air	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig. Approval Signature _____

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
NTRM 00052008	NITROGEN	PROPANE	SG868167NB	50.5 PPM

Analytical Results

1st Component PROPANE

1st Analysis Date: 02/14/2006

R 50.44	S 59.53	Z 0	Conc 59.60 PPM
S 59.50	Z 0	R 50.56	Conc 59.43 PPM
Z 0	R 50.56	S 59.46	Conc 59.39 PPM
			AVG: 59.473 PPM

EPA-USS-0325989

EPA-R5-2012-0005960000321

Airgas

Certificate of Analysis: EPA Protocol Gas Mixture

Airgas Specialty Gases
12722 South Wentworth Avenue
Chicago, IL 60628
www.airgas.com

Cylinder Number: CC173939 Reference Number: 54-124035481-2
Cylinder Pressure: 1999.6 PSIG Expiration Date: 5/2/2008
Certification Date: 5/2/2005 Laboratory: ASG - Chicago - IL

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
PROPANE	91.20 PPM	+/- 1%	FID	G1
Air	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig. Approval Signature

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
NTRM 51808		PROPANE	SG9126303BAL	243.2 PPM

Analytical Results

1st Component PROPANE

1st Analysis Date: 05/02/2005

R 243.2	S 91.34	Z 0	Conc 91.34 PPM
S 91.39	Z 0	R 243.6	Conc 91.24 PPM
Z 0	R 244	S 91.33	Conc 91.03 PPM
			AVG: 91.20 PPM

EPA-USS-0325990

EPA-R5-2012-0005960000321

Airgas

Airgas Specialty Gases
12722 South Wentworth Avenue
Chicago, IL 60628
www.airgas.com

Certificate of Analysis: EPA Protocol Gas Mixture

Cylinder Number:	CC37304&	Reference Number:	54-124035292-12
Cylinder Pressure:	1999.6 PSIG	Expiration Date:	4/29/2008
Certification Date:	4/29/2005	Laboratory:	ASG - Chicago - IL

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
PROPANE	30.70 PPM	+/- 1%	FID	G1
METHANE	31.71 PPM	+/- 1%	FID	G1
	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig.

Approval Signature

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
GMIS 2		METHANE	SG9127443BAL	50.3 PPM
NTRM 52008		PROPANE	SG868167NB	50.5 PPM

Analytical Results

1st Component PROPANE

1st Analysis Date: 04/29/2005

R 51.5	S 31.22	Z 0	Conc 30.61 PPM
S 31.27	Z 0	R 51.35	Conc 30.75 PPM
Z 0	R 51.33	S 31.25	Conc 30.74 PPM
			AVG: 30.70 PPM

2nd Component METHANE

1st Analysis Date: 04/29/2005

R 50.35	S 31.81	Z 0	Conc 31.77 PPM
S 31.75	Z 0	R 50.41	Conc 31.68 PPM
Z 0	R 50.33	S 31.71	Conc 31.69 PPM
			AVG: 31.71 PPM

EPA-USS-0325991

EPA-R5-2012-0005960000321

Airgas

Certificate of Analysis: EPA Protocol Gas Mixture

Cylinder Number:	XC031801B	Reference Number:	54-124057812-6
Cylinder Pressure:	2000.6 PSIG	Expiration Date:	2/15/2009
Certification Date:	2/15/2006	Laboratory:	ASG - Chicago - IL

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
METHANE	58.82 PPM	+/- 1%	FID	G1
PROPANE	59.01 PPM	+/- 1%	FID	G1
Air	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig.

Signature on file

Approval Signature

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
NTRM 51715		PROPANE	SG9101987ALB	103.6 PPM
GMIS 60104		METHANE	CC146254	249.6 PPM

Analytical Results

1st Component METHANE

1st Analysis Date: 02/15/2006

R 249.1	S 59.23	Z 0	Conc 59.34 PPM
S 58.64	Z 0	R 249.3	Conc 58.71 PPM
Z 0	R 249.3	S 58.36	Conc 58.43 PPM
			AVG: 58.827 PPM

2nd Component PROPANE

1st Analysis Date: 02/15/2006

R 103.7	S 58.76	Z 0	Conc 58.7 PPM
S 59.15	Z 0	R 104	Conc 58.92 PPM
Z 0	R 103.9	S 59.59	Conc 59.42 PPM
			AVG: 59.013 PPM

EPA-USS-0325992

EPA-R5-2012-000596000321

Airgas

Airgas Specialty Gases
12722 South Wentworth Avenue
Chicago, IL 60628
www.airgas.com

Certificate of Analysis: EPA Protocol Gas Mixture

Cylinder Number:	SG871385NB	Reference Number:	54-124035292-11
Cylinder Pressure:	1999.6 PSIG	Expiration Date:	4/29/2008
Certification Date:	4/29/2005	Laboratory:	ASG - Chicago - IL

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
PROPANE	89.50 PPM	[illegible]	FID	G1
METHANE	91.55 PPM	[illegible]	FID	G1
Balance				

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig.

Approval Signature

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
NTRM 51808		PROPANE	SG9128303BAL	243.2 PPM
GMIS 60104		METHANE	CC146254	249.6 PPM

Analytical Results

1st Component PROPANE

1st Analysis Date: 04/29/2005

R 243.9	S 89.84	Z 0	Conc 89.58 PPM
S 89.93	Z 0	R 244.36	Conc 89.52 PPM
Z 0	R 244.6	S 89.92	Conc 89.41 PPM
			AVG: 89.50 PPM

2nd Component METHANE

1st Analysis Date: 04/29/2005

R 249.6	S 91.61	Z 0	Conc 91.61 PPM
S 91.28	Z 0	R 248.9	Conc 91.54 PPM
Z 0	R 249.5	S 91.46	Conc 91.50 PPM
			AVG: 91.55 PPM

EPA-USS-0325993

EPA-R5-2012-000596000321

Airgas

Certificate of Analysis: EPA Protocol Gas Mixture

Cylinder Number: CC105162 Reference Number: 54-124070271-1
Cylinder Pressure: 2015 PSIG Expiration Date: 7/14/2009
Certification Date: 7/14/2006 Laboratory: ASG - Chicago - IL

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
METHANE	203.8 PPM	+/- 1%	FID	G1
Air	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed.
Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig.

Signature on file

Approval Signature

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
GMIS 60104		METHANE	CC146254	249.6 PPM

Analytical Results

1st Component METHANE

1st Analysis Date: 07/14/2006

R 249.7	S 203.9	Z 0	Conc 203.8 PPM
S 203.6	Z 0	R 249.3	Conc 203.8 PPM
Z 0	R 249.2	S 203.6	Conc 203.9 PPM
			AVG: 203.833 PPM

EPA-USS-0325994

U.S. Steel – Gary Works

Indiana Department of Environmental Management

1st Quarter 2007

South Sheet Mill Hydrogen Annealing Furnaces

Contents

South Sheet Mill Hydrogen Annealing Furnaces - Natural Gas Usage Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: South Sheet Mill Hydrogen Atmosphere Batch Annealing Furnaces
Parameter: NOx
Limit: 37.2 million cubic feet of natural gas per 12 consecutive month period with compliance demonstrated at the end of each month

Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
January	0.46	7.82	8.28
February	0.58	7.36	7.94
March	0.76	7.08	7.83

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

1st Quarter 2007

Turboblower House - No. 6 Boiler

Contents

Turboblower House - No. 6 Boiler Natural Gas Usage Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U. S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No. T089-7663-00121
Facility: Turboblower Boiler House (TBBH) Boiler No. 6
Parameter: Natural Gas Usage
Limits: 1,059.7 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Quarter: 1st Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
January	0.2	420.8	421.0
February	22.6	371.6	394.2
March	53.8	346.4	400.2

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Rodney Sommerville
City of Gary
Department of Environmental Affairs
839 Broadway 2nd Floor NE
Gary, Indiana 46402

COMPLETE THIS SECTION ON DELIVERY

A. Signature: X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name): Tom Ross

C. Date of Delivery: 4-30-07

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label): 7006 0810 0006 3557 3520

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

EPA-R5-2012-0005960000321

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

David Sampias
IDEM/NW Regional Office
8315 Virginia St., Ste 1
Merrillville, Indiana 46410

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) [signature]
C. Date of Delivery 4-30-07

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

[signature]

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7006 0810 0006 3557 3513

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

EPA-USS-0326000

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Dave Cline
Indiana Department of Environmental Mgt.
Office of Air Quality
Mail Code 61-50
100 N. Senate Avenue
Indianapolis, IN 46204-2251

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Bobby Burton ☐ Agent ☐ Addressee

B. Received by (Printed Name) BOBBY BURTON
C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7006 0810 0006 3557 3506

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

United States Steel Corporation
Gary Works
One North Broadway
Gary, IN 46402-3199

July 25, 2007

Certified Mail
Return Receipt Requested

Dave Cline
Indiana Department of Environmental Management
Office of Air Quality
Mail Code 61-50
100 North Senate Avenue
Indianapolis, IN 46204-2251

Subject: **Second (2nd) Quarter 2007 Reports**
Operation Permit No. T089-7663-00121
U.S. Steel – Gary Works

Dear Mr. Cline:

As required, the following reports are enclosed and cover the reporting period of April 1, 2007 through June 30, 2007:

- Operating Permit Certification
- Quarterly Deviation and Compliance Monitoring
- No. 2 Precarbon Facility Compliance Monitoring
- Nos. 2, 5 and 7 Underfiring Stacks COMS Excess Emissions (On Diskette)
- Nos. 2, 5 and 7 Underfiring Stacks Opacity Monitor Performance Audit
- Coke Oven Battery Underfiring NG Injection Jets Natural Gas Usage Rates
- Coke Plant Boiler House Nos. 1 through 10 Boilers NG Usage Rates
- Coke Plant Boiler House Nos. 1 through 10 Boilers NOx Emissions
- Coke Plant Boiler House Nos. 9 and 10 Boilers CO Excess Emissions
- No. 3 Sinter Plant Reheat Burners Natural Gas Usage Rates
- No. 3 Sinter Plant Reheat Burners Coke Oven Gas Usage Rates
- No. 3 Sinter Plant CEMS Excess Emissions
- No. 3 Sinter Plant Cylinder Gas Audit
- South Sheet Mill Hydrogen Annealing Furnaces Natural Gas Usage
- TBBH - No. 6 Boiler Natural Gas Usage

The Turboblower Boiler House No. 4a Boiler did not operate during the 2nd quarter 2007.

The following semi-annual reports are enclosed and cover the reporting period of January 1, 2007 through June 30, 2007.

- Semi-Annual Battery NESHAP Report (40 CFR 63, Subpart L)
- Semi-Annual Byproducts NESHAP Report (40 CFR 61, Subpart L and Subpart V)
- Semi-Annual Natural Gas Fired Boiler Certification for the Coke Plant Boiler House Boiler Nos. 3 through 10
- Semi-Annual Natural Gas Fired Boiler Certification for the No. 4 Boiler House Boiler Nos. 1, 2 and 3
- Semi-Annual Natural Gas Fired Boiler Certification for the Turbo Blower Boiler House Boiler Nos. 1, 2, 3, 5 and 6

If there are any questions concerning the enclosed, please contact me at 219.888.3387.

Sincerely,

Jim Alexander
Manager, Environmental Air Compliance

cc:

Dave Sampias (w/o diskette data)
IDEM/NWRO
8315 Virginia St, Suite 1
Merrillville, Indiana 46410

Rodney Sommerville (w/o diskette data)
Environmental Affairs Department
839 Broadway, 2nd Floor NE
Gary, Indiana 46402

America's Steel Most Recycled Material

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT CERTIFICATION

Source Name:	U. S. Steel – Gary Works
Source Address:	One North Broadway, Gary, Indiana 46402
Mailing Address:	One North Broadway, Gary, Indiana 46402
Part 70 Permit No.:	T089-7663-00121
Reporting Period:	April 1, 2007 to June 30, 2007

This certification shall be included when submitting monitoring, testing report/results or other documents as required by this approval

Please check what document is being certified:

- Test Result (specify)
- X Reports (specify) Quarterly Deviation and Compliance Monitoring Report for Iron Producing
  Quarterly Deviation and Compliance Monitoring Report for Steel Producing North
  Quarterly Deviation and Compliance Monitoring Report for Steel Producing South
  Quarterly Deviation and Compliance Monitoring Report for Coke Plant
  No. 2 Precarbon Facility Compliance Monitoring
  Coke Battery Nos. 2, 5 and 7 Underfiring COMS Excess Emissions
  Coke Battery Nos. 2, 5 and 7 Underfiring Opacity Monitor Performance Audit
  Coke Battery Nos. 2, 5 and 7 Underfiring NG Injection Jets Natural Gas Usage Rates
  Semiannual Byproducts NESHAP Report (40 CFR 61, Subpart L and Subpart V)
  Semiannual Battery NESHAP Report (40 CFR 63, Subpart L)
  Coke Plant Boiler House Nos. 1 through 10 Boilers Natural Gas Usage Rates
  Coke Plant Boiler House Nos. 1 through 10 Boilers NOx Emissions
  No. 3 Sinter Plant Recirculating Burners Natural Gas Usage Rates
  No. 3 Sinter Plant Recirculating Burners Coke Oven Gas Usage Rates
  No. 3 Sinter Plant CEMS Excess Emissions
  South Sheet Mill Hydrogen Annealing Furnaces Natural Gas Usage Rates
  Turboblower Boiler House Boiler No. 6 Natural Gas Usage Rate
- Notification (specify)
- Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature: MSWilliams

Printed Name: Michael S. Williams

Title/Position: General Manager

Date: 7-23-07

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: U.S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121

Months: April 1 **to** June 30 **Year:** 2007

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☒ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
Permit Requirement (specify permit condition #):	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document is true, accurate and complete.

Form Completed By: Dale Baker

Title/Position: Division Manager, Iron Producing

Date: July 20, 2007

Phone: 219.888.4688

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: U.S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121

Months: April 1 **to** June 30 **Year:** 2007

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☒ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
Permit Requirement (specify permit condition #):	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document is true, accurate and complete.

Form Completed By: Casey C. Carrabine

Title/Position: Division Manager, Steel Producing North

Date: July 20, 2007

Phone: 219.888.4803

Attach a signed certification to complete this report.

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: U.S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121

Months: April 1 **to** June 30 **Year:** 2007

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☒ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Permit Requirement (specify permit condition #) D.8.4(b), D.8.15

Date of Deviation: 04/10/07	**Duration of Deviation:** 9 minutes

Number of Deviations: 3

Probable Cause of Deviation: Hot metal burn through hot metal transfer ladle No. 3 required a reladle from ladle No. 3 to ladle No. 1.

Response Steps Taken: Revised iron ladle visual inspection procedures and revised SOP to inspect and maintain the iron ladles on a routine basis.

Permit Requirement (specify permit condition #) D.8.4(c)

Date of Deviation: 05/18/07	**Duration of Deviation:** 6 minutes

Number of Deviations: 1

Probable Cause of Deviation: Unknown portion of the sandblast material used to blast the fan as well as some of the material removed from the fan was not recovered by the vacuum truck prior to startup.

Response Steps Taken: Developed procedure for blasting fans including additional steps to recover the blasting media and loosened material fully.

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document is true, accurate and complete.

Form Completed By: Robert H. Lange

Title/Position: Division Manager, Steel Producing South

Date: July 20, 2007

Phone: 219.888.7435

U.S. Steel – Gary Works

Indiana Department of Environmental Management

2nd Quarter 2007

Coke Plant

Contents

No. 2 Precarbon Facility Compliance Monitoring and Deviation Report
Nos. 2, 5 and 7 Underfiring Stacks COMS Excess Emissions Report (on Disk)
Nos. 2, 5 and 7 Underfiring Stacks Opacity Monitor Performance Audit

U. S. Steel - Gary Works
Coke and Chemicals Division
Precarbon COMS Waiver
Compliance Monitoring and Deviation Report

Reporting Period: 2nd Quarter 2007

#2 Precarbon

Parameter	Deviations Occurred This Reporting Period	No Deviations Occurred This Reporting Period
%CO		X
PVolts		X
PAmps		X
SVolts		X
SAmps		X
ESPress		X
VEs		X

Key	**Limit**	**Description**
%CO	<6%	Percent of CO at discharge of combustion chamber
PVolts	>300	Primary Field Voltage
Pamps	>30	Primary Field Amperage
SVolts	>300	Secondary Field Voltage
Samps	>30	Secondary Field Amperage
ESPress	≥0	ESP Static Pressure
VEs	<13%	Visible Emissions

Explanation and Corrective Actions

NA

INQUEST
ENVIRONMENTAL INC.

3609 Mojave Ct., Ste E ◆ COLUMBIA, MO 65202
(573) 474-8110 ◆ FAX: (573) 474-8371

June 12, 2007

Mr. James Alexander
USS - Gary Works
MS-70-A
1 N. Broadway
Gary, Indiana 46402-3199

RE: US Steel Coke Plant, Gary, Indiana, 2nd Quarter, 2007, Opacity Monitor Performance Audits.

Dear Mr. Alexander,

Please find enclosed the results of the performance audits that were recently conducted on the three, Teledyne Monitor Labs, Model 560, opacity monitors that are located on #'s 2, 5, & 7 battery stacks in the Gary Coke Plant.

The audits were performed on June 5th, 2007. The start time and date for each audit were as follows:

Battery Stack #2	08:00 a.m.	06/05/07
Battery Stack #5	10:49 a.m.	06/05/07
Battery Stack #7	03:30 p.m.	06/05/07

All audits were conducted in accordance with 326 IAC 3-5-5 (c)(3). Currently certified neutral density filters were used during each audit. A copy of the certification of the filters used has been enclosed.

Each audit began with the recording of the most recent, daily, automatic, zero and upscale calibration readings. Real-time opacity readings were then recorded, the optics were cleaned, and the real-time readings were taken again.

The calibration device was then attached to the transmissometer in order to simulate a clear stack zero reading. The zero reading of the instrument was then recorded.

Three NIST certified neutral density filters were then individually inserted in the calibration device. The known value of each filter and the instrument's response was recorded. The known value of each filter was adjusted according to each stack's exit correlation ratio Each filter was inserted five times with the zero reading being recorded after each pass of the filters. The sixth and final pass allowed for the PI system's (data acquisition system) six-minute averages to update with each filter before the reading was recorded.

After the filter challenges were complete, all purge air intake dust filters were cleaned. All lenses and windows in each instrument were also cleaned. The primary goal of the cleanings is to ensure that all seals are cleaned so as to protect the instrument's optics and electronics. The final steps taken consisted of checking the service data readings of each instrument. The service readings may give an indication of any potential problems with the instruments. All readings were found to be at proper levels.

Following each audit, the control panels mounted in the meter rooms were checked, and were verified to be

working properly. Parameters that were checked included the most recent automatic upscale calibration values, the most recent automatic zero readings, and the window dirt percentage levels. All were found to be within limits.

A table has been included below to summarize the results of the performance audits

Parameter	Limit	Result	Pass/Fail
Stack Exit Correlation Error	≤ 2%	#2 0.0% #5 0 0% #7 0.0%	Pass Pass Pass
Zero & Upscale Response	≤ ±2%	#2 0.0% & -0.9% #5 0.0% & 0.5% #7 0.0% & -0.8%	Pass Pass Pass
Zero Compensation	≤ 4%	#2 0.0% #5 0.0% #7 0.0%	Pass Pass Pass
Optical Alignment	Manufacturer's Recommendation	Verified correct, all instruments	Pass
Optical Surface Dust	≤ 4%	#2 0.03% #5 -0.7% #7 0.5%	Pass Pass Pass
Calibration Error	≤ 3%	#2 Low 0.2 %, Mid 0.2%, High 1.1% #5 Low 0 3%, Mid 0.7%, High 0 2% #7 Low 0.5%, Mid 0.9%, High 0.1%	Pass Pass Pass

Following the audits, Unit #2 was taken off of the stack and a clear stack, bench top calibration was conducted The unit was found to be operating normally. The unit was then cleaned and placed back on the stack and back into normal service.

Included in this report are the worksheets and calculations for each of your opacity monitor audits, the current certification for the neutral density filters used, and copies of the database trends produced during each audit

Thank you very much for choosing Inquest Environmental to participate in this project. We are very pleased to have your organization as a client. Please feel free to call with any comments or questions

Sincerely,

John A. Kunkel
Inquest Environmental, Inc.

CC: Mr. Larry Swihart, Coke Plant Systems

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation: US Steel	**Monitor ID:** #2 Battery Stack
Facility: Gary, Indiana	**Make/Model:** USI 560
Date: 6/52007	**Serial No.** 5601014
Start Time: 8:00am **Stop:** 10:25am	
Auditor: John Kunkel	**Representing:** Inquest Environmental, Inc
Attendees: Kyle Shafer	**Representing:** Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	16.75	Calculated stack exit correlation ratio (Lx / Lt)	0.846
Transmissometer single path length (ft) = Lt	19.79	Source-cited stack exit correlation ratio	0.846
		Stack exit correlation error (Limit ±2%)	0.0

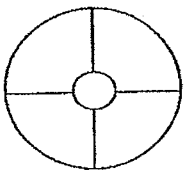
Warning Lamps:	OPACITY ALARM	Off	CAL FAIL	Off	POWER FAIL	Off
	DIRTY WINDOW	On	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto cal value (%Op)	37.3			
Panel meter upscale calibration value (%Op)	36.4	Error (%Op)	-0 9	(Limit ±2%)
Data recorder upscale cal value (%Op)	36.4	Error (%Op)	-0.9	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	1.1	Transceiver pre-cleaning effluent Opacity (%)	2.6
Retroflector post-clean effluent Opacity (%)	0.0	Transceiver post-clean effluent Opacity (%)	1.1
Retro optics dust accumulation (Limit 2% Op)	1.1	Trans Optics dust accumulation (Limit 2% Op)	1.5
Total optical dust accumulation (Limit 4% Op)	2.6		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

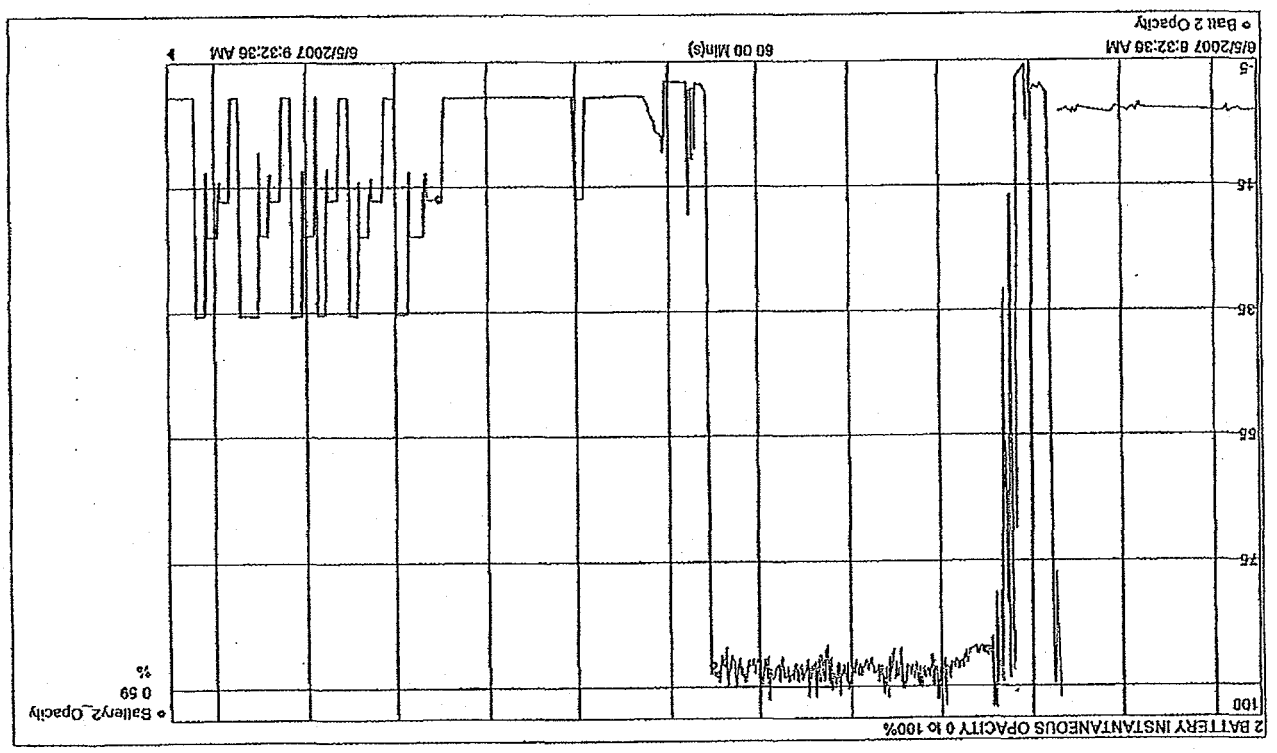
Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation

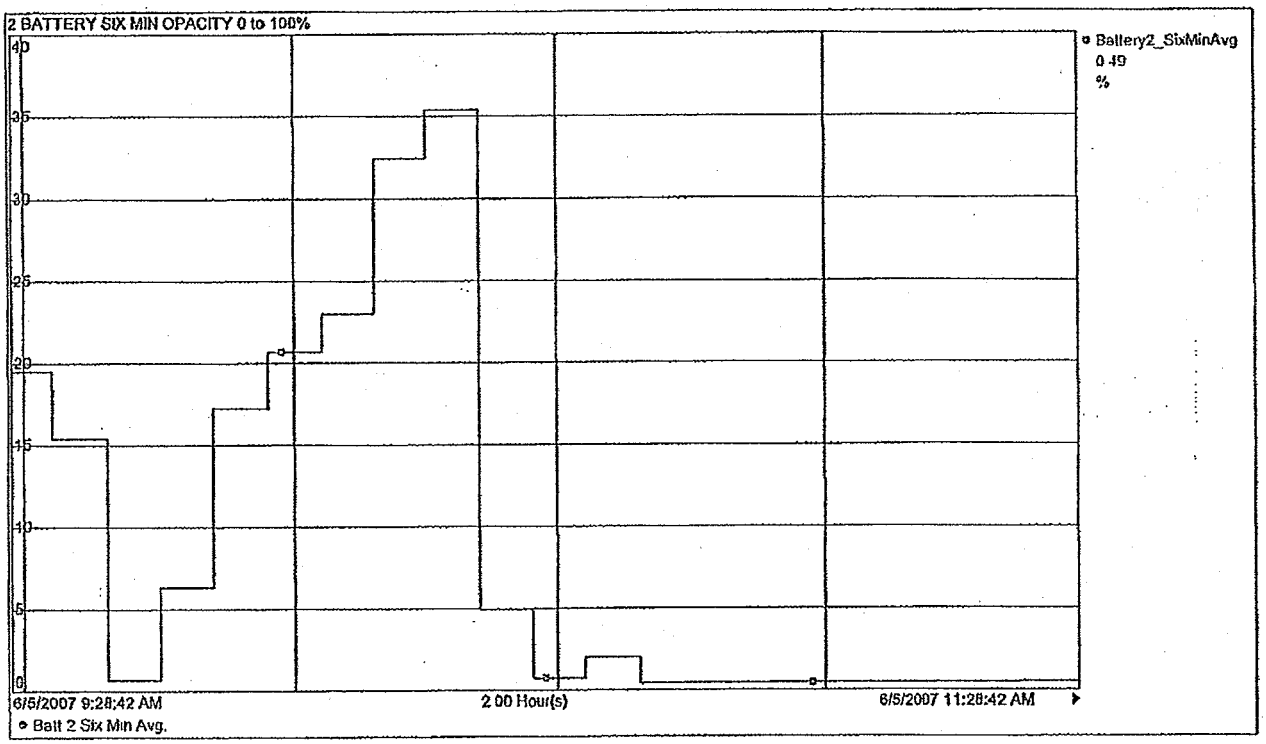
Calibration Error Check

Range	Low	Mid	High
Filter Serial No	TT43	VB55	TT44
Certified % Op	19.4	25.8	38.9
Corrected % Op	17.2	22.8	34.5

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0.5	16 9	22 9	35.4	
	0.8	17.2	22.9	35.6	
	0.7	17.0	22.7	35.5	
	0.6	17.2	22.8	35.6	Final Zero
	0.7	17.2	23.0	35.5	0.6
DAS six-minute average	0.7	17.2	23.0	35.4	0.8

Results	Low	Mid	High	
Mean error	-0.1	0 1	1.0	
Confidence interval	0.2	0.1	0 1	
Calibration error	0.2	0.2	1.1	(Limit 3%)
Six-minute averaged error	0.1	0.2	0.9	(Limit ±2%)


2 BATTERY INSTANTANEOUS OPACITY 0 to 100%
100
75
55
35
15
-5
6/5/2007 8:32:36 AM
60 00 Min(s)
6/5/2007 9:32:36 AM
Batt 2 Opacity
Battery2_Opacity
0 59
%


2 BATTERY SIX MIN OPACITY 0 to 100%
40
35
30
25
20
15
10
5
0
Battery2_SixMinAvg
0.49
%
6/5/2007 9:28:42 AM
2.00 Hour(s)
6/5/2007 11:28:42 AM
Batt 2 Six Min Avg.

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation:	US Steel	Monitor ID:	#5 Battery Stack
Facility:	Gary, Indiana	Make/Model:	USI 560
Date:	6/5/2007	Serial No.	5601011
Start Time:	10:49am Stop:12:15pm		
Auditor:	John Kunkel	Representing:	Inquest Environmental, Inc
Attendees:	Kyle Shafer	Representing:	Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	6.00	Calculated stack exit correlation ratio (Lx / Lt)	0.484
Transmissometer single path length (ft) = Lt	12.40	Source-cited stack exit correlation ratio	0 484
		Stack exit correlation error (Limit ±2%)	0 0

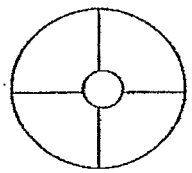
Warning Lamps:	OPACITY ALARM	Off	CAL FAIL	Off	POWER FAIL	Off
	DIRTY WINDOW	Off	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal. value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto cal value (%Op)	35.3			
Panel meter upscale calibration value (%Op)	35.8	Error (%Op)	0 5	(Limit ±2%)
Data recorder upscale cal value (%Op)	35 8	Error (%Op)	0.5	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	13.4	Transceiver pre-cleaning effluent Opacity (%)	9.6
Retroflector post-clean effluent Opacity (%)	12.0	Transceiver post-clean effluent Opacity (%)	9.2
Retro. optics dust accumulation (Limit 2% Op)	1.4	Trans Optics dust accumulation (Limit 2% Op)	0.4
Total optical dust accumulation (Limit 4% Op)	1.8		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

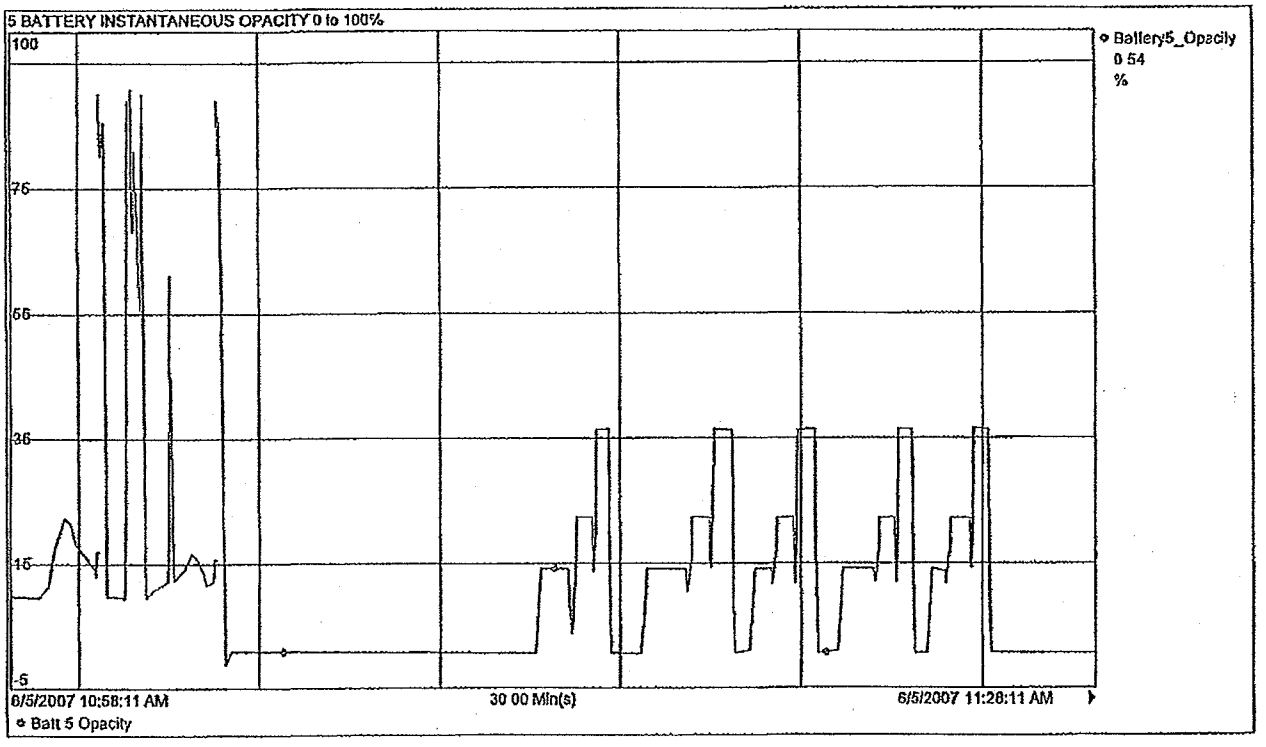
Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation

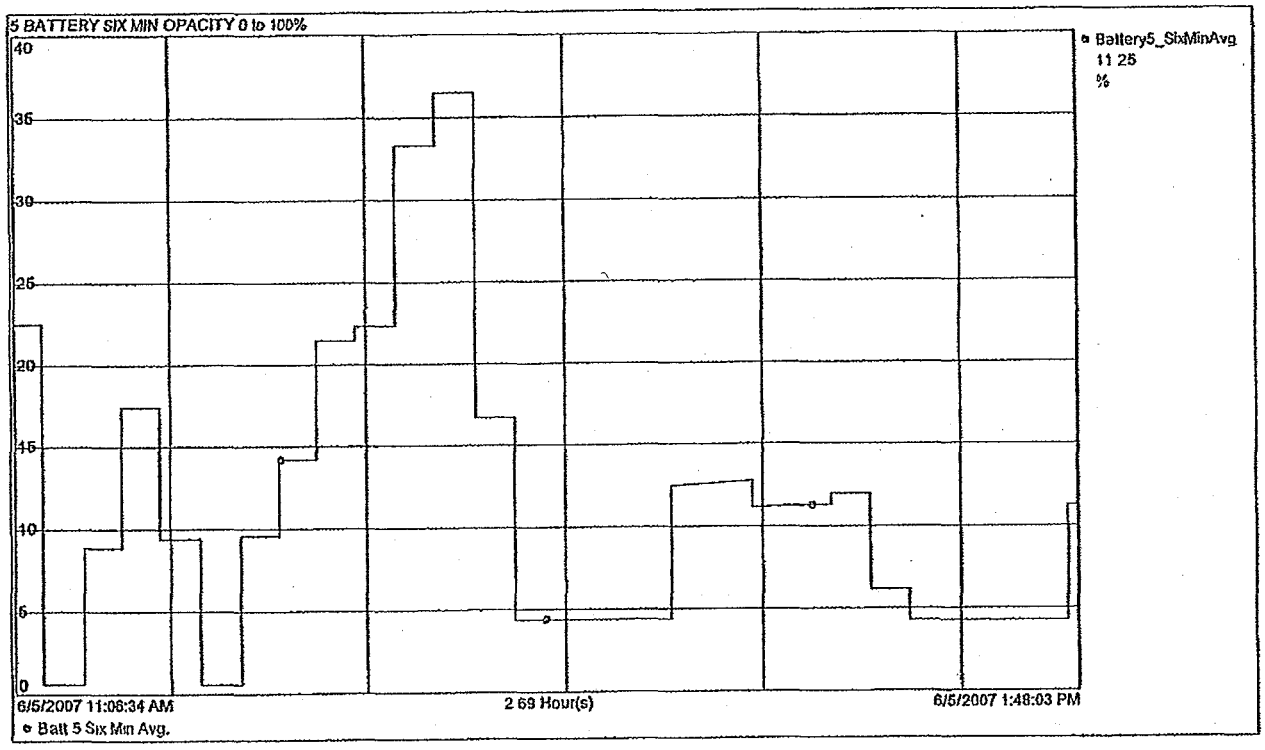
Calibration Error Check

Range	Low	Mid	High
Filter Serial No	VB55	TT44	VN87
Certified % Op	25.8	38 9	60.3
Corrected % Op	13.9	21.6	36.4

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0 9	14.2	22 4	36.4	
	0.6	14.2	22.3	36.5	
	0.6	14.1	22.3	36.3	
	0.5	14.2	22.3	36.4	Final Zero
	0 5	14.2	22.2	36.6	0.5
DAS six-minute average	0.6	14.2	22.4	36.5	0 6

Results	Low	Mid	High	
Mean error	0.2	0.7	0.0	
Confidence interval	0.0	0 1	0.1	
Calibration error	0.3	0.7	0.2	(Limit 3%)
Six-minute averaged error	0.3	0.7	0.1	(Limit ±2%)


5 BATTERY INSTANTANEOUS OPACITY 0 to 100%
100
75
55
35
15
-5
Battery5_Opacity
0 54
%
6/5/2007 10:58:11 AM
30 00 Min(s)
6/5/2007 11:28:11 AM
Batt 5 Opacity


5 BATTERY SIX MIN OPACITY 0 to 100%
40
35
30
25
20
15
10
5
0
Battery5_SixMinAvg
11 25
%
6/5/2007 11:08:34 AM
2 69 Hour(s)
6/5/2007 1:48:03 PM
Batt 5 Six Min Avg.

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation: US Steel	Monitor ID: #7 Battery Stack
Facility: Gary, Indiana	Make/Model: USI 560
Date: 6/5/2007	Serial No. 5601012
Start Time: 3:30pm Stop:4:45pm	
Auditor: John Kunkel	Representing: Inquest Environmental, Inc
Attendees: Kyle Shafer	Representing: Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	6.00	Calculated stack exit correlation ratio (Lx / Lt)	0 503
Transmissometer single path length (ft) = Lt	11 94	Source-cited stack exit correlation ratio	0 503
		Stack exit correlation error (Limit ±2%)	0.0

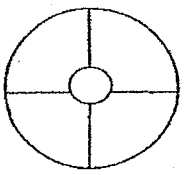
Warning Lamps:	OPACITY ALARM	Off	CAL FAIL	On	POWER FAIL	Off
	DIRTY WINDOW	Off	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.1	Error (%Op)	0.1	(Limit ±4%)
Opacity data recorder zero cal value (%Op)	0.1	Error (%Op)	0.1	(Limit ±4%)
Source-cited upscale auto. cal value (%Op)	33.6			
Panel meter upscale calibration value (%Op)	32 8	Error (%Op)	-0.8	(Limit ±2%)
Data recorder upscale cal value (%Op)	32.8	Error (%Op)	-0.8	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	12.0	Transceiver pre-cleaning effluent Opacity (%)	12.4
Retroflector post-clean effluent Opacity (%)	11.9	Transceiver post-clean effluent Opacity (%)	12.0
Retro optics dust accumulation (Limit 2% Op)	0.1	Trans Optics dust accumulation (Limit 2% Op)	0.4
Total optical dust accumulation (Limit 4% Op)	0.5		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

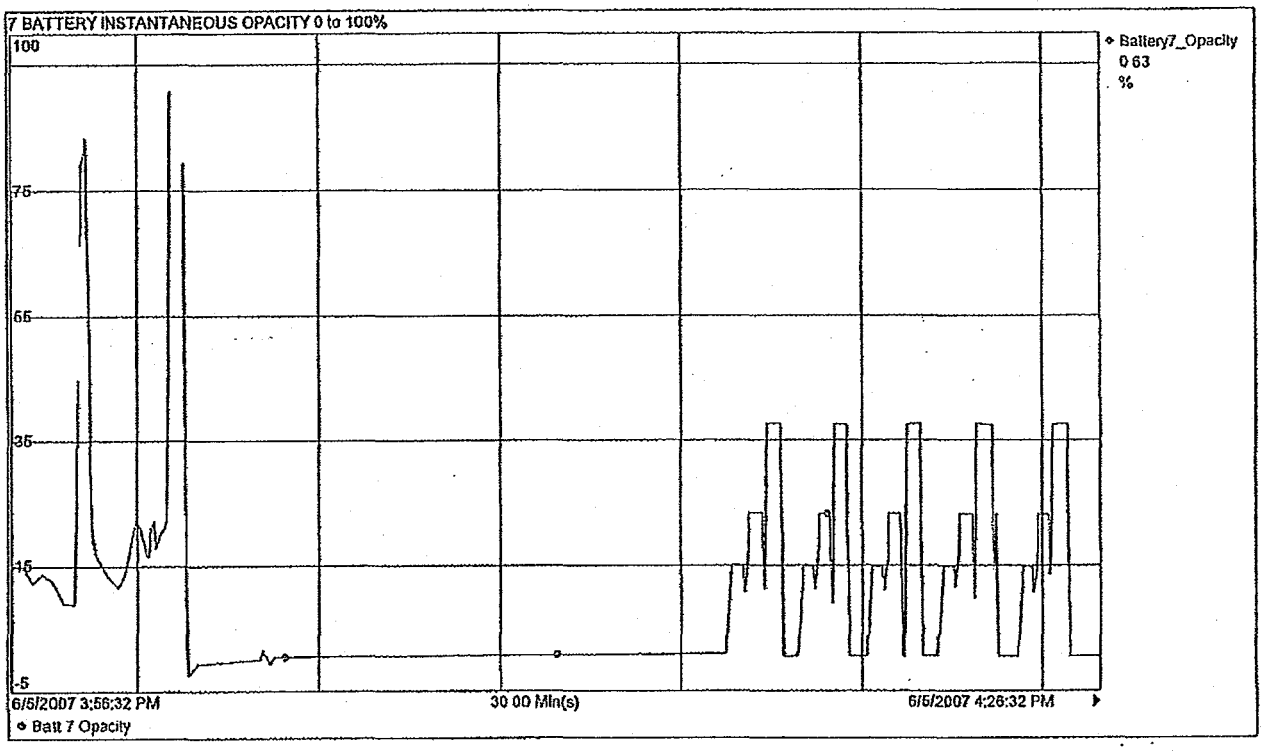
Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation

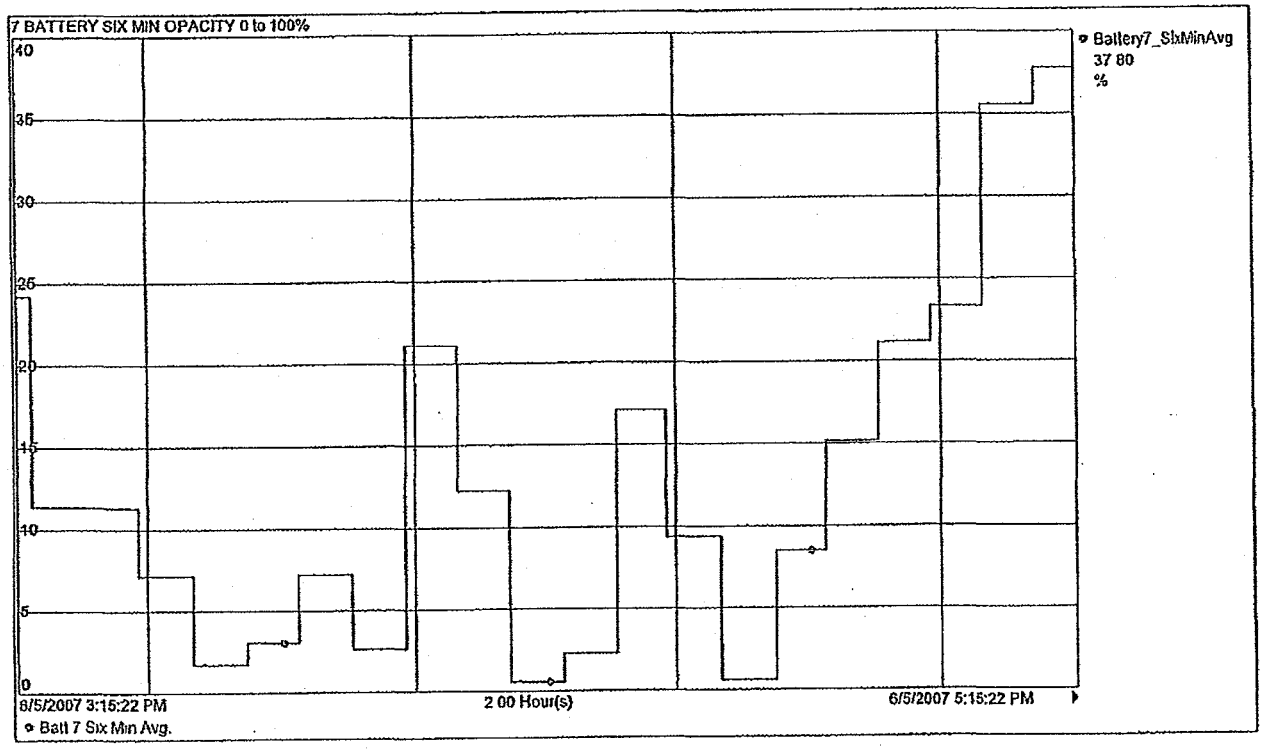
Calibration Error Check

Range	Low	Mid	High
Filter Serial No	VB55	TT44	VN87
Certified % Op	25.8	38.9	60.3
Corrected % Op	14.5	22.4	37.6

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0.6	15.0	23.4	37.6	
	0.5	15 0	23.2	37.6	
	0.5	14.8	23.3	37.6	
	0.5	14.9	23.2	37.7	Final Zero
	0.5	14.9	23.2	37.6	0.6
DAS six-minute average	0.6	15.2	23.4	37 8	0.7

Results	Low	Mid	High	
Mean error	0.4	0.8	0.0	
Confidence interval	0.1	0 1	0.1	
Calibration error	0.5	0.9	0.1	(Limit 3%)
Six-minute averaged error	0.7	0.9	0.2	(Limit ±2%)


7 BATTERY INSTANTANEOUS OPACITY 0 to 100%
100
75
55
35
15
-5
Battery7_Opacity
0 63
%
6/5/2007 3:56:32 PM
30 00 Min(s)
6/5/2007 4:26:32 PM
Batt 7 Opacity


7 BATTERY SIX MIN OPACITY 0 to 100%
40
35
30
25
20
15
10
5
0
Battery7_SixMinAvg
37 80
%
6/5/2007 3:15:22 PM
2 00 Hour(s)
6/5/2007 5:15:22 PM
Batt 7 Six Min Avg.

Inquest Environmental, Inc.
Opacity Monitor Audit

Calculations

Stack Exit Correlation Error (%) = (Cited ratio - Calculated ratio) / Calculated ratio x 100

Zero Error (% Opacity) = Measured zero value - Cited zero value

Span Error (% Opacity) = Measured span value - Cited span value

Retroflector Dust Accumulation (% Opacity) = Pre-cleaning Opacity - Post-cleaning Opacity

Transceiver Dust Accumulation (% Opacity) = Pre-cleaning Opacity - Post-cleaning Opacity

Total Dust Accumulation (% Opacity) = Retroflector accumulation + Transceiver accumulation

Corrected Filter Opacity =
[1 - (((1 - Filter value/100)^(Stack exit correlation ratio)) x (1 - Final jig zero/100))] x 100

Difference = Measured Opacity - Corrected filter Opacity

Difference^2 = (Measured Opacity - Corrected filter Opacity)^2

n = Number of readings

Mean Error (ME) = SUM(Difference) / n

Confidence Interval (CI)= SQRT[(n x SUM(Difference^2)) - SUM(Difference)^2] x 0.2776

Calibration Error (CE)= ABS(ME) + CI

Six-Minute Averaged Error = Six-minute averaged Opacity - Corrected filter Opacity

CAL CHECK

11600 Black Horse Run, Raleigh, North Carolina 27613 Phone (919) 847-1898 FAX (919) 847-8005

REPORT OF CERTIFICATION OF NEUTRAL DENSITY AUDIT FILTERS

Report prepared for: **Inquest Environmental Inc**

Date of Filter Certification: **September 29, 2006**
Date of Filter Expiration: September 28, 2007

Monitor Make/Model: **Teledyne-Monitor Labs 560**

Audit Device/Filter Slot Angle of Incidence: **10 degrees**
Path-Length Correction: 1.000 (1.000 constitutes no taper)

Table 1-1: Individual Filter Certification Data

Serial Number	Opacity Value (%)	Transmittance (%)	Optical Density	Previous Opacity (%)	Change in Opacity (%)	Accuracy (%)
TT42	8.8	91.2	0.0399			± 0.5
TT43	19.4	80.6	0.0939	18.9	0.5	± 0.5
VB55	25.8	74.2	0.129	25.4	0.4	± 0.5
TT44	38.9	61.1	0.214			± 0.5
VN87	60.3	39.7	0.402			± 0.5

- **Calibration of Spectrophotometer**

Instrument
Spectrophotometer: Varian Cary 50 Serial Number: EL0309-7553
Testing Range: 380nm to 780nm

SRM Reference Material
Calibration Filters: NIST 930D SRM Serial No's: Blank; 30-1505; 20-1505; 10-1505
Date of SRM Certification: 01-19-06 Laboratory Environment: 72 deg F +/- 4 deg F

- **Description of Certification**

Cal Check certifies filters per 40 CFR Part 60, Subpart B, "Performance Specification 1", section 7.1.2. Opacity values are determined and assigned to each filter by use of a laboratory-based spectrophotometer exceeding the specifications set forth in section 6.3 of Performance Specification 1, and certified accurate daily using National Institute of Standards and Technology (NIST) 930D Standard Reference Materials (SRM).

"Your Clear Choice for Opacity Monitor On-Stack Testing"
Visit us on the web at www.calcheck.com

U.S. Steel – Gary Works

Indiana Department of Environmental Management

2nd Quarter 2007

Coke Plant

Contents

Coke Oven Battery Underfiring Natural Gas Injection Jets NG Usage Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name:	U.S. Steel - Gary Works
Source Address:	One North Broadway Ave., Gary, Indiana 46402
Mailing Address:	One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.:	T089-7663-00121
Facility	Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002 and CPNG003)
Parameter:	Natural Gas Usage
Limit:	178.7 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
April	0.0	0.0	0.0
May	11.1	0.0	11.1
June	0.0	0.0	0.0

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by:	Anthony E. Pacilio
Title/Position:	Division Manager, Coke Operations
Phone:	219.888.4028

Attach a signed certification to complete this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

2nd Quarter 2007

Coke Plant Boiler House

Contents

Coke Plant Boiler House – Nos. 1 through 10 Boilers Natural Gas Usage Report
Coke Plant Boiler House – Nos. 1 through 10 Boilers NOx Emissions Report
Coke Plant Boiler House – Nos. 9 and 10 Boilers CO Excess Emissions Report
Coke Plant Boiler House – Nos. 3 through 10 Semi-Annual Certification

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary Indiana 46402
Mailing Address: One North Broadway, Gary Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Boilers No. 1 through No. 10 at the Coke Plant Boiler House
Parameter: Total Natural Gas Usage
Limit: Less than 2,550 million cubic feet (MMCF) per 12-consecutive month period with compliance determined at the end of each month.

Quarter: 2nd Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
April	4.5	77.8	82.3
May	10.9	77.6	88.5
June	45.4	82.1	127.5

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Kevin F. McGuire
Title/Position: Area Manager, Utilities
Phone: 219.888.2719

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary Indiana 46402
Mailing Address: One North Broadway, Gary Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Boilers No. 1 through No. 10 at the Coke Plant Boiler House
Parameter: Total NOx Emissions
Limit: Less than 64.6 tons per twelve (12) consecutive month period period with compliance determined at the end of each month

NOx Emissions (tons/month) = (280 X + 36 Y + 129 Z) / 2000
Where X=total monthly natural gas usage in Boilers Nos. 1 through 8 (MMcf/month)
Y=monthly natural gas usage rate in temporary rental bolier (MMcf/month)
Z=total monthly natural gas usage in Boilers Nos. 9 and 10 (MMcf/month)

Quarter: 2nd Year: 2007

Month	Boiler Nos. 1 through 8		Boiler Nos. 9 and 10		NOx Emissions (tons)	NOx Emissions Previous 11 Months	NOx Emissions 12-month Period
	Natural Gas Usage Rate (MMcf)	NOx Emissions (tons)	Natural Gas Usage Rate (MMcf)	NOx Emissions (tons)			
April	4.33	0.61	0.20	0.01	0.62	9.40	10.02
May	5.77	0.81	5.15	0.33	1.14	9.36	10.50
June	4.34	0.61	41.04	2.65	3.25	9.62	12.87

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Kevin F. McGuire
Title/Position: Area Manager, Utilities
Phone: 219.888.2719

Attach a signed certification to complete this report.

U.S. Steel Corporation – Gary Works
Coke Plant Boiler House No. 9 Boiler
Second (2nd) Quarter 2007 Excess Emissions Report
Part 70 Permit No. T089-7663-00121

Plant Operations Downtime Summary

Date of facility downtime:	Various times during the quarter, does not affect CEMS operation
Time of commencement and completion of downtime:	Various times during the quarter, does not affect CEMS operation
Reason(s) for the downtime:	Regularly scheduled outages and unscheduled boiler stoppages
Total facility downtime for this quarter:	Approximately 3 days

Excess Emissions Summary

Date of excess emissions:	No excess emissions this quarter
Time of commencement and completion:	
Magnitude:	
Reason(s) for excess emissions:	

CEMS Instrument Downtime Summary

Date of downtime:	No CEMS downtime during boiler operation
Time of commencement:	
Duration of downtime:	
Nature of system repairs and adjustments:	

U.S. Steel Corporation – Gary Works
Coke Plant Boiler House No. 10 Boiler
Second (2nd) Quarter 2007 Excess Emissions Report
Part 70 Permit No. T089-7663-00121

Plant Operations Downtime Summary

Date of facility downtime:	Various times during the quarter, does not affect CEMS operation
Time of commencement and completion of downtime:	Various times during the quarter, does not affect CEMS operation
Reason(s) for the downtime:	Regularly scheduled outages and unscheduled boiler stoppages
Total facility downtime for this quarter:	Approximately 14 days

Excess Emissions Summary

Date of excess emissions:	No excess emissions this quarter
Time of commencement and completion:	
Magnitude:	
Reason(s) for excess emissions:	

CEMS Instrument Downtime Summary

Date of downtime:	No CEMS downtime during boiler operation
Time of commencement:	
Duration of downtime:	
Nature of system repairs and adjustments:	

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name:	U. S. Steel – Gary Works
Source Address:	One North Broadway, Gary, Indiana 46402
Mailing Address:	One North Broadway, Gary, Indiana 46402
Source Modification No:	T089-7663-00121

Coke Plant Boiler House Nos. 3 through 10 Boilers
Natural Gas and/or Coke Oven Gas
From: January 1, 2007 To: June 30, 2007

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:	MS Williams
Printed Name:	Michael S. Williams
Title/Position:	General Manager
Date:	7-23-07

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

2nd Quarter 2007

No. 3 Sinter Plant

Contents

No. 3 Sinter Plant – Reheat Burners NG and COG Usage Report
No. 3 Sinter Plant – VOC Excess Emissions Report
No. 3 Sinter Plant – VOC CEM Cylinder Gas Audit

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility Nos. 1 and 3 Sinter Strand, Natural Gas Reheat Burners (ISB001 and ISB003)
Parameter: Natural Gas Usage
Limit: 95.5 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
April	0.000	0.084	0.084
May	0.000	0.084	0.084
June	0.000	0.084	0.084

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility Nos. 1 and 3 Sinter Strand, Recirculating Burners (ISB001 and ISB003)
Parameter: Coke Oven Gas
Limit: 1,637.4 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2007

Month	Coke Oven Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
April	16.6	162.5	179.1
May	9.7	159.7	169.4
June	7.7	153.8	161.6

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

EPA-R5-2012-0005960000321

U. S. Steel Sinter Plant CEMS - Quarterly Excess Emissions Summary

Second Quarter 2007

Date	Limit Exceeded	Emission Rate	Cause/Reason	Corrective Action

No Excess Emissions This Quarter

56.03 tons	Quarterly VOC Emissions
0	Quarterly VOC Exceedances

EPA-USS-0326036

EPA-R5-2012-0005960000321

U. S. Steel Sinter Plant CEMS - Quarterly System Downtime Summary

Second Quarter 2007

	Date	Time	Hours Lost	System Component	Cause/Reason	Corrective Action
Start	9-Apr-07	16:37	1	All	Changed Cal Cylinder	Initiated Daily Calibration
Stop	9-Apr-07	16:54				
Start	9-May-07	9:30	1	All	Changed Cal Cylinder	Initiated Daily Calibration
Stop	9-May-07	11:30				
Start	18-May-07	13:16	1	All	Changed Cal Cylinder	Initiated Daily Calibration
Stop	18-May-07	13:39				
Start	21-May-07	8:39	2	All	Failed Calibration	Initiated Daily Calibration
Stop	21-May-07	9:18				
Start	21-May-07	10:30	1	All	Problems with WTC Software	Reset the software to it's original configuration
Stop	21-May-07	10:47				Initiated Daily Calibration
Start	1-Jun-07	16:08	1	All	Manual Calibration	Initiated Daily Calibration
Stop	1-Jun-07	16:32				
Start	20-Jun-07	10:09	3	Stack 1	System rebuilt / 2Q CGA	Rebuilt and calibrated system.
Stop	20-Jun-07	12:39				Completed 2Q CGA

10.0 **Total Hours Invalid**

2110.0 **Total Hours of Operation**

100% **Total System Availability**

EPA-USS-0326037

U.S. STEEL SINTER STACK 1 CGA

CYLINDER GAS AUDIT FORM

U. S. STEEL GROUP

PLANT: Gary Works
LOCATION: Gary Indiana

PROJECT NUMBER: M076003
DATE: 6/20/2007

PERIOD ENDING: SECOND QUARTER 2007

GAS TYPE: Methane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111004-109
Response Factor: 1.2810

UNIT: #3 Sinter Plant Stack #1
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

	LOW	HIGH
CYLINDER NUMBER	CC68108	CC162211
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	5/30/2010
CERTIFIED VALUE	22.95	55.26
RUN 1	23.42	55.74
RUN 2	23.42	55.74
RUN 3	23.42	55.27
MEAN	23.42	55.58
ERROR RATE	-2.04%	0.86%

Methane Raw Data

Low	High
10.0	23.8
10.0	23.8
10.0	23.6

GAS TYPE: Propane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111004-109

UNIT: #3 Sinter Plant Stack #1
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

	LOW	HIGH
CYLINDER NUMBER	CC68108	CC162211
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	5/30/2010
CERTIFIED VALUE	24.52	56.50
RUN 1	23.50	55.00
RUN 2	23.90	56.80
RUN 3	23.70	56.70
MEAN	23.70	56.17
ERROR RATE	4.16%	-2.65%

U.S. STEEL SINTER STACK 2 CGA

CYLINDER GAS AUDIT FORM

U. S. STEEL GROUP

PLANT: Gary Works
LOCATION: Gary Indiana

PROJECT NUMBER: M076003
DATE: 6/20/2007

PERIOD ENDING: SECOND QUARTER 2007

GAS TYPE: Methane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111005-109

UNIT: #3 Sinter Plant Stack #2
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

Response Factor: 1.2980

	LOW	HIGH
CYLINDER NUMBER	CC68108	CC162211
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	5/30/2010
CERTIFIED VALUE	22.95	55.26
RUN 1	23.34	55.47
RUN 2	23.34	55.24
RUN 3	23.11	55.01
MEAN	23.27	55.24
ERROR RATE	-1.72%	0.38%

Methane Raw Data

Low	High
10.1	24.0
10.1	23.9
10.0	23.8

GAS TYPE: Propane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111005-109

UNIT: #3 Sinter Plant Stack #2
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

	LOW	HIGH
CYLINDER NUMBER	CC68108	XC031801B
TYPE CERTIFICATION	PROTOCOL ONE	CC162211
EXPIRATION DATE	9/21/2009	5/30/2010
CERTIFIED VALUE	24.52	56.50
RUN 1	23.30	55.70
RUN 2	23.40	55.70
RUN 3	23.40	55.80
MEAN	23.37	55.73
ERROR RATE	4.98%	-1.42%

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG
6/20/2007 12:14:00	17.0 C	13.9 C	2.7 C	19.9 C
6/20/2007 12:15:00	10.2 C	23.8 C	9.9 C	23.5 C
6/20/2007 12:16:00	10.1 C	23.6 C	10.1 C	23.3 C
6/20/2007 12:17:00	10.0 C	23.5 C	10.1 C	23.3 C
6/20/2007 12:18:00	10.0 C	23.3 C	10.1 C	29.1 C
6/20/2007 12:19:00	17.3 C	60.9 C	18.7 C	60.4 C
6/20/2007 12:20:00	23.8 C	55.2 C	24.0 C	55.7 C
6/20/2007 12:21:00	23.8 C	55.0 C	24.0 C	55.7 C
6/20/2007 12:22:00	23.3 C	37.9 C	22.5 C	28.6 C
6/20/2007 12:23:00	11.8 C	21.6 C	10.9 C	22.8 C
6/20/2007 12:24:00	10.1 C	23.5 C	10.1 C	23.4 C
6/20/2007 12:25:00	10.0 C	23.9 C	10.1 C	23.4 C
6/20/2007 12:26:00	10.1 C	31.2 C	10.1 C	37.2 C
6/20/2007 12:27:00	20.1 C	60.1 C	21.6 C	57.9 C
6/20/2007 12:28:00	23.8 C	56.8 C	23.9 C	55.7 C
6/20/2007 12:29:00	23.8 C	56.8 C	23.9 C	55.7 C
6/20/2007 12:30:00	23.8 C	56.7 C	23.9 C	54.6 C
6/20/2007 12:31:00	18.5 C	22.8 C	15.7 C	24.3 C
6/20/2007 12:32:00	10.1 C	23.7 C	10.1 C	23.5 C
6/20/2007 12:33:00	10.0 C	23.7 C	10.0 C	23.4 C
6/20/2007 12:34:00	10.0 C	23.4 C	9.9 C	30.5 C
6/20/2007 12:35:00	18.9 C	61.1 C	19.4 C	59.6 C
6/20/2007 12:36:00	23.7 C	56.7 C	23.8 C	55.7 C
6/20/2007 12:37:00	23.6 C	56.7 C	23.8 C	55.8 C

Airgas

Certificate of Analysis: EPA Protocol Gas Mixture

Cylinder Number:	CC68108	Reference Number:	46-124075723-1
Cylinder Pressure:	2000.6 PSIG	Expiration Date:	9/21/2009
Certification Date:	9/21/2006	Laboratory:	ASG - Cheshire - CT

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
METHANE	22.95 PPM	+/- 1%	FTIR	G1
PROPANE	24.52 PPM	+/- 1%	FTIR	G1
Air	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig.

Signature on file

Approval Signature

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
GMIS 11220	AIR	METHANE	SG9154509	24.54 PPM
NTRM 52007	NITROGEN	PROPANE	SG902367ALB	50.5 PPM

Analytical Results

1st Component — METHANE

1st Analysis Date: 09/21/2006

R 24.21	S 22.65	Z 0.016	Conc 22.95 PPM
S 22.66	Z -0.013	R 24.22	Conc 22.97 PPM
Z 0.008	R 24.21	S 22.64	Conc 22.95 PPM
			AVG: 22.957 PPM

2nd Component — PROPANE

1st Analysis Date: 09/21/2006

R 49.85	S 24.28	Z 0.111	Conc 24.54 PPM
S 24.27	Z -0.011	R 50.02	Conc 24.51 PPM
Z 0.052	R 49.87	S 24.24	Conc 24.52 PPM
			AVG: 24.523 PPM

Airgas

CERTIFICATE OF ANALYSIS
Grade of Product: EPA Protocol

Part Number:	E03AI99E15ACQN8	Reference Number:	54-124096966-1
Cylinder Number:	CC162211	Cylinder Volume:	146 Cu.Ft.
Laboratory:	ASG - Chicago - IL	Cylinder Pressure:	2015 PSIG
Analysis Date:	May 30, 2007	Valve Outlet:	590

Expiration Date: May 30, 2010

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.
Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainity
METHANE	55.00 PPM	55.26 PPM	G1	+/- 1% NIST Traceable
PROPANE	55.00 PPM	56.50 PPM	G1	+/- 1% NIST Traceable
Air	Balance			

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	20505	SG865260	246.0PPM METHANE/NITROGEN	Jul 01, 2007
NTRM	51715	SG9101987ALB	103.6PPM PROPANE/	Jul 01, 2009

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
VARIAN 3800	FID	May 18, 2007
Nicolet Nexus	FTIR	May 18, 2007

Triad Data Available Upon Request

Notes:

Signature on file

QA Approval

U.S. Steel – Gary Works

Indiana Department of Environmental Management

2nd Quarter 2007

South Sheet Mill Hydrogen Annealing Furnaces

Contents

South Sheet Mill Hydrogen Annealing Furnaces - Natural Gas Usage Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: South Sheet Mill Hydrogen Atmosphere Batch Annealing Furnaces
Parameter: NOx
Limit: 37.2 million cubic feet of natural gas per 12 consecutive month period with compliance demonstrated at the end of each month

Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
April	0.86	6.78	7.63
May	0.48	6.68	7.16
June	0.58	6.35	6.93

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

2nd Quarter 2007

Turboblower House - No. 6 Boiler

Contents

Turboblower House - No. 6 Boiler Natural Gas Usage Report
Turboblower House - Nos. 1, 2, 3, 5 and 6 Boilers
Semi-Annual Natural Gas Fired Boiler Certification

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U. S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No. T089-7663-00121
Facility: Turboblower Boiler House (TBBH) Boiler No. 6
Parameter: Natural Gas Usage
Limits: 1,059.7 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Quarter: 2nd Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
April	28.0	359.7	387.7
May	29.8	375.1	404.8
June	11.2	355.2	366.5

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name:	U. S. Steel – Gary Works
Source Address:	One North Broadway, Gary, Indiana 46402
Mailing Address:	One North Broadway, Gary, Indiana 46402
Source Modification No:	T089-7663-00121

Turbo Blower Boiler House Nos. 1, 2, 3, 5 and 6 Boilers
Natural Gas, Coke Oven Gas, Blast Furnace Gas and/or Fuel Oil
From: January 1, 2007 To: June 30, 2007

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:	MS Williams
Printed Name:	Michael S. Williams
Title/Position:	General Manager
Date:	7-23-07

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Semi-annual Report

January 1, 2007 to June 30, 2007

No. 4 Boiler House Boiler Nos. 1, 2 and 3

Contents

Semi-Annual Natural Gas Fired Boiler Certification

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name:	U. S. Steel – Gary Works
Source Address:	One North Broadway, Gary, Indiana 46402
Mailing Address:	One North Broadway, Gary, Indiana 46402
Source Modification No:	T089-7663-00121

No. 4 Boiler House Nos. 1, 2, and 3 Boilers
Natural Gas, Blast Furnace Gas and/or Fuel Oil
From: January 1, 2007 To: June 30, 2007

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:	MS Williams
Printed Name:	Michael S. Williams
Title/Position:	General Manager
Date:	7-23-07

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

Semiannual Report

January 1, 2007 to June 30, 2007

Coke Plant

Contents

Semi-Annual Battery NESHAP Report (40 CFR 63, Subpart L)
Semi-Annual Byproducts NESHAP Report (40 CFR 61, Subpart L and Subpart V)

U.S. Steel
Gary Coke Operations
Semiannual Coke Battery Compliance Certification
40 CFR 63, Subpart L

Reporting Period
January 1 – June 30
2007

Venting Incidents (40 CFR 63.311(d)(1)):

No venting incidents occurred during this reporting period.

Coke Oven Battery Startup, Shutdown, or Malfunction Events (40 CFR 63.311(d)(2)):

No. 2 Battery was shutdown on May 4, 2007 due to failure of a coal conveyor structure above the battery. The battery returned to normal operation on June 25, 2007. The shutdown and startup activities were implemented in accordance with standard operating procedures and plans.

Implementation of Work Practice Plans (40 CFR 63.311(d)(3)):

The facility was not required to implement the work practice plans during this reporting period under the requirements of 40 CFR 63.306(c).

EPA-R5-2012-0005960000321

US Steel
Gary Coke Operations Byproducts Plant
40 CFR 61, Subpart L
2007 Semiannual Report
Reporting Period: January 1 - June 30

Process Vessels, Storage Tanks, Tar-Intercepting Sumps and Light Oil Sumps (61.132 and 61.133

Number of Leaks Detected: 1
Number of Leaks Repaired: 1

Brief description of any visible defect in the source or ductwork
None beyond usual and customary routine maintenance.

Brief description of any system abnormalities found during each annual maintenance inspection that occurred in this reporting peric
None beyond usual and customary routine maintenance.

Exhausters (61.135):

Number of Exhauster Leaks Detected 0
Number of Exhauster Leaks Repaired: NA

Owner/Operator Statement:
All provisions of 40 CFR 61, Subpart L have been fulfilled during this semiannual reporting period.

EPA-USS-0326052

EPA-R5-2012-000596000321

US Steel
Gary Coke Operations Byproducts Plant
40 CFR 61, Subpart V
2007 Semiannual Report
Reporting Period: January 1 - June 30

Process Unit Identification: Light Oil Production System

Number of Valves For Which Leaks Were Detected:[1]	0
Number of Valves For Which Leaks Were Not Repaired:	NA
Number of Pumps For Which Leaks Were Detected:[1]	0
Number of Pumps For Which Leaks Were Not Repaired:	NA
Number of Compressors For Which Leaks Were Detected:[1]	0
Number of Compressors For Which Leaks Were Not Repaired:	NA

Explain any delay of repairs and, if applicable, why a process unit shutdown was technically infeasible:

None, this reporting period.

Dates of any light oil production system shutdowns (which stops production of light oil)

None, this reporting period.

Results of any NDE performance testing conducted on PRVs in gas/vapor service (after release):[1]

None, this reporting period.

(1 - NDE means no detectable emissions as determined by instrument monitoring at levels 500 ppm)

Owner/Operator Statement:
All provisions of 40 CFR 61, Subpart V have been fulfilled during this semiannual reporting period.

EPA-USS-0326053

EPA-R5-2012-0005960000321

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Dave Cline
Indiana Department of Environmental Mgt.
Office of Air Quality
Mail Code 61-50
100 N. Senate Avenue
Indianapolis, IN 46204-2251

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☐ Agent
☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7006 0810 0006 3555 0316

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

EPA-USS-0326054

7006 0810 0006 3555 0309

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com®

OFFICIAL USE

Postage	$	$1.65
Certified Fee		$2.65
Return Receipt Fee (Endorsement Required)		$2.15
Restricted Delivery Fee (Endorsement Required)		$0.00
Total Postage & Fees	$	$6.45

Postmark Here

GARY, IN 46401 MAIN OFFICE USPS JUL 2007

07/26/2007

Sent To David Sampias
Street, Apt. No. or PO Box No. IDEM/NW Regional Office
City, State, ZIP 8315 Virginia St., Ste 1
Merrillville, Indiana 46410

PS Form 3800

7006 0810 0006 3555 0293

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com®

OFFICIAL USE

Postage	$	$1.65
Certified Fee		$2.65
Return Receipt Fee (Endorsement Required)		$2.15
Restricted Delivery Fee (Endorsement Required)		$0.00
Total Postage & Fees	$	$6.45

Postmark Here

GARY, IN 46401 MAIN OFFICE USPS JUL 2007

07/26/2007

Sent To Rodney Sommerville
City of Gary
Street, Apt. No.; or PO Box No. Department of Environmental Affairs
City, State, ZIP+4 839 Broadway 2nd Floor NE
Gary, Indiana 46402

PS Form 3800

7006 0810 0006 3555 0316

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com®

OFFICIAL USE

Postage	$	$2.50
Certified Fee		$2.65
Return Receipt Fee (Endorsement Required)		$2.15
Restricted Delivery Fee (Endorsement Required)		$0.00
Total Postag	$	$7.30

Postmark Here

GARY, IN 46401 MAIN OFFICE USPS JUL 2007

07/26/2007

Sent To Mr. Dave Cline
Indiana Department of Environmental Mgt.
Office of Air Quality
Street, Apt. No. or PO Box No. Mail Code 61-50
City, State, ZIP 100 N. Senate Avenue
Indianapolis, IN 46204-2251

PS Form 3800

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Rodney Sommerville
City of Gary
Department of Environmental Affairs
839 Broadway 2nd Floor NE
Gary, Indiana 46402

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Irma Doss ☐ Agent ☐ Addressee

B. Received by (Printed Name) IRMA DOSS
C. Date of Delivery 7-27-07

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7006 0810 0006 3555 0293

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

David Sampias
IDEM/NW Regional Office
8315 Virginia St., Ste 1
Merrillville, Indiana 46410

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Janice Melton ☐ Agent ☐ Addressee

B. Received by (Printed Name) JANICE MELTON
C. Date of Delivery 7-27-07

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7006 0810 0006 3555 0309

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

United States Steel Corporation
Gary Works
One North Broadway
Gary, IN 46402-3199

October 26, 2007

Certified Mail
Return Receipt Requested

Dave Cline
Indiana Department of Environmental Management
Office of Air Quality
Mail Code 61-50
100 North Senate Avenue
Indianapolis, IN 46204-2251

Subject: Third (3rd) Quarter 2007 Reports
Operation Permit No. T089-7663-00121
U.S. Steel – Gary Works

Dear Mr. Cline:

As required, the following reports are enclosed and cover the reporting period of July 1, 2007 through September 30, 2007:

- Operating Permit Certification
- Quarterly Deviation and Compliance Monitoring
- No. 2 Precarbon Facility Compliance Monitoring
- Nos. 2, 5 and 7 Underfiring Stacks COMS Excess Emissions (On Diskette)
- Nos. 2, 5 and 7 Underfiring Stacks Opacity Monitor Performance Audit
- Coke Oven Battery Underfiring NG Injection Jets Natural Gas Usage Rates
- Coke Plant Boiler House Nos. 1 through 10 Boilers NG Usage Rates
- Coke Plant Boiler House Nos. 1 through 10 Boilers NOx Emissions
- Coke Plant Boiler House Nos. 9 and 10 Boilers CO Excess Emissions
- No. 3 Sinter Plant Reheat Burners Natural Gas Usage Rates
- No. 3 Sinter Plant Reheat Burners Coke Oven Gas Usage Rates
- No. 3 Sinter Plant CEMS Excess Emissions
- No. 3 Sinter Plant RATA Report
- South Sheet Mill Hydrogen Annealing Furnaces Natural Gas Usage
- TBBH No. 6 Boiler Natural Gas Usage

The Turboblower Boiler House No. 4a Boiler did not operate during the 3rd quarter 2007.

If there are any questions concerning the enclosed, please contact me at 219.888.3387.

Sincerely,

Jim Alexander
Manager, Environmental Air Compliance

cc:

Dave Sampias (via email)
IDEM/NWRO
8315 Virginia St, Suite 1
Merrillville, Indiana 46410

Rodney Sommerville (w/o diskette data)
Environmental Affairs Department
839 Broadway, 2nd Floor NE
Gary, Indiana 46402

America's Steel Most Recycled Material

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT CERTIFICATION

Source Name:	U. S. Steel – Gary Works
Source Address:	One North Broadway, Gary, Indiana 46402
Mailing Address:	One North Broadway, Gary, Indiana 46402
Part 70 Permit No.:	T089-7663-00121
Reporting Period:	July 1, 2007 to September 30, 2007

This certification shall be included when submitting monitoring, testing report/results or other documents as required by this approval.

Please check what document is being certified:

- Test Result (specify)
- X Reports (specify) Quarterly Deviation and Compliance Monitoring Report for Iron Producing
  Quarterly Deviation and Compliance Monitoring Report for Steel Producing North
  Quarterly Deviation and Compliance Monitoring Report for Steel Producing South
  Quarterly Deviation and Compliance Monitoring Report for Coke Plant
  No. 2 Precarbon Facility Compliance Monitoring
  Coke Battery Nos. 2, 5 and 7 Opacity Exceedances
  Coke Battery Nos. 2, 5 and 7 Underfiring NG Injection Jets Natural Gas Usage Rates
  Coke Battery Nos. 2, 5 and 7 Underfiring COMS Excess Emissions
  Coke Battery Nos. 2, 5 and 7 Underfiring Opacity Monitor Performance Audit
  Coke Plant Boiler House Nos. 1 through 10 Boilers Natural Gas Usage Rates
  Coke Plant Boiler House Nos. 1 through 10 Boilers NOx Emissions
  No. 3 Sinter Plant Recirculating Burners Natural Gas Usage Rates
  No. 3 Sinter Plant Recirculating Burners Coke Oven Gas Usage Rates
  No. 3 Sinter Plant CEMS Excess Emissions
  South Sheet Mill Hydrogen Annealing Furnaces Natural Gas Usage Rates
  Turboblower Boiler House Boiler No. 6 Natural Gas Usage Rate
- Notification (specify)
- Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature: MS Williams

Printed Name: Michael S. Williams

Title/Position: General Manager

Date: 10-30-07

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: U.S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121

Months: July 1 **to** September 30 **Year:** 2007

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☒ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Permit Requirement (specify permit condition #) C.1(a), D.7.16

Date of Deviation: 08/21/2007	**Duration of Deviation:** 6 minutes

Number of Deviations: 1

Probable Cause of Deviation: Tap hole started to blow unexpectedly while iron was casting into first ladle. The crew began to close the tap and there was insufficient time to turn on the natural gas flame suppression.

Response Steps Taken: Review natural gas flame suppression procedure with casthouse crews.

Permit Requirement (specify permit condition #) C.5(a)(12)

Date of Deviation: 08/28/07	**Duration of Deviation:** 3 minute

Number of Deviations: 1

Probable Cause of Deviation: The furnace was in the process of coming off curtailment. While the coal injection system was stabilizing some of the coal was not burned in the raceway and traveled through the furnace past the worn bell seal.

Response Steps Taken: Reduce coal injection rate and then remove coal injection and replace with oil.

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document is true, accurate and complete.

Form Completed By: Gary Levanduski

Title/Position: Division Manager, Iron Producing

Date: October 19, 2007

Phone: 219.888.4688

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: U.S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121

Months: July 1 **to** September 30 **Year:** 2007

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☒ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
Permit Requirement (specify permit condition #):	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document is true, accurate and complete.

Form Completed By: Casey C. Carrabine

Title/Position: Division Manager, Steel Producing North

Date: October 19, 2007

Phone: 219.888.4803

Attach a signed certification to complete this report.

US Steel-Gary Works
Gary, Indiana
Permit Reviewer: Gail McGarrity

T089-7663-00121

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: U.S. Steel – Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121

Months: July 1 **to** September 30 **Year:** 2007

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☒ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
Permit Requirement (specify permit condition #):	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document is true, accurate and complete.

Form Completed By: Robert H. Lange

Title/Position: Division Manager, Steel Producing South

Date: October 19, 2007

Phone: 219.888.7435

Attach a signed certification to complete this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

3rd Quarter 2007

Coke Plant

Contents

No. 2 Precarbon Facility Compliance Monitoring and Deviation Report
Nos. 2, 5 and 7 Underfiring Stacks COMS Excess Emissions Report (on Disk)
Nos. 2, 5 and 7 Underfiring Stacks Opacity Monitor Performance Audit

U. S. Steel - Gary Works
Coke and Chemicals Division
Precarbon COMS Waiver
Compliance Monitoring and Deviation Report

Reporting Period: 3rd Quarter 2007

#2 Precarbon

Parameter	Deviations Occurred This Reporting Period	No Deviations Occurred This Reporting Period
%CO		X
PVolts		X
PAmps		X
SVolts		X
SAmps		X
ESPress		X
VEs		X

Key	**Limit**	**Description**
%CO	<6%	Percent of CO at discharge of combustion chamber
PVolts	>300	Primary Field Voltage
Pamps	>30	Primary Field Amperage
SVolts	>300	Secondary Field Voltage
Samps	>30	Secondary Field Amperage
ESPress	≥0	ESP Static Pressure
VEs	<13%	Visible Emissions

Explanation and Corrective Actions

NA

INQUEST
ENVIRONMENTAL INC.

3609 Mojave Ct., Ste E ◆ COLUMBIA, MO 65202
(573) 474-8110 ◆ FAX: (573) 474-8371

September 21, 2007

Mr. James Alexander
USS - Gary Works
MS-70-A
1 N. Broadway
Gary, Indiana 46402-3199

RE: US Steel Coke Plant, Gary, Indiana, 3rd Quarter, 2007, Opacity Monitor Performance Audits.

Dear Mr. Alexander,

Please find enclosed the results of the performance audits that were recently conducted on the three, Teledyne Monitor Labs, Model 560, opacity monitors that are located on #'s 2, 5, & 7 battery stacks in the Gary Coke Plant.

The audits were performed on August 28th, 2007. The start time and date for each audit were as follows:

Battery Stack #2	08:00 a.m.	08/28/07
Battery Stack #5	11:00 a.m.	08/28/07
Battery Stack #7	01:40 p.m.	08/28/07

All audits were conducted in accordance with 326 IAC 3-5-5 (c)(3). Currently certified neutral density filters were used during each audit. A copy of the certification of the filters used has been enclosed.

Each audit began with the recording of the most recent, daily, automatic, zero and upscale calibration readings. Real-time opacity readings were then recorded, the optics were cleaned, and the real-time readings were taken again.

The calibration device was then attached to the transmissometer in order to simulate a clear stack zero reading. The zero reading of the instrument was then recorded.

Three NIST certified neutral density filters were then individually inserted in the calibration device. The known value of each filter and the instrument's response was recorded. The known value of each filter was adjusted according to each stack's exit correlation ratio. Each filter was inserted five times with the zero reading being recorded after each pass of the filters. The sixth and final pass allowed for the PI system's (data acquisition system) six-minute averages to update with each filter before the reading was recorded.

After the filter challenges were complete, all purge air intake dust filters were cleaned. All lenses and windows in each instrument were also cleaned. The primary goal of the cleanings is to ensure that all seals are cleaned so as to protect the instrument's optics and electronics. The final steps taken consisted of checking the service data readings of each instrument. The service readings may give an indication of any potential problems with the instruments. All readings were found to be at proper levels.

Following each audit, the control panels mounted in the meter rooms were checked, and were verified to be

working properly. Parameters that were checked included the most recent automatic upscale calibration values, the most recent automatic zero readings, and the window dirt percentage levels. All were found to be within limits.

A table has been included below to summarize the results of the performance audits.

Parameter	Limit	Result	Pass/Fail
Stack Exit Correlation Error	≤ 2%	#2 0.0% #5 0.0% #7 0.0%	Pass Pass Pass
Zero & Upscale Response	≤ ±2%	#2 0.0% & -1.4% #5 0.0% & 0.5% #7 0.0% & -1.7%	Pass Pass Pass
Zero Compensation	≤ 4%	#2 0.0% #5 0.0% #7 0.0%	Pass Pass Pass
Optical Alignment	Manufacturer's Recommendation	Verified correct, all instruments	Pass
Optical Surface Dust	≤ 4%	#2 2.34% #5 -0.04% #7 1.88%	Pass Pass Pass
Calibration Error	≤ 3%	#2 Low 0.2 %, Mid 0.6%, High 0.8% #5 Low 0.6%, Mid 0.6%, High 0.3% #7 Low 1.5%, Mid 1.3%, High 1.0%	Pass Pass Pass

Following the audits, Unit #7 was taken off of the stack and sent to the factory for a check-out. During the recent winter months, #7 had failed an automatic daily calibration check for no apparent reason and it was felt that a factory check-out of the unit was in order. The spare unit was set-up and went through a bench top calibration, placed on stack #7 and put through the monitor certification process. The certification report for this monitor has been issued under a different cover.

Included in this report are the worksheets and calculations for each of the opacity monitor audits, the current certification for the neutral density filters used, and copies of the database trends produced during each audit.

Thank you very much for choosing Inquest Environmental to participate in this project. We are very pleased to have your organization as a client. Please feel free to call with any comments or questions.

Sincerely,

John A. Kunkel
Inquest Environmental, Inc.

CC: Mr. Larry Swihart, Coke Plant Systems

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation:	US Steel	Monitor ID:	#2 Battery Stack
Facility:	Gary, Indiana	Make/Model:	USI 560
Date:	8/28/2007	Serial No.	5601014
Start Time:	8:00am Stop:10:25am		
Auditor:	John Kunkel	Representing:	Inquest Environmental, Inc.
Attendees:	Chris Perkins	Representing:	Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	16.75	Calculated stack exit correlation ratio (Lx / Lt)	0.846
Transmissometer single path length (ft) = Lt	19.79	Source-cited stack exit correlation ratio	0.846
		Stack exit correlation error (Limit ±2%)	0.0

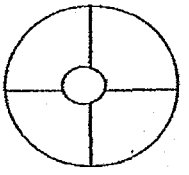
Warning Lamps	OPACITY ALARM	Off	CAL FAIL	Off	POWER FAIL	Off
	DIRTY WINDOW	On	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal. value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal. value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto. cal. value (%Op)	37.3			
Panel meter upscale calibration value (%Op)	35.9	Error (%Op)	-1.4	(Limit ±2%)
Data recorder upscale cal. value (%Op)	35.9	Error (%Op)	-1.4	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	0.6	Transceiver pre-cleaning effluent Opacity (%)	0.8
Retroflector post-clean effluent Opacity (%)	0.3	Transceiver post-clean effluent Opacity (%)	0.6
Retro. optics dust accumulation (Limit 2% Op)	0.3	Trans. Optics dust accumulation (Limit 2% Op)	0.2
Total optical dust accumulation (Limit 4% Op)	0.5		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation.

Calibration Error Check

Range	Low	Mid	High
Filter Serial No.	TT43	VB55	TT44
Certified % Op	19.4	25.8	38.9
Corrected % Op	16.9	22.6	34.3

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0.3	17.0	23.0	34.9	
	0.4	16.7	23.1	34.7	
	0.4	17.0	23.0	34.7	
	0.6	17.0	23.1	35.1	Final Zero
	0.3	17.0	23.1	35.0	0.3
DAS six-minute average	0.3	17.0	23.1	34.9	0.5

Results	Low	Mid	High	
Mean error	0.0	0.5	0.6	
Confidence interval	0.2	0.1	0.2	
Calibration error	0.2	0.6	0.8	(Limit 3%)
Six-minute averaged error	0.1	0.5	0.6	(Limit ±2%)

Inquest Environmental, Inc.
Opacity Monitor Audit

Calculations

Stack Exit Correlation Error (%) = (Cited ratio - Calculated ratio) / Calculated ratio x 100

Zero Error (% Opacity) = Measured zero value - Cited zero value

Span Error (% Opacity) = Measured span value - Cited span value

Retroflector Dust Accumulation (% Opacity) = Pre-cleaning Opacity - Post-cleaning Opacity

Transceiver Dust Accumulation (% Opacity) = Pre-cleaning Opacity - Post-cleaning Opacity

Total Dust Accumulation (% Opacity) = Retroflector accumulation + Transceiver accumulation

Corrected Filter Opacity =
[1 - (((1 - Filter value/100)^(Stack exit correlation ratio)) x (1 - Final jig zero/100))] x 100

Difference = Measured Opacity - Corrected filter Opacity

Difference^2 = (Measured Opacity - Corrected filter Opacity)^2

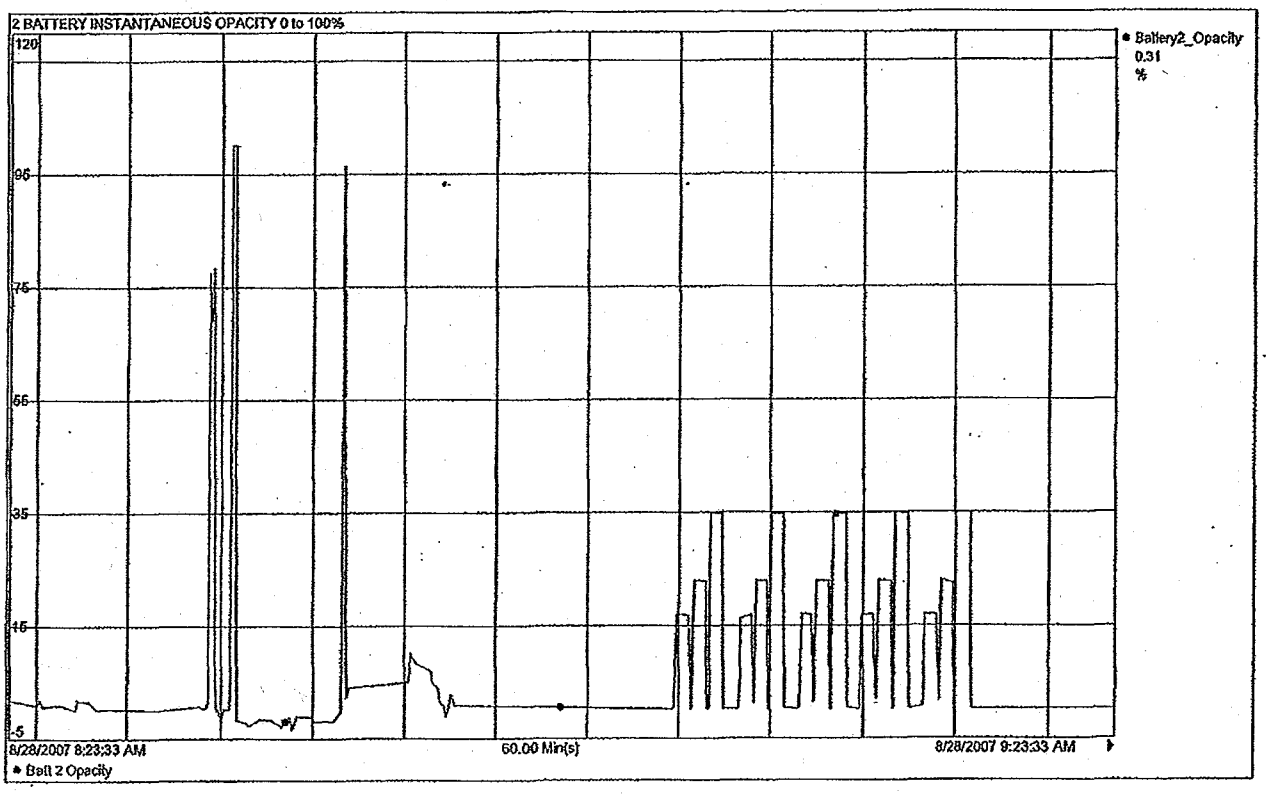
n = Number of readings

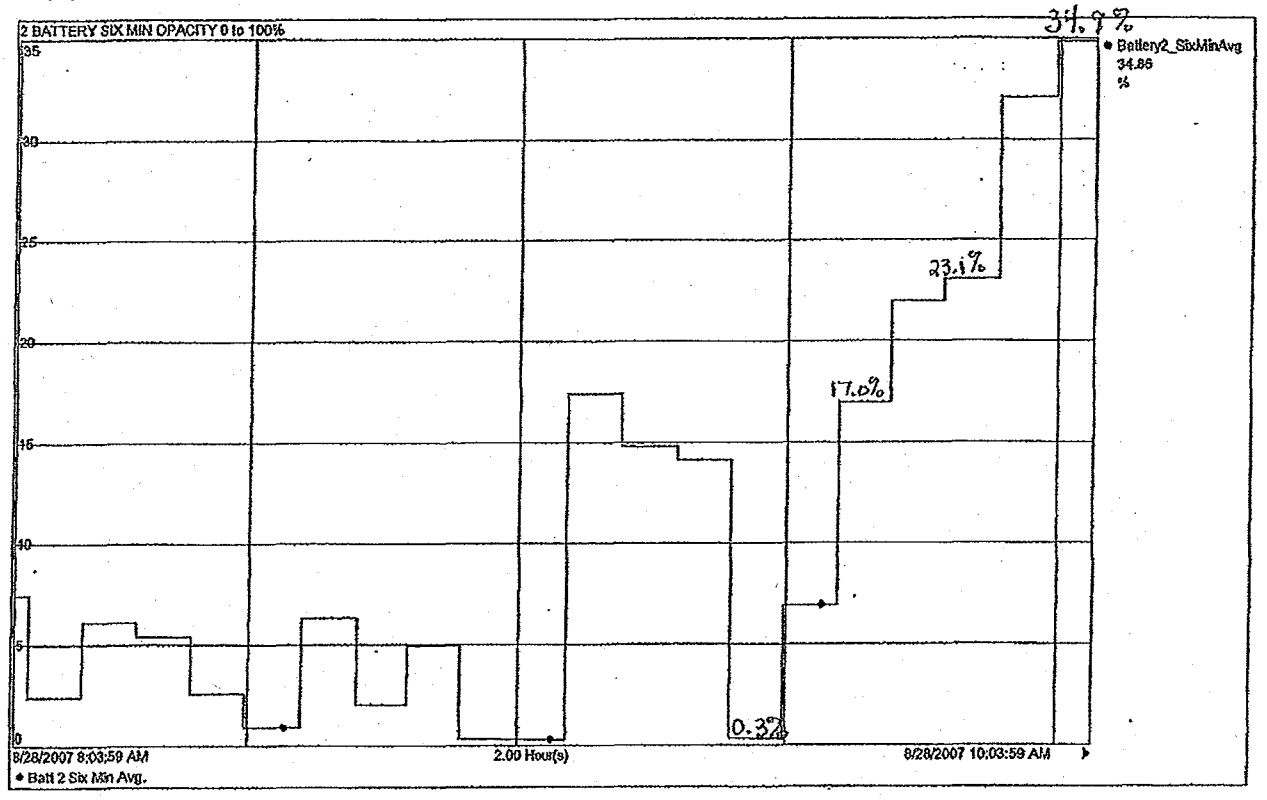
Mean Error (ME) = SUM(Difference) / n

Confidence Interval (CI)= SQRT[(n x SUM(Difference^2)) - SUM(Difference)^2] x 0.2776

Calibration Error (CE)= ABS(ME) + CI

Six-Minute Averaged Error = Six-minute averaged Opacity - Corrected filter Opacity


2 BATTERY INSTANTANEOUS OPACITY 0 to 100%
120
95
75
55
35
15
-5
8/28/2007 8:23:33 AM
60.00 Min(s)
8/28/2007 9:23:33 AM
Battery2_Opacity
0.31
%
Batt 2 Opacity


2 BATTERY SIX MIN OPACITY 0 to 100%
35
30
25
20
15
10
5
0
34.9%
23.1%
17.6%
0.3%
Battery2_SixMinAvg
34.86
%
8/28/2007 8:03:59 AM
2.00 Hour(s)
8/28/2007 10:03:59 AM
Batt 2 Six Min Avg.

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation:	US Steel	Monitor ID:	#5 Battery Stack
Facility:	Gary, Indiana	Make/Model:	USI 560
Date:	8/28/2007	Serial No.	5601011
Start Time:	11:00am Stop:12:15pm		
Auditor:	John Kunkel	Representing:	Inquest Environmental, Inc.
Attendees:	Chris Perkins	Representing:	Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	6.00	Calculated stack exit correlation ratio (Lx / Lt)	0.484
Transmissometer single path length (ft) = Lt	12.40	Source-cited stack exit correlation ratio	0.484
		Stack exit correlation error (Limit ±2%)	0.0

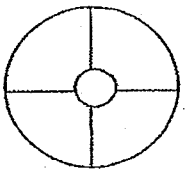
Warning Lamps	OPACITY ALARM	Off	CAL FAIL	Off	POWER FAIL	Off
	DIRTY WINDOW	Off	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal. value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal. value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto. cal. value (%Op)	35.3			
Panel meter upscale calibration value (%Op)	35.8	Error (%Op)	0.5	(Limit ±2%)
Data recorder upscale cal. value (%Op)	35.8	Error (%Op)	0.5	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	3.8	Transceiver pre-cleaning effluent Opacity (%)	4.0
Retroflector post-clean effluent Opacity (%)	3.7	Transceiver post-clean effluent Opacity (%)	3.8
Retro. optics dust accumulation (Limit 2% Op)	0.1	Trans. Optics dust accumulation (Limit 2% Op)	0.2
Total optical dust accumulation (Limit 4% Op)	0.3		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

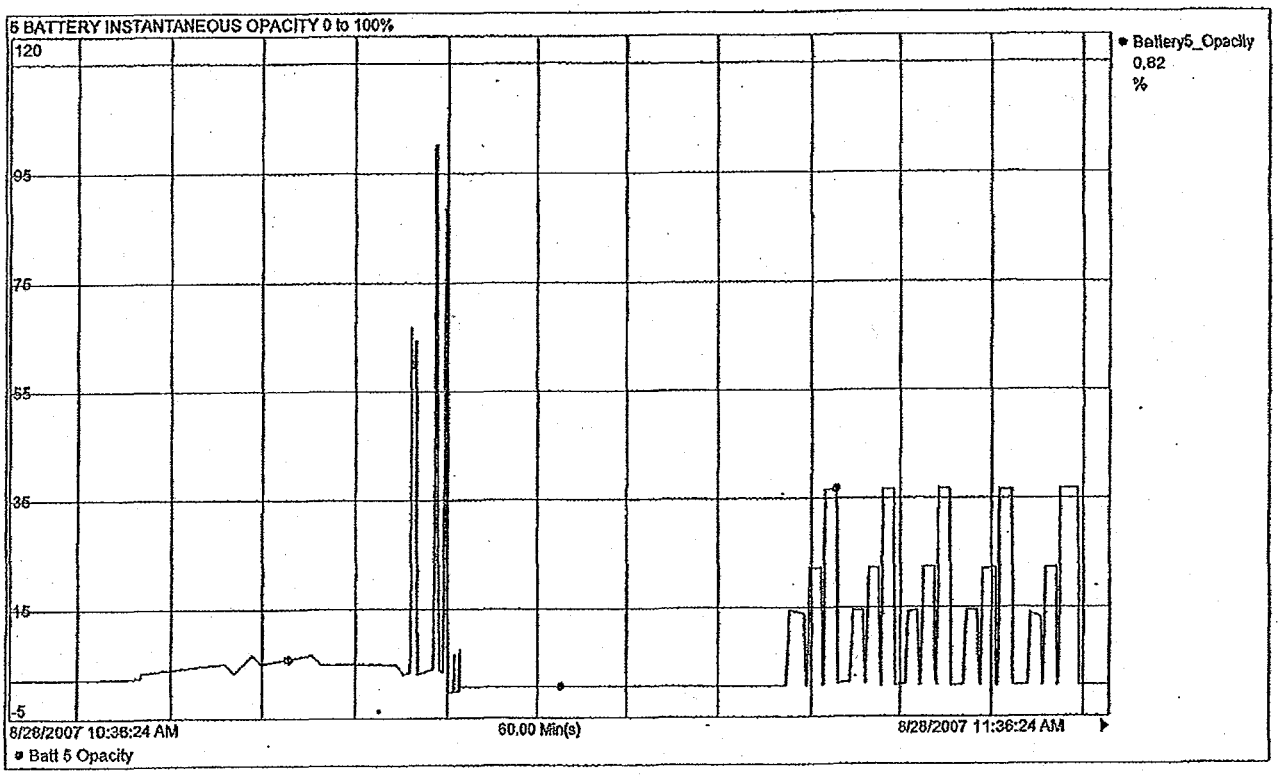
Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation.

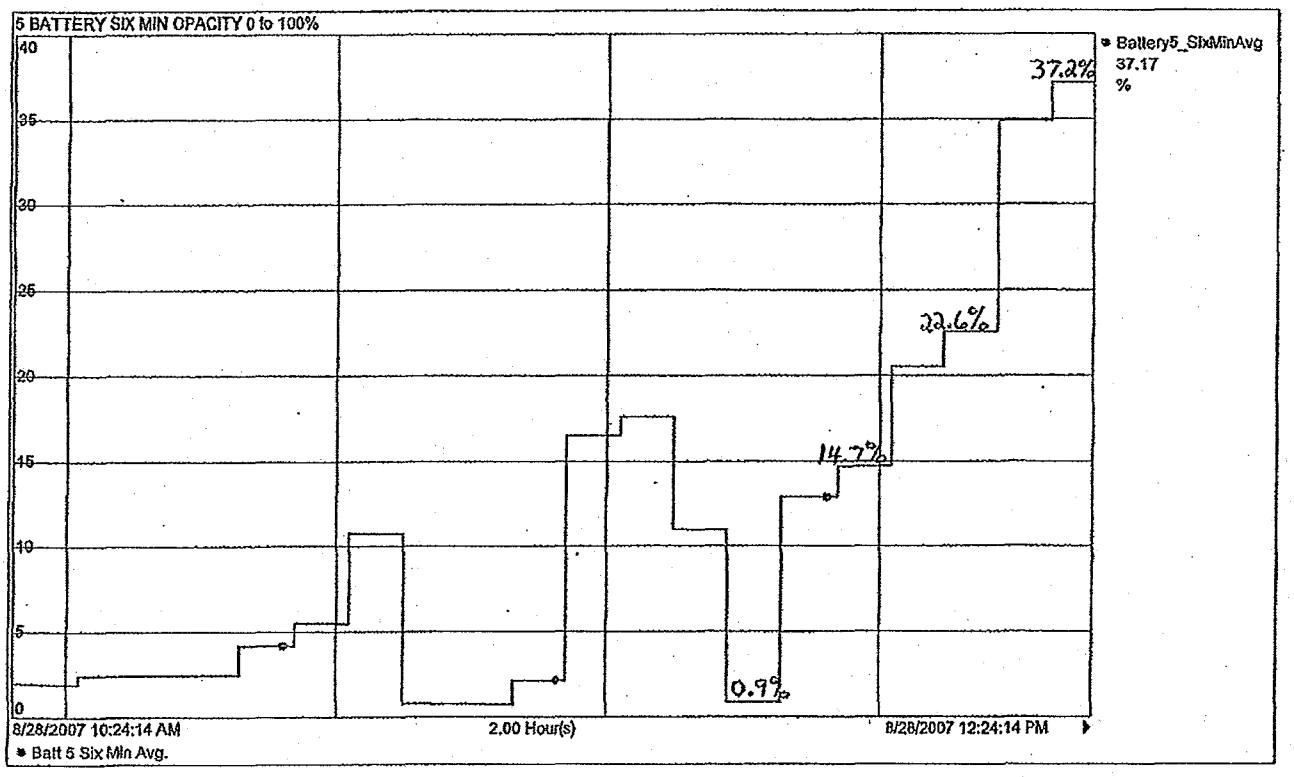
Calibration Error Check

Range	Low	Mid	High
Filter Serial No.	VB55	TT44	VN87
Certified % Op	25.8	38.9	60.3
Corrected % Op	14.2	21.9	36.6

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0.7	14.6	22.3	36.6	
	0.8	14.6	22.3	36.8	
	0.9	14.3	22.4	36.9	
	0.8	14.6	22.1	36.6	Final Zero
	0.8	13.9	22.3	36.7	0.8
DAS six-minute average	0.9	14.7	22.6	37.2	1.0

Results	Low	Mid	High	
Mean error	0.2	0.4	0.2	
Confidence Interval	0.4	0.1	0.1	
Calibration error	0.6	0.6	0.3	(Limit 3%)
Six-minute averaged error	0.6	0.7	0.6	(Limit ±2%)


5 BATTERY INSTANTANEOUS OPACITY 0 to 100%
120
95
75
55
35
15
-5
8/28/2007 10:36:24 AM
60.00 Min(s)
8/28/2007 11:36:24 AM
Batt 5 Opacity
Battery5_Opacity
0.82
%


5 BATTERY SIX MIN OPACITY 0 to 100%
40
35
30
25
20
15
10
5
0
37.2%
22.6%
14.7%
0.9%
Battery5_SixMinAvg
37.17
%
8/28/2007 10:24:14 AM
2.00 Hour(s)
8/28/2007 12:24:14 PM
Batt 5 Six Min Avg.

Inquest Environmental, Inc.
Opacity Monitor Performance Audit

Corporation:	US Steel	Monitor ID:	#7 Battery Stack
Facility:	Gary, Indiana	Make/Model:	USI 560
Date:	8/28/2007	Serial No.	5601012
Start Time:	1:40pm Stop:3:30pm		
Auditor:	John Kunkel	Representing:	Inquest Environmental, Inc.
Attendees:	Chris Perkins	Representing:	Inquest Environmental, Inc.

Stack exit inside diameter (ft) = Lx	6.00	Calculated stack exit correlation ratio (Lx / Lt)	0.503
Transmissometer single path length (ft) = Lt	11.94	Source-cited stack exit correlation ratio	0.503
		Stack exit correlation error (Limit ±2%)	0.0

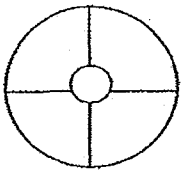
Warning Lamps						
	OPACITY ALARM	Off	CAL FAIL	On	POWER FAIL	Off
	DIRTY WINDOW	Off	PURGE FAIL	Off	LAMP FAIL	Off

Source-cited zero automatic cal. value (%Op)	0.0			
Panel meter zero calibration value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Opacity data recorder zero cal. value (%Op)	0.0	Error (%Op)	0.0	(Limit ±4%)
Source-cited upscale auto. cal. value (%Op)	33.6			
Panel meter upscale calibration value (%Op)	31.9	Error (%Op)	-1.7	(Limit ±2%)
Data recorder upscale cal. value (%Op)	31.9	Error (%Op)	-1.7	(Limit ±2%)

Retroflector pre-cleaning effluent Opacity (%)	5.2	Transceiver pre-cleaning effluent Opacity (%)	6.3
Retroflector post-clean effluent Opacity (%)	4.0	Transceiver post-clean effluent Opacity (%)	5.2
Retro. optics dust accumulation (Limit 2% Op)	1.2	Trans. Optics dust accumulation (Limit 2% Op)	1.1
Total optical dust accumulation (Limit 4% Op)	2.3		

Is Alignment correct? Yes

Draw Image:



Clear Stack Opacity (Limit ±1%) n/a (stack in use)

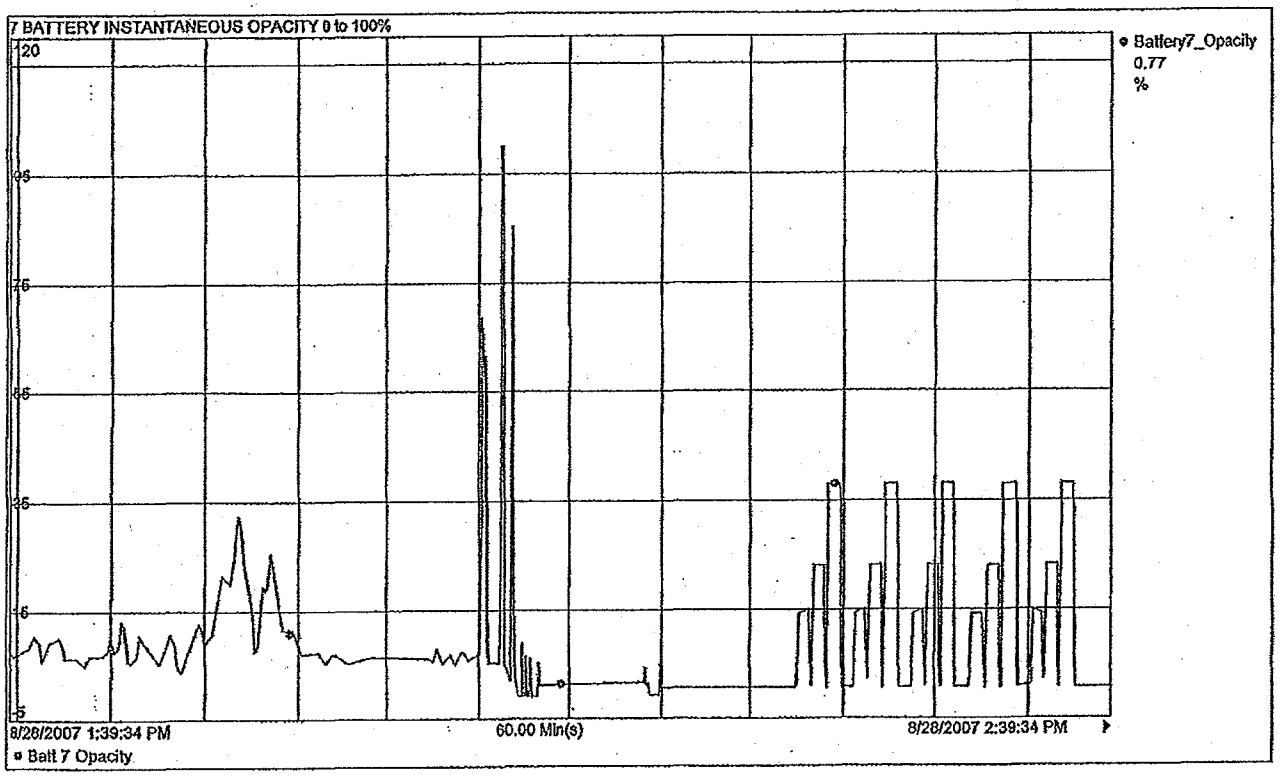
Comments: Clear stack zero was simulated using the calibration device due to continuous coke oven operation.

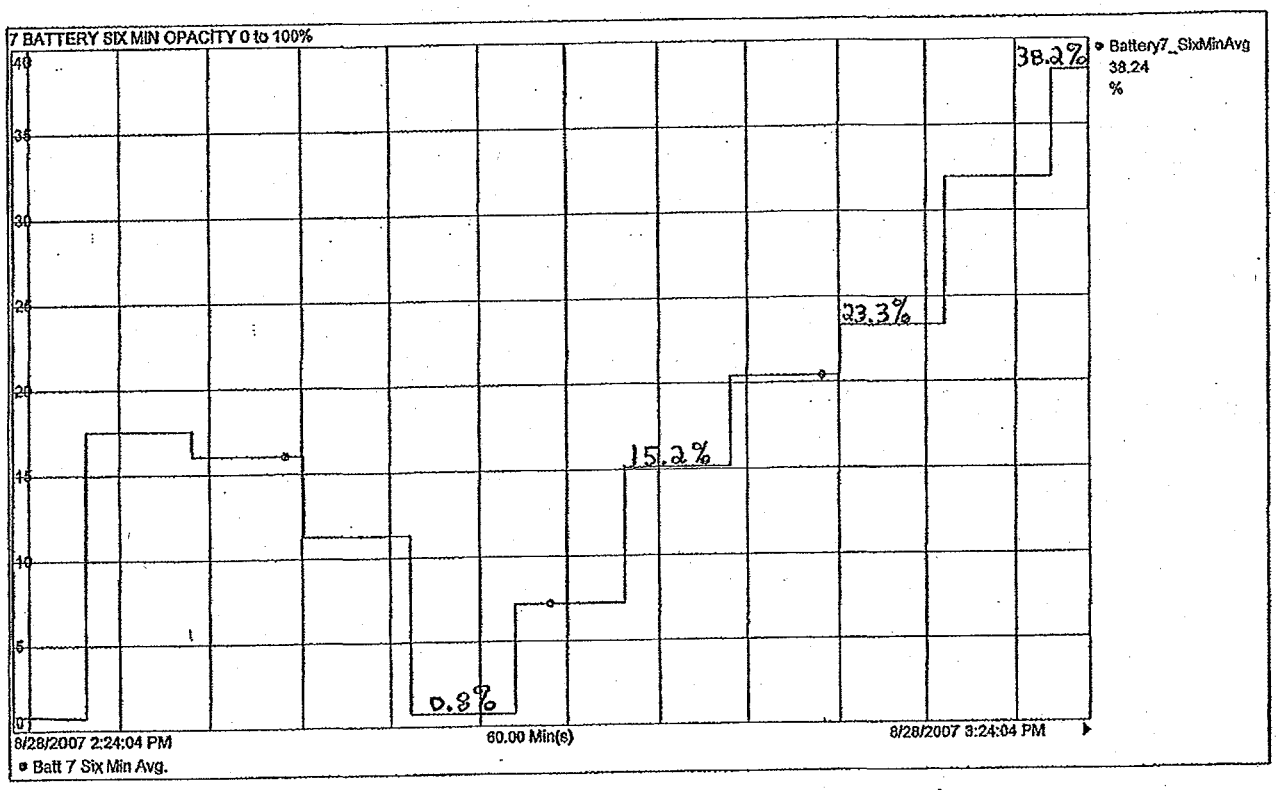
Calibration Error Check

Range	Low	Mid	High
Filter Serial No.	VB55	TT44	VN87
Certified % Op	25.8	38.9	60.3
Corrected % Op	13.9	21.9	37.2

Attenuator:	Zero	Low	Mid	High	
DAS readings:	0.8	15.1	23.1	38.0	
	0.8	15.2	23.2	38.0	
	0.8	15.1	23.2	38.2	
	0.8	14.3	23.1	38.0	Final Zero
	0.8	15.1	23.3	38.1	0.0
DAS six-minute average	0.8	15.2	23.3	38.2	0.9

Results	Low	Mid	High	
Mean error	1.0	1.2	0.9	
Confidence interval	0.5	0.1	0.1	
Calibration error	1.5	1.3	1.0	(Limit 3%)
Six-minute averaged error	1.2	1.4	1.1	(Limit ±2%)


7 BATTERY INSTANTANEOUS OPACITY 0 to 100%
20
15
10
5
0
8/28/2007 1:39:34 PM
60.00 Min(s)
8/28/2007 2:39:34 PM
Batt 7 Opacity
Battery7_Opacity
0.77
%


7 BATTERY SIX MIN OPACITY 0 to 100%
40
35
30
25
20
15
10
5
0
38.2%
23.3%
15.2%
0.8%
Battery7_SixMinAvg
38.24
%
8/28/2007 2:24:04 PM
60.00 Min(s)
8/28/2007 3:24:04 PM
Batt 7 Six Min Avg.

CAL CHECK

11600 Black Horse Run, Raleigh, North Carolina 27613 Phone (919) 847-1898 FAX (919) 847-8005

REPORT OF CERTIFICATION OF NEUTRAL DENSITY AUDIT FILTERS

Report prepared for: Inquest Environmental Inc

Date of Filter Certification: September 29, 2006
Date of Filter Expiration: September 28, 2007

Monitor Make/Model: Teledyne-Monitor Labs 560

Audit Device/Filter Slot Angle of Incidence: 10 degrees
Path-Length Correction: 1.000 (1.000 constitutes no taper)

Table 1-1: Individual Filter Certification Data

Serial Number	Opacity Value (%)	Transmittance (%)	Optical Density	Previous Opacity (%)	Change in Opacity (%)	Accuracy (%)
TT42	8.8	91.2	0.0399			± 0.5
TT43	19.4	80.6	0.0939	18.9	0.5	± 0.5
VB55	25.8	74.2	0.129	25.4	0.4	± 0.5
TT44	38.9	61.1	0.214			± 0.5
VN87	60.3	39.7	0.402			± 0.5

- **Calibration of Spectrophotometer**

Instrument
Spectrophotometer: Varian Cary 50 Serial Number: EL0309-7553
Testing Range: 380nm to 780nm

SRM Reference Material
Calibration Filters: NIST 930D SRM Serial No's: Blank; 30-1505; 20-1505; 10-1505
Date of SRM Certification: 01-19-06 Laboratory Environment: 72 deg F +/- 4 deg F

- **Description of Certification**

Cal Check certifies filters per 40 CFR Part 60, Subpart B, "Performance Specification 1", section 7.1.2. Opacity values are determined and assigned to each filter by use of a laboratory-based spectrophotometer exceeding the specifications set forth in section 6.3 of Performance Specification 1, and certified accurate daily using National Institute of Standards and Technology (NIST) 930D Standard Reference Materials (SRM).

"Your Clear Choice for Opacity Monitor On-Stack Testing"
Visit us on the web at www.calcheck.com

U.S. Steel – Gary Works

Indiana Department of Environmental Management

3rd Quarter 2007

Coke Plant

Contents

Coke Oven Battery Underfiring Natural Gas Injection Jets NG Usage Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Coke Oven Battery Natural Gas Injection Jets (CPNG001, CPNG002 and CPNG003)
Parameter: Natural Gas Usage
Limit: 178.7 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
July	0.0	15.0	15.0
August	0.0	15.0	15.0
September	2.1	12.4	14.5

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Anthony E. Pacilio
Title/Position: Division Manager, Coke Operations
Phone: 219.888.4028

Attach a signed certification to complete this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

3rd Quarter 2007

Coke Plant Boiler House

Contents

Coke Plant Boiler House – Nos. 1 through 10 Boilers Natural Gas Usage Report
Coke Plant Boiler House – Nos. 1 through 10 Boilers NOx Emissions Report
Coke Plant Boiler House – Nos. 9 and 10 Boilers CO Excess Emissions Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary Indiana 46402
Mailing Address: One North Broadway, Gary Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Boilers No. 1 through No. 10 at the Coke Plant Boiler House
Parameter: Total Natural Gas Usage
Limit: Less than 2,550 million cubic feet (MMCF) per 12-consecutive month period with compliance determined at the end of each month.

Quarter: 3rd Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
July	5.0	124.6	129.5
August	4.7	124.4	129.0
September	28.1	121.6	149.6

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Kevin F. McGuire
Title/Position: Area Manager, Utilities
Phone: 219.888.2719

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway, Gary Indiana 46402
Mailing Address: One North Broadway, Gary Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Boilers No. 1 through No. 10 at the Coke Plant Boiler House
Parameter: Total NOx Emissions
Limit: Less than 64.6 tons per twelve (12) consecutive month period period with compliance determined at the end of each month

NOx Emissions (tons/month) = (280 X + 36 Y + 129 Z) / 2000
Where X=total monthly natural gas usage in Boilers Nos. 1 through 8 (MMcf/month)
Y=monthly natural gas usage rate in temporary rental bolier (MMcf/month)
Z=total monthly natural gas usage in Boilers Nos. 9 and 10 (MMcf/month)

Quarter: 3rd Year: 2007

Month	Boiler Nos. 1 through 8		Boiler Nos. 9 and 10		NOx Emissions (tons)	NOx Emissions Previous 11 Months	NOx Emissions 12-month Period
	Natural Gas Usage Rate (MMcf)	NOx Emissions (tons)	Natural Gas Usage Rate (MMcf)	NOx Emissions (tons)			
July	4.61	0.65	0.35	0.02	0.67	12.49	13.16
August	4.53	0.63	0.12	0.01	0.64	12.50	13.14
September	26.45	3.70	1.61	0.10	3.81	12.31	16.12

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Kevin F. McGuire
Title/Position: Area Manager, Utilities
Phone: 219.888.2719

Attach a signed certification to complete this report.

U.S. Steel Corporation – Gary Works
Coke Plant Boiler House No. 9 Boiler
Third (3rd) Quarter 2007 Excess Emissions Report
Part 70 Permit No. T089-7663-00121

Plant Operations Downtime Summary

Date of facility downtime:	Various times during the quarter, does not affect CEMS operation
Time of commencement and completion of downtime:	Various times during the quarter, does not affect CEMS operation
Reason(s) for the downtime:	Regularly scheduled outages and unscheduled boiler stoppages
Total facility downtime for this quarter:	Approximately 4 days

Excess Emissions Summary

Date of excess emissions:	No excess emissions this quarter
Time of commencement and completion:	
Magnitude:	
Reason(s) for excess emissions:	

CEMS Instrument Downtime Summary

Date of downtime:	No CEMS downtime during boiler operation
Time of commencement:	
Duration of downtime:	
Nature of system repairs and adjustments:	

U.S. Steel Corporation – Gary Works
Coke Plant Boiler House No. 10 Boiler
Third (3rd) Quarter 2007 Excess Emissions Report
Part 70 Permit No. T089-7663-00121

Plant Operations Downtime Summary

Date of facility downtime:	Various times during the quarter, does not affect CEMS operation
Time of commencement and completion of downtime:	Various times during the quarter, does not affect CEMS operation
Reason(s) for the downtime:	Regularly scheduled outages and unscheduled boiler stoppages
Total facility downtime for this quarter:	Approximately 9 days

Excess Emissions Summary

Date of excess emissions:	No excess emissions this quarter
Time of commencement and completion:	
Magnitude:	
Reason(s) for excess emissions:	

CEMS Instrument Downtime Summary

Date of downtime:	No CEMS downtime during boiler operation
Time of commencement:	
Duration of downtime:	
Nature of system repairs and adjustments:	

U.S. Steel – Gary Works

Indiana Department of Environmental Management

3rd Quarter 2007

No. 3 Sinter Plant

Contents

No. 3 Sinter Plant – Reheat Burners NG and COG Usage Report
No. 3 Sinter Plant – VOC Excess Emissions Report
No. 3 Sinter Plant – VOC CEM Cylinder Gas Audit

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Nos. 1 and 3 Sinter Strand, Natural Gas Reheat Burners (ISB001 and ISB003)
Parameter: Natural Gas Usage
Limit: 95.5 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
July	0.0	0.0	0.0
August	0.0	0.0	0.0
September	0.0	0.0	0.0

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility: Nos. 1 and 3 Sinter Strand, Recirculating Burners (ISB001 and ISB003)
Parameter: Coke Oven Gas Usage
Limit: 1,637.4 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Year: 2007

Month	Coke Oven Gas Usage (MMCF)		
	This Month (A)	Previous 11-Month Period (B)	12-Month Period (A+B)
July	4.0	139.2	143.1
August	3.4	129.3	132.8
September	8.9	124.4	133.3

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

EPA-R5-2012-0005960000321

U. S. Steel Sinter Plant CEMS - Quarterly Excess Emissions Summary

Third Quarter 2007

Date	Limit Exceeded	Emission Rate	Cause/Reason	Corrective Action

No Excess Emissions This Quarter

53.13 tons	Quarterly VOC Emissions
0	Quarterly VOC Exceedances

EPA-USS-0326090

U.S. STEEL SINTER STACK 1 CGA

CYLINDER GAS AUDIT FORM

U. S. STEEL GROUP

PLANT: Gary Works
LOCATION: Gary Indiana

PROJECT NUMBER: M076003
DATE: 9/6/2007

PERIOD ENDING: THIRD QUARTER 2007

GAS TYPE: Methane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111004-109
Response Factor: 1.2810

UNIT: #3 Sinter Plant Stack #1
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

	LOW	HIGH
CYLINDER NUMBER	CC68108	CC162211
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	5/30/2010
CERTIFIED VALUE	22.95	55.26
RUN 1	22.95	54.57
RUN 2	22.72	54.10
RUN 3	22.95	53.86
MEAN	23.42	55.58
ERROR RATE	-2.04%	0.86%

Methane Raw Data

Low	High
9.8	23.3
9.7	23.1
9.8	23.0

GAS TYPE: Propane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111004-109

UNIT: #3 Sinter Plant Stack #1
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

	LOW	HIGH
CYLINDER NUMBER	CC68108	CC162211
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	5/30/2010
CERTIFIED VALUE	24.52	56.50
RUN 1	23.90	56.60
RUN 2	23.50	56.30
RUN 3	23.60	56.00
MEAN	23.70	56.17
ERROR RATE	4.16%	-2.65%

U.S. STEEL SINTER STACK 2 CGA

CYLINDER GAS AUDIT FORM

U. S. STEEL GROUP

PLANT: Gary Works
LOCATION: Gary Indiana

PROJECT NUMBER: M076003
DATE: 9/6/2007

PERIOD ENDING: THIRD QUARTER 2007

GAS TYPE: Methane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111005-109
Response Factor: 1.2980

UNIT: #3 Sinter Plant Stack #2
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

	LOW	HIGH
CYLINDER NUMBER	CC68108	CC162211
TYPE CERTIFICATION	PROTOCOL ONE	PROTOCOL ONE
EXPIRATION DATE	9/21/2009	5/30/2010
CERTIFIED VALUE	22.95	55.26
RUN 1	22.88	54.55
RUN 2	23.34	55.24
RUN 3	21.03	55.24
MEAN	23.27	55.24
ERROR RATE	-1.72%	0.38%

Methane Raw Data

Low	High
9.9	23.6
10.1	23.9
9.1	23.9

GAS TYPE: Propane
MANUFACTURE: J.U.M.
SERIAL NUMBER: 98111005-109

UNIT: #3 Sinter Plant Stack #2
MODEL NUMBER: 109A
FULL SCALE VALUE: 100 ppm

	LOW	HIGH
CYLINDER NUMBER	CC68108	PROTOCOL ONE
TYPE CERTIFICATION	PROTOCOL ONE	CC162211
EXPIRATION DATE	9/21/2009	5/30/2010
CERTIFIED VALUE	24.52	56.50
RUN 1	23.80	56.30
RUN 2	23.60	56.00
RUN 3	23.70	55.90
MEAN	23.37	55.73
ERROR RATE	4.98%	-1.42%

Date/Time	CH4 STACK 1 1 MIN PPMC3 AVG	NMHC STACK 1 1 MIN PPMC3 AVG	CH4 STACK 2 1 MIN PPMC3 AVG	NMHC STACK 2 1 MIN PPMC3 AVG
9/6/2007 12:44:00	14.7 C	24.9 C	4.1 C	25.7 C
9/6/2007 12:45:00	14.1 C	19.9 C	11.0 C	22.7 C
9/6/2007 12:46:00	9.8 C	24.0 C	9.9 C	23.8 C
9/6/2007 12:47:00	9.8 C	23.9 C	9.9 C	23.7 C
9/6/2007 12:48:00	9.8 C	22.6 C	9.9 C	18.4 C
9/6/2007 12:49:00	14.7 C	49.1 C	14.7 C	58.1 C
9/6/2007 12:50:00	23.1 C	56.6 C	23.5 C	56.3 C
9/6/2007 12:51:00	23.3 C	56.6 C	23.5 C	56.2 C
9/6/2007 12:52:00	23.3 C	56.4 C	23.6 C	56.3 C
9/6/2007 12:53:00	22.7 C	41.1 C	21.5 C	36.0 C
9/6/2007 12:54:00	13.7 C	19.9 C	11.2 C	22.6 C
9/6/2007 12:55:00	9.8 C	23.6 C	10.1 C	23.6 C
9/6/2007 12:56:00	9.7 C	23.5 C	10.1 C	23.6 C
9/6/2007 12:57:00	9.7 C	23.5 C	10.2 C	22.3 C
9/6/2007 12:58:00	13.4 C	42.5 C	13.5 C	53.4 C
9/6/2007 12:59:00	22.6 C	56.2 C	24.0 C	55.7 C
9/6/2007 13:00:00	23.0 C	56.1 C	24.1 C	55.7 C
9/6/2007 13:01:00	23.0 C	56.2 C	23.9 C	56.0 C
9/6/2007 13:02:00	23.1 C	56.3 C	24.9 C	56.1 C
9/6/2007 13:03:00	20.6 C	18.8 C	19.0 C	20.5 C
9/6/2007 13:04:00	9.1 C	24.4 C	10.6 C	23.3 C
9/6/2007 13:05:00	9.8 C	23.6 C	10.0 C	23.7 C
9/6/2007 13:06:00	9.8 C	23.6 C	8.5 C	15.9 C
9/6/2007 13:07:00	9.8 C	23.6 C	9.1 C	21.4 C
9/6/2007 13:08:00	9.8 C	22.3 C	9.6 C	18.9 C
9/6/2007 13:09:00	16.8 C	54.5 C	16.9 C	62.6 C
9/6/2007 13:10:00	23.0 C	56.0 C	23.6 C	56.0 C
9/6/2007 13:11:00	23.0 C	56.0 C	23.8 C	55.8 C
9/6/2007 13:12:00	23.0 C	56.0 C	23.9 C	55.9 C
9/6/2007 13:13:00	22.7 C	50.4 C	21.1 C	49.6 C

Airgas.

Certificate of Analysis: EPA Protocol Gas Mixture

Cylinder Number:	CC68108	Reference Number:	46-124075723-1
Cylinder Pressure:	2000.6 PSIG	Expiration Date:	9/21/2009
Certification Date:	9/21/2006	Laboratory:	ASG - Cheshire - CT

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
METHANE	22.95 PPM	+/- 1%	FTIR	G1
PROPANE	24.52 PPM	+/- 1%	FTIR	G1
Air	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig.

Signature on file

Approval Signature

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
GMIS 11220	AIR	METHANE	SG9154509	24.54 PPM
NTRM 52007	NITROGEN	PROPANE	SG902367ALB	50.5 PPM

Analytical Results

1st Component — METHANE

1st Analysis Date: 09/21/2006

R 24.21	S 22.65	Z 0.016	Conc 22.95 PPM
S 22.66	Z -0.013	R 24.22	Conc 22.97 PPM
Z 0.008	R 24.21	S 22.64	Conc 22.95 PPM
			AVG: 22.957 PPM

2nd Component — PROPANE

1st Analysis Date: 09/21/2006

R 49.85	S 24.28	Z 0.111	Conc 24.54 PPM
S 24.27	Z -0.011	R 50.02	Conc 24.51 PPM
Z 0.052	R 49.87	S 24.24	Conc 24.52 PPM
			AVG: 24.523 PPM

Airgas

CERTIFICATE OF ANALYSIS
Grade of Product: EPA Protocol

Part Number:	E03AI99E15ACQN8	Reference Number:	54-124096966-1
Cylinder Number:	CC162211	Cylinder Volume:	146 Cu.Ft.
Laboratory:	ASG - Chicago - IL	Cylinder Pressure:	2015 PSIG
Analysis Date:	May 30, 2007	Valve Outlet:	590

Expiration Date: May 30, 2010

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.
Do Not Use This Cylinder below 150 psig.i.e. 1 Mega Pascal

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainity
METHANE	55.00 PPM	55.26 PPM	G1	+/- 1% NIST traceable
PROPANE	55.00 PPM	56.50 PPM	G1	+/- 1% NIST traceable
Air	Balance			

CALIBRATION STANDARDS

Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	20505	SG865260	246.0PPM METHANE/NITROGEN	Jul 01, 2007
NTRM	51715	SG9101987ALB	103.6PPM PROPANE/	Jul 01, 2009

ANALYTICAL EQUIPMENT

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
VARIAN 3800	FID	May 18, 2007
Nicolet Nexus	FTIR	May 18, 2007

Triad Data Available Upon Request

Notes:

Signature on file

QA Approval

U.S. Steel – Gary Works

Indiana Department of Environmental Management

3rd Quarter 2007

South Sheet Mill Hydrogen Annealing Furnaces

Contents

South Sheet Mill Hydrogen Annealing Furnaces - Natural Gas Usage Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U.S. Steel - Gary Works
Source Address: One North Broadway Ave., Gary, Indiana 46402
Mailing Address: One North Broadway Ave., Gary, Indiana 46402
Part 70 Permit No.: T089-7663-00121
Facility South Sheet Mill Hydrogen Atmosphere Batch Annealing Furnaces
Parameter: NOx
Limit: 37.2 million cubic feet of natural gas per 12 consecutive month period with compliance demonstrated at the end of each month

Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
July	0.77	5.90	6.67
August	0.91	5.76	6.67
September	1.18	5.96	7.13

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

U.S. Steel – Gary Works

Indiana Department of Environmental Management

3rd Quarter 2007

Turboblower House - No. 6 Boiler

Contents

Turboblower House - No. 6 Boiler Natural Gas Usage Report

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Part 70 Operating Permit Quarterly Report

Source Name: U. S. Steel - Gary Works
Source Address: One North Broadway, Gary, Indiana 46402
Mailing Address: One North Broadway, Gary, Indiana 46402
Part 70 Permit No. T089-7663-00121
Facility: Turboblower Boiler House (TBBH) Boiler No. 6
Parameter: Natural Gas Usage
Limits: 1,059.7 million cubic feet (MMCF) per 12-consecutive month period with compliance demonstrated at the end of each month.

Quarter: 3rd Year: 2007

Month	Natural Gas Usage (MMCF)		
	This Month (A)	Previous 11-Months (B)	12-Month Period (A+B)
July	28.6	317.5	346.2
August	32.6	278.6	311.2
September	26.7	262.4	289.1

☑ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: Jim Alexander
Title/Position: Manager, Environmental Air Compliance
Phone: 219.888.3387

Attach a signed certification to complete this report.

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Dave Cline
Indiana Department of Environmental Mgt.
Office of Air Quality
Mail Code 61-50
100 N. Senate Avenue
Indianapolis, IN 46204-2251

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☐ Agent
☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery
1-1-07

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label) 7006 0100 0005 6636 1852

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

ENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Rodney Sommerville
City of Gary
Department of Environmental Affairs
839 Broadway 2nd Floor NE
Gary, Indiana 46402

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) [illegible] Doss
C. Date of Delivery 11-1-7

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

Article Number
(Transfer from service label) 7006 0100 0005 6636 1845

Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

7006 0100 0005 6336 7852

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
OFFICIAL USE
INDIANAPOLIS IN 46204

Postage	$ $2.50	0322
Certified Fee	$2.65	03 Postmark Here
Return Receipt Fee (Endorsement Required)	$2.15	
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $7.30	10/30/2007

Sent To Mr. Dave Cline
Indiana Department of Environmental Mgt.
Street, Apt. No.; or PO Box No. Office of Air Quality
Mail Code 61-50
City, State, ZIP+4 100 N. Senate Avenue
Indianapolis, IN 46204-2251

PS Form 3800, A

7006 0100 0005 6336 1845

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
GARY IN 46402
OFFICIAL USE

Postage	$ $1.99	0322
Certified Fee	$2.65	03 Postmark Here
Return Receipt Fee (Endorsement Required)	$2.15	
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & F	$6.79	10/30/2007

Sent To Rodney Sommerville
City of Gary
Street, Apt. No.; or PO Box No. Department of Environmental Affairs
839 Broadway 2nd Floor NE
City, State, ZIP+4 Gary, Indiana 46402

PS Form 3800, June 2002