GRAPHIC PACKAGING
INTERNATIONAL, INC.

Graphic Packaging International, Inc.
2600 De La Cruz Blvd
Santa Clara, CA, 95050

August 26, 2016

Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Attn: Title V Reports

RECEIVED
2016 AUG 29 AM 8:50
BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

Subject:
Title V Monitoring Report for the Period: February 1, 2016, to July 31, 2016

Reference:
Graphic Packaging International Santa Clara Paper Mill, Plant #AO732
2600 De La Cruz Blvd., Santa Clara, California

Dear Director:

This Title V Monitoring Report is submitted by Graphic Packaging International, Inc., as required to comply with the reporting requirements in District Regulation 2-6-502 and Title V permit condition I-F. The attached *Compliance Certification Report* lists the primary sources at the facility, the corresponding major applicable requirements, and Graphic Packaging International's performance against these requirements for the referenced period. During this period, Graphic Packaging International has complied with all applicable monitoring requirements for the all sources, with exception to one gas turbine breakdown event (damper door malfunction) that was self-reported and totaled 27 minutes. Graphic Packaging International has petitioned BAAQMD for relief from this event, and it is currently under review. The details of this breakdown are provided in the attached *Compliance Certification Report* and in the attached Graphic Packaging International letter of June 29 regarding the breakdown to BAAQMD. We have also appended monthly CEMS NO_x Reports for this period. During this period no fuel oil was combusted in the back-up boiler, which operated at an annual capacity factor of less than 6% over the last 12 months. The gas turbine, duct burners, and back-up boiler all operated at below their maximum firing rates. The rolling 12-month throughput rate for boxboard product remained below 140,000 tons per year. If you have any additional questions regarding this report or any events during this period, please call Rick Horne at (408) 496 5080.

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I certify that based on the information and belief formed after reasonable inquiry, the statements and information contained in this Title V Monitoring Report are true, accurate, and complete. I certify that I am the responsible official as defined in District Regulation 2-6.

Sincerely,

Jeff Mih
Acting Resident Manager & Responsible Official

Attachments:
Compliance Certification Report, February through July, 2016
CEMS NO_x Data, August, 2015, through January, 2016
June 29 Letter to BAAQMD Regarding May 31 Damper Door Malfunction

Copies:
William Buchan, Market Potential, Inc.

COMPLIANCE CERTIFICATION REPORT

February 1 to July 31, 2016

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MANAGEMENT DISTRICT

FACILITY NUMBER: AO732 (#19441)
FACILITY NAME: Graphics Packaging International, Inc.
Santa Clara Paperboard Mill
ADDRESS: 2600 De La Cruz, Blvd.
Santa Clara, CA 95050

SOURCE #	SOURCE	CITATION #	CITATION	DAYS OUT OF COMPLIANCE/ COMMMENTS
S-6	Turbine	BAAQMD 9-9-301.1.2	15 ppmv NO_x @ 15% O_2 Or 0.70 lbs NO_x/MWhr	**0.45 hrs:** May 31: Up to 23 ppmv @ 15% O_2[1]
S-6	Turbine	BAAQMD Regulation 1-522.4 Title V Condition 14522-5	CEMS operation	**None:** No inoperable monitor events
S-6	Turbine	40 CFR 60, Appendix F	Calibration drift	**None:** Within daily drift limits
S-6	Turbine	Title V Condition 14522-7	2,190 therms/hr	**None:** Did not exceed 2180 therms/hr
S-6/S-7	Turbine/Duct Burner	Title V Condition 14522 -1	Fire only natural gas	**None:** Did not burn oil
S-7	Duct Burner	Title V Condition 14522-9	1,684.8 MMBtu/day	**None:** Did not exceed 1500 MMBtu/day
S-9	Standby Boiler	BAAQMD 9-1-304	0.5% sulfur in fuel oil	**None:** Did not burn oil
S-9	Standby Boiler	Title V Condition 12231-10	0.05% sulfur in fuel oil	**None:** Did not burn oil
S-9	Standby Boiler	Title V Condition 12231-3	100 hrs/yr fuel oil	**None:** Did not burn oil
S-9	Standby Boiler	Title V Condition 12231-4	161 MMBtu/hr	**None:** Did not exceed 120 MMBtu/hr
S-10	Recycle Paper Machine	Title V Condition 13344-1	146,000 tons paperboard/yr	**None:** Did not exceed 140,000tons/yr
S-11,12,13	Cold Cleaners	Title V Condition 16714-1	20 gal/yr/source net usage	**None:** Did not exceed 15 gal/yr/source
S-14	Fire Pump Engine	Title V Condition 22851-1	Reliability tests - 34 hrs/yr	**None:** Did not exceed 24 hrs/yr
S-16, 17, 18, 19	Felt Cleaning	BAAQMD Regulation 8-4-302.1	5 tons VOC/yr per source	**None:** Did not exceed 1 ton/yr/source
S20 to 25	Sealing and Coating	BAAQMD Regulation 8-12-301.1	2.2 lbs VOC/gal	**None:** Did not exceed 1 lbs/gal/source

[1] Breakdown due to damper door malfunction which caused a protective shutdown of cogeneration plant. GPI has petitioned for breakdown relief, and BAAQMD is reviewing the incident.

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MONTHLY CEMS REPORT
MONTH OF FEBRUARY 2016

Enclosed is the monthly NOx report for the month of February 2016. There were no shutdown(s) / start up(s) for the month. The maximum 4 hour average was less than 14.6 PPMv NOx.

DATE	MAXIMUM 3 HR. AVERAGE STACK CORRECTED NOX PPM	FUEL CONSUMPTION MCF / DAY	NOX POUNDS / DAY
02/01/2016	14.51	6110	326
02/02/2016	14.51	6235	332
02/03/2016	14.51	6656	354
02/04/2016	14.51	6182	329
02/05/2016	14.50	6194	330
02/06/2016	14.51	6149	327
02/07/2016	14.51	6106	325
02/08/2016	14.53	6132	326
02/09/2016	14.52	6027	321
02/10/2016	14.52	5731	305
02/11/2016	14.52	5895	314
02/12/2016	14.51	5981	318
02/13/2016	14.51	5867	312
02/14/2016	14.50	5926	314
02/15/2016	14.53	5940	315
02/16/2016	14.51	5985	317
02/17/2016	14.51	6205	329
02/18/2016	14.52	6186	329
02/19/2016	14.53	6207	330
02/20/2016	14.53	6081	323
02/21/2016	14.52	5908	314
02/22/2016	14.51	5796	308
02/23/2016	14.51	5847	311
02/24/2016	14.53	5942	316
02/25/2016	14.51	5912	314
02/26/2016	14.53	5930	315
02/27/2016	14.54	5976	318
02/28/2016	14.51	5997	318
02/29/2016	14.51	5976	317

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MONTHLY CEMS REPORT
MONTH OF MARCH 2016

Enclosed is the monthly NOx report for the month of March 2016. There were no shutdown(s) / start up(s) for the month. The maximum 4 hour average was less than 14.6 PPMv NOx.

DATE	MAXIMUM 3 HR. AVERAGE STACK CORRECTED NOX PPM	FUEL CONSUMPTION MCF / DAY	NOX POUNDS / DAY
03/01/2016	14.53	5967	317
03/02/2016	14.54	5843	311
03/03/2016	14.52	5935	315
03/04/2016	14.52	5812	308
03/05/2016	14.51	5809	308
03/06/2016	14.53	5965	317
03/07/2016	14.52	5862	312
03/08/2016	14.51	5862	312
03/09/2016	14.52	5730	305
03/10/2016	14.53	5950	316
03/11/2016	14.51	6094	324
03/12/2016	14.51	5993	318
03/13/2016	14.52	5676	301
03/14/2016	14.52	6046	322
03/15/2016	14.52	6030	321
03/16/2016	14.51	6014	320
03/17/2016	14.51	5939	316
03/18/2016	14.52	5874	312
03/19/2016	14.52	5859	311
03/20/2016	14.51	5931	315
03/21/2016	14.53	6015	320
03/22/2016	14.51	6483	345
03/23/2016	14.52	6374	339
03/24/2016	14.52	6166	328
03/25/2016	14.53	5965	317
03/26/2016	14.52	5884	313
03/27/2016	14.53	5987	317
03/28/2016	14.52	6192	329
03/29/2016	14.54	6056	321
03/30/2016	14.51	6070	323
03/31/2016	14.53	5844	311

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MONTHLY CEMS REPORT
MONTH OF APRIL 2016

Enclosed is the monthly NOx report for the month of April 2016. There were 3 shutdown(s) / start up(s) for the month. The maximum 4 hour average was less than 62.2 PPMv NOx.

DATE	MAXIMUM 3 HR. AVERAGE STACK CORRECTED NOX PPM	FUEL CONSUMPTION MCF / DAY	NOX POUNDS / DAY
04/01/2016	14.52	5912	314
04/02/2016	14.51	5942	316
04/03/2016	14.51	6095	324
04/04/2016	14.52	5982	318
04/05/2016	14.52	5678	303
04/06/2016	14.53	5761	306
04/07/2016	14.52	5910	314
04/08/2016	14.53	5849	311
04/09/2016	14.51	5913	314
04/10/2016	14.52	5953	317
04/11/2016	14.53	6079	323
04/12/2016	14.51	6124	326
04/13/2016	14.52	5971	318
04/14/2016	14.53	6035	322
04/15/2016	14.48	3788	369
04/16/2016	14.53	6191	329
04/17/2016	14.53	6176	328
04/18/2016	14.55	6559	348
04/19/2016	14.53	6780	360
04/20/2016	14.57	6343	337
04/21/2016	14.52	5994	318
04/22/2016	14.52	6168	328
04/23/2016	14.53	6318	335
04/24/2016	14.50	6242	332
04/25/2016	14.51	6477	344
04/26/2016	14.33	565	97
04/27/2016	0.00	0	0
04/28/2016	14.56	3714	337
04/29/2016	14.52	6081	323
04/30/2016	14.52	5772	307

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MONTHLY CEMS REPORT
MONTH OF MAY 2016

Enclosed is the monthly NOx report for the month of May 2016. There were no shutdown(s) / start up(s) for the month. The maximum 4 hour average was less than 21.1 PPMv NOx.
**Episode reported to BAAQMD, Breakdown ID# 06Z33 and Excess ID# 06Z34

DATE	MAXIMUM 3 HR. AVERAGE STACK CORRECTED NOX PPM	FUEL CONSUMPTION MCF / DAY	NOX POUNDS / DAY
05/01/2016	14.52	5954	316
05/02/2016	14.52	6112	325
05/03/2016	14.52	6113	324
05/04/2016	14.53	6013	320
05/05/2016	14.52	6096	324
05/06/2016	14.51	6094	324
05/07/2016	14.53	6197	329
05/08/2016	14.53	6165	328
05/09/2016	14.52	6243	331
05/10/2016	14.51	6054	321
05/11/2016	14.54	6082	323
05/12/2016	14.51	5832	310
05/13/2016	14.52	5969	318
05/14/2016	14.52	6035	321
05/15/2016	14.52	6089	324
05/16/2016	14.51	6134	326
05/17/2016	14.51	5980	318
05/18/2016	14.52	5958	316
05/19/2016	14.53	5977	318
05/20/2016	14.51	6053	323
05/21/2016	14.52	6232	331
05/22/2016	14.52	6258	333
05/23/2016	14.52	6141	326
05/24/2016	14.53	6144	327
05/25/2016	14.53	6180	329
05/26/2016	14.51	6125	325
05/27/2016	14.51	6037	319
05/28/2016	14.51	5903	314
05/29/2016	14.52	5925	315
05/30/2016	14.51	5952	316
05/31/2016	**23.20	5998	340

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MONTHLY CEMS REPORT
MONTH OF JUNE 2016

Enclosed is the monthly NOx report for the month of June 2016. There were no shutdown(s) / start up(s) for the month. The maximum 4 hour average was less than 14.6 PPMv NOx.

DATE	MAXIMUM 3 HR. AVERAGE STACK CORRECTED NOX PPM	FUEL CONSUMPTION MCF / DAY	NOX POUNDS / DAY
06/01/2016	14.03	6118	314
06/02/2016	14.03	6088	312
06/03/2016	14.02	5753	295
06/04/2016	14.03	5685	292
06/05/2016	14.02	5845	300
06/06/2016	14.02	6036	310
06/07/2016	14.51	6020	318
06/08/2016	14.52	6076	323
06/09/2016	14.52	5886	313
06/10/2016	14.52	6053	322
06/11/2016	14.51	6044	321
06/12/2016	14.52	5990	318
06/13/2016	14.52	6111	325
06/14/2016	14.52	6179	329
06/15/2016	14.52	6239	332
06/16/2016	14.51	6104	324
06/17/2016	14.52	5959	316
06/18/2016	14.51	5981	318
06/19/2016	14.53	5947	315
06/20/2016	14.51	5982	317
06/21/2016	14.50	5797	307
06/22/2016	14.51	5877	312
06/23/2016	14.50	6081	322
06/24/2016	14.51	6004	319
06/25/2016	14.52	5893	312
06/26/2016	14.51	5814	309
06/27/2016	14.50	5842	311
06/28/2016	14.52	5649	300
06/29/2016	14.51	5803	308
06/30/2016	14.52	5916	315

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MONTHLY CEMS REPORT

MONTH OF JULY 2016

Enclosed is the monthly NOx report for the month of July 2016. There were 2 shutdown(s) / start up(s) for the month. The maximum 4 hour average was less than 88.0 PPMv NOx.

DATE	MAXIMUM 3 HR. AVERAGE STACK CORRECTED NOX PPM	FUEL CONSUMPTION MCF / DAY	NOX POUNDS / DAY
07/01/2016	14.51	6347	331
07/02/2016	14.01	6422	328
07/03/2016	14.01	6381	326
07/04/2016	14.02	6286	322
07/05/2016	14.02	6638	339
07/06/2016	14.17	2500	305
07/07/2016	14.33	4142	347
07/08/2016	14.51	5914	314
07/09/2016	14.50	5758	305
07/10/2016	14.53	5842	311
07/11/2016	14.52	6034	321
07/12/2016	14.52	6006	317
07/13/2016	14.50	5907	313
07/14/2016	14.17	5876	303
07/15/2016	14.30	5982	311
07/16/2016	14.26	6013	314
07/17/2016	14.48	5977	316
07/18/2016	14.52	6107	324
07/19/2016	14.51	6085	323
07/20/2016	14.51	6024	320
07/21/2016	14.51	5957	317
07/22/2016	14.51	5991	315
07/23/2016	14.24	5946	306
07/24/2016	13.98	5717	288
07/25/2016	14.42	5608	285
07/26/2016	13.83	5703	285
07/27/2016	13.67	5713	274
07/28/2016	13.72	5805	282
07/29/2016	13.28	5665	270
07/30/2016	13.26	5769	275
07/31/2016	13.46	5793	279

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Graphic Packaging International, Inc.
2600 De La Cruz Boulevard
Santa Clara, CA 95050

June 29, 2016

Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Attn: Title V Reports

Subject: Damper Door Malfunction – May 31, 2016:
Excess #06Z34/Breakdown #06Z33
Re: Graphics Packaging International Santa Clara Paper Mill, Plant #19441
2600 De La Cruz Blvd., Santa Clara, California

Dear Director:

This written report from Graphic Packaging International, Inc. (GPI) is submitted as required to comply with the reporting requirements in District Regulation 1-522 and the Title V notification of instances of non-compliance as required by Condition F1 of the Major Facility Review Permit concerning the damper door malfunction on May 31, 2016. This letter provides details concerning the referenced event, including the root cause analysis, a discussion of excess emissions versus applicable requirements, and corrective actions implemented. As the malfunction was unforeseen and has not ever occurred before, we respectfully request relief from any violation for this episode.

Summary of Incident

At 3:58PM on May 31, 2016, the steam injection system, which provides NO_x control for the gas turbine, went into an automatic shutdown when the steam temperature escalated to 800F. Noting the system alarms, GPI staff determined immediately that the automatic shutdown was caused by a malfunctioned, partially-closed damper door to the Heat Recovery Steam Generator (HRSG). By 3:59PM, GPI staff quickly reset the breakers and fully opened the damper door. GPI then restarted the steam injection system, including duct burner pilot and main flames, HRSG, and steam mixing process. By 4:19PM, steam injection was at full flow, and stack corrected NO_x levels fell below 15 ppmv with the gas turbine operating at full load by 4:25PM.

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During this 27-minute episode, the 1-minuted averaged NO_x concentrations at 15% oxygen peaked at 134 ppmv and dropped quickly below 15 ppmv by 4:25PM. The 3-hour NO_x average peaked at 23 ppmv at 15% oxygen while the emission rate peaked at 0.78 lbs/MWhr. Under regulation 9-9 and GPI's permit conditions, GPI is required to maintain the cogeneration exhaust stack at or below 15 ppmv NO_x at 15% O_2 or 0.70 lbs NO_x /MW-hr based on 3-hour averages. During the 27-minute breakdown period, 20 lbs of excess NO_x were released over the allowable NO_x emissions level. The minute-by-minute CEM data and calculations of NO_x emissions during this episode are attached.

GPI attempted to immediately notify the District of the episode by fax using the RCA Form. The District indicated that the RCA was received by fax on May 31. However, uncertain if the fax was received, GPI talked with Dave Garrison about the apparent fax notification failure, and GPI emailed the RCA Form to Mr. Garrison on the morning of June 1. As required by permit condition F1 in the Major Facility Review Permit, GPI notified the District again of this episode with the Title V 10-day notification of the discovery of instance of non-compliance, which was received on June 9, 2016.

Summary of Corrective Action

GPI began its root cause analysis once the episode was cleared. The root cause analysis is still under investigation. A visual inspection has been conducted, but no obvious problems were detected. As this problem has never happened before, it is difficult to determine the root cause for the partially closing of the damper door. GPI has hired CSE Engineering to evaluate the problem and propose a solution. GPI has a scheduled outage on July 6, 2016, where a more thorough inspection can be performed of the damper door. Preliminary conclusions from this root cause analysis indicate that communication links between the damper door and the instrumentation controlling door operation may have been fragmented, causing a failure of the damper door to completely open to the HRSG. In parallel with the root cause analysis, GPI is exploring options for new instrumentation and alarm logic that can provide tighter operational control under broader conditions to avoid communication link failures in the future. Once a solution is identified, GPI will implement the solution so that this breakdown does not occur again.

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GPI identified the problem within one minute after the episode started and immediately re-opened the damper door to minimize excess emissions. On May 31, at 4:25PM, the episode was cleared in 27-minutes, which generally the time required to re-start the steam injection system. GPI staff were extremely effective in identifying the problem and reducing emissions to the smallest possible excess. The excess emissions from this episode was 20 lbs NOx. There was no indication of plume, and no complaints received from the public from this episode. The episode was not the result of lack of maintenance or negligence, but rather an unforeseen breakdown. This malfunction has never occurred before, and GPI has not had a breakdown and excess emission for more than 5 years. The District was notified of the incident as soon as possible once the incident was cleared. Once the root cause analysis is complete, GPI will implement a solution that ensures that this breakdown will not occur again. Despite the strong preventative maintenance program GPI has instituted, unforeseen incidents that have never happened before, such as this malfunction of the damper door, may still occur. If you have any additional questions regarding this incident, please call Rick Horne at (408) 496-5080.

Sincerely,

Jeff Mih
Acting Resident Manager

Attachment:
GPI Emission Calculations – Minute-By-Minute Episode Data
GPI Excess Emission Calculations – 27-Minute Breakdown Period

Copies:
William Buchan, Market Potential, Inc.

EMISSION CALCULATIONS - **Minute-By-Minute Episode Data**

Min Snapshot Report from May 31, 2016 11:00:00 to May 31, 2016 20:00:00

Date	Time	Raw NOx	Raw O2	O2	NOx 3 Hour Average	Mass Emitted lbs/min	Mass Emitted lbs/hr	Instantaneous Megawatts/Hr	Totalized Megawatts/Hr	Totalized lbs NOx/MWhr	3 Hr Avg lbs NOx/MWhr
05/31/2016	11:00	13.391	17.273	13.289							
05/31/2016	11:01	13.643	17.673	13.257							
05/31/2016	11:02	14.043	18.088	13.301							
05/31/2016	11:03	14.198	18.297	13.296							
05/31/2016	11:04	14.352	18.492	13.298							
05/31/2016	11:05	14.454	18.683	13.274							
05/31/2016	11:06	14.633	18.876	13.289							
05/31/2016	11:07	14.662	18.873	13.305							
05/31/2016	11:08	14.663	18.875	13.305							
05/31/2016	11:09	14.809	19.081	13.298							
05/31/2016	11:10	14.876	19.071	13.310							
05/31/2016	11:11	14.695	18.876	13.321							
05/31/2016	11:12	14.690	18.874	13.319							
05/31/2016	11:13	14.662	18.874	13.305							
05/31/2016	11:14	14.602	18.874	13.274							
05/31/2016	11:15	14.632	18.874	13.289							
05/31/2016	11:16	14.603	18.876	13.274							
05/31/2016	11:17	14.456	18.684	13.275							
05/31/2016	11:18	14.422	18.682	13.257							
05/31/2016	11:19	14.391	18.681	13.241							
05/31/2016	11:20	14.306	18.491	13.274							
05/31/2016	11:21	14.268	18.488	13.255							
05/31/2016	11:22	14.297	18.487	13.271							
05/31/2016	11:23	14.124	18.296	13.257							
05/31/2016	11:24	14.122	18.294	13.257							
05/31/2016	11:25	14.306	18.489	13.275							
05/31/2016	11:26	14.299	18.488	13.272							
05/31/2016	11:27	14.332	18.488	13.289							
05/31/2016	11:28	14.392	18.488	13.321							
05/31/2016	11:29	18.489	18.680	48.482							
05/31/2016	11:30	15.673	20.689	0.000							
05/31/2016	11:31	12.079	20.752	0.000							
05/31/2016	11:32	8.457	20.757	0.000							
05/31/2016	11:33	4.670	20.755	142.930							
05/31/2016	11:34	1.063	20.756	32.627							
05/31/2016	11:35										
05/31/2016	11:36										
05/31/2016	11:37										
05/31/2016	11:38										
05/31/2016	11:39										
05/31/2016	11:40										
05/31/2016	11:41	0.240	20.756	7.373							
05/31/2016	11:42	0.238	20.755	7.323							
05/31/2016	11:43	0.243	20.754	7.436							
05/31/2016	11:44	0.040	20.755	1.239							
05/31/2016	11:45										
05/31/2016	11:46										
05/31/2016	11:47										

Time from 11:29 to 13:04 is monthly CEMS Preventive Maintenance performed by Air Science Technologies. Data omitted for average calculation.

Time from 11:29 to 13:04 is monthly CEMS Preventive Maintenance performed by Air Science Technologies.

Date	Time	Raw NOx	Raw O2	O2	NOx 3 Hour Average	Mass Emitted lbs/min	Mass Emitted lbs/hr	Instantaneous Megawatts/Hr	Totalized Megawatts/Hr	lbs NOx/MWhr	3 Hr Avg lbs NOx/MWhr
[illegible]	11:48	[illegible]	Data omitted for average calculation.	[illegible]							
[illegible]	11:49	[illegible]	[illegible]	[illegible]							
[illegible]	11:50	[illegible]	[illegible]	[illegible]							
[illegible]	11:51	0.039	20.755	1.200							
[illegible]	11:52	0.038	20.757	1.199							
[illegible]	11:53	0.039	20.755	1.199							
[illegible]	11:54	0.039	20.756	1.226							
[illegible]	11:55	0.038	20.753	1.169							
[illegible]	11:56	0.039	20.754	1.198							
[illegible]	11:57	0.039	-0.077	0.011							
[illegible]	11:58	0.040	-0.079	0.011							
[illegible]	11:59	0.038	-0.079	0.011							
[illegible]	12:00	0.040	21.310	-0.663							
[illegible]	12:01	0.040	21.772	-0.290							
[illegible]	12:02	0.041	21.875	-0.266							
[illegible]	12:03	0.041	21.843	-0.277							
[illegible]	12:04	0.040	22.067	-0.213							
[illegible]	12:05	0.038	22.201	-0.184							
[illegible]	12:06	0.037	22.294	-0.167							
[illegible]	12:07	0.039	22.353	-0.166							
[illegible]	12:08	0.041	22.451	-0.163							
[illegible]	12:09	0.041	22.485	-0.158							
[illegible]	12:10	0.040	22.517	-0.153							
[illegible]	12:11	0.040	22.541	-0.152							
[illegible]	12:12	0.039	22.549	-0.145							
[illegible]	12:13	0.039	22.645	-0.139							
[illegible]	12:14	0.039	20.780	-0.499							
[illegible]	12:15	0.041	20.753	1.268							
[illegible]	12:16	0.041	20.815	1.838							
[illegible]	12:17	0.040	20.818	1.837							
[illegible]	12:18	0.042	20.851	2.572							
[illegible]	12:19	0.039	20.851	2.397							
[illegible]	12:20	0.040	20.879	3.402							
[illegible]	12:21	0.039	20.851	2.381							
[illegible]	12:22	0.037	20.881	3.215							
[illegible]	12:23	0.039	20.884	3.619							
[illegible]	12:24	0.039	20.916	7.116							
[illegible]	12:25	0.040	20.950	0.000							
[illegible]	12:26	0.041	20.948	126.361							
[illegible]	12:27	0.040	19.268	0.143							
[illegible]	12:28	[illegible]	[illegible]	[illegible]							
[illegible]	12:29	[illegible]	Time from 11:29 to 13:04 is monthly CEMS Preventive	[illegible]							
[illegible]	12:30	[illegible]	Maintenance performed by Air Science Technologies.	[illegible]							
[illegible]	12:31	[illegible]	Data omitted for average calculation.	[illegible]							
[illegible]	12:32	[illegible]	[illegible]	[illegible]							
[illegible]	12:33	[illegible]	[illegible]	[illegible]							
[illegible]	12:34	4.459	20.981	0.000							
[illegible]	12:35	0.449	20.962	0.000							

Date	Time	Raw NOx	Raw O2	O2	NOx 3 Hour Average	Mass Emitted lbs/min	Mass Emitted lbs/hr	Instantaneous Megawatts/Hr	Totalized Megawatts/Hr	Totalized lbs NOx/MWhr	3 Hr Avg lbs NOx/MWhr
[illegible]	12:36	0.459	20.981	0.000							
[illegible]	12:37	0.450	20.980	0.000							
[illegible]	12:38	0.249	20.981	0.000							
[illegible]	12:39	0.242	20.984	0.000							
[illegible]	12:40	0.242	21.012	0.000							
[illegible]	12:41	0.244	21.008	0.000							
[illegible]	12:42	0.239	20.946	0.000							
[illegible]	12:43	0.239	20.979	0.000							
[illegible]	12:44	0.246	18.526	0.630							
[illegible]	12:45	17.466	0.278	5.027							
[illegible]	12:46	48.668	-0.019	13.809							
[illegible]	12:47	80.048	-0.079	22.648							
[illegible]	12:48	111.695	-0.079	31.602							
[illegible]	12:49	143.086	-0.080	40.482							
[illegible]	12:50	157.049	-0.079	44.432							
[illegible]	12:51	157.436	-0.080	44.541							
[illegible]	12:52	157.436	-0.080	44.541							
[illegible]	12:53	157.588	-0.081	44.584							
[illegible]	12:54	157.596	-0.082	44.581							
[illegible]	12:55	159.614	-0.081	45.155							
[illegible]	12:56	159.614	-0.082	45.153							
[illegible]	12:57	159.614	-0.082	45.155							
[illegible]	12:58	159.6140	-0.0820	45.1540							
[illegible]	12:59	159.6140	0.6400	46.3750							
[illegible]	13:00	144.8790	12.9680	108.0090							
[illegible]	13:01	116.4380	13.1530	88.8190				22.613			
[illegible]	13:02	87.5660	13.3210	68.3760				22.601			
[illegible]	13:03	56.2820	13.3750	44.2130				22.663			
[illegible]	13:04	26.5950	13.4380	21.0670				22.569			
[illegible]	13:05	15.8024	13.3693	12.4517		0.150217		22.632			
[illegible]	13:06	15.2713	13.4086	12.0471		0.145169		22.776			
[illegible]	13:07	15.2798	13.4974	12.1991		0.145250		22.776			
[illegible]	13:08	15.2774	13.5456	12.2829		0.145226		22.694			
[illegible]	13:09	15.4796	13.4540	12.2871		0.147149		22.582			
[illegible]	13:10	15.5411	13.3755	12.2080		0.147733		22.694			
[illegible]	13:11	15.5724	13.4080	12.3642		0.148982		22.788			
[illegible]	13:12	16.0591	13.4164	12.6834		0.152657		22.551			
[illegible]	13:13	16.4612	13.4334	13.0304		0.156480		22.282			
[illegible]	13:14	16.8809	13.4014	13.3079		0.160470		22.551			
[illegible]	13:15	17.2728	13.4340	13.6729		0.164195		22.469			
[illegible]	13:16	17.5304	13.4974	13.9458		0.166644		22.394			
[illegible]	13:17	17.8748	13.5295	14.3346		0.169917		22.326			
[illegible]	13:18	18.1487	13.4876	14.4092		0.172521		22.488			
[illegible]	13:19	18.3586	13.5615	14.7325		0.174516		22.394			
[illegible]	13:20	18.4899	13.5775	14.9218		0.175765		22.469			
[illegible]	13:21	18.6516	13.5935	15.0339		0.177302		22.394			
[illegible]	13:22	18.6831	13.6096	15.1442		0.177601		22.326			
[illegible]	13:23	18.6832	13.6335	15.1916		0.177602		22.407			

Estimated Flowate	
121913	dscf/m
Conversion Factors	
28.32	sL/scf
24.0	sL/mole
30.0	gm/mole
454.0	gm/lbs
NOx Permit Limits	
0.70	lbs/MWhr
15	ppmv @ 15% O2

Date	Time	Raw NOx	Raw O2	NOx corrected to 15% O2	NOx 3 Hour Average	Mass Emitted lbs/min	Mass Emitted lbs/hr	Instantaneous Megawatts/Hr	Totalized Megawatts/Hr	lbs NOx/MWhr	3 Hr Avg lbs NOx/MWhr
05/31/2016	13:24	18.6842	13.6416	15.2114		0.177612		22.407			
05/31/2016	13:25	18.4889	13.6416	15.0524		0.175755		22.407			
05/31/2016	13:26	18.4830	13.6086	14.9799		0.175700		22.501			
05/31/2016	13:27	18.2903	13.0652	13.8104		0.173867		22.438			
05/31/2016	13:28	18.4828	13.1611	14.1152		0.175697		22.438			
05/31/2016	13:29	18.4903	12.9667	13.7848		0.175769		22.457			
05/31/2016	13:30	18.7787	12.8408	13.7786		0.178510		22.532			
05/31/2016	13:31	19.0684	12.8248	13.9636		0.181264		22.426			
05/31/2016	13:32	19.4695	12.2958	13.3925		0.185077		22.501			
05/31/2016	13:33	19.4765	12.0240	12.9814		0.185143		22.457			
05/31/2016	13:34	19.8245	12.2963	13.6307		0.188452		22.438			
05/31/2016	13:35	20.0924	11.9500	13.2755		0.190998		22.469			
05/31/2016	13:36	20.2873	12.2489	13.8723		0.192851		22.438			
05/31/2016	13:37	20.6819	12.2803	14.1930		0.196601		22.407			
05/31/2016	13:38	21.0692	12.1201	14.1992		0.200284		22.426			
05/31/2016	13:39	21.4975	12.3283	14.8359		0.204355		22.426			
05/31/2016	13:40	21.6870	12.8795	15.9885		0.206157		22.119			
05/31/2016	13:41	21.8872	12.2058	14.8931		0.208060		22.026			
05/31/2016	13:42	21.8879	12.2168	14.9125		0.208067		22.394			
05/31/2016	13:43	21.8882	12.8562	16.0913		0.208069		22.232			
05/31/2016	13:44	21.6881	13.6093	17.5794		0.206167		22.026			
05/31/2016	13:45	21.2847	12.9622	15.8547		0.202332		22.219			
05/31/2016	13:46	20.8713	12.3503	14.4582		0.198402		22.313			
05/31/2016	13:47	20.2864	12.9689	15.1256		0.192842		22.294			
05/31/2016	13:48	20.0905	12.6167	14.3478		0.190980		22.263			
05/31/2016	13:49	19.6848	12.6644	14.1261		0.187124		22.313			
05/31/2016	13:50	19.4650	12.9062	14.4007		0.185034		22.188			
05/31/2016	13:51	19.4708	12.6967	14.0369		0.185089		22.294			
05/31/2016	13:52	19.4763	12.8568	14.3187		0.185141		22.394			
05/31/2016	13:53	19.4755	12.9082	14.4095		0.185134		22.363			
05/31/2016	13:54	19.4774	12.8889	14.3764		0.185152		22.107			
05/31/2016	13:55	19.5889	12.9049	14.5625		0.187163		22.294			
05/31/2016	13:56	19.5854	12.8568	14.4767		0.187129		22.376			
05/31/2016	13:57	19.5879	12.9849	14.7070		0.187153		22.263			
05/31/2016	13:58	19.4820	12.9530	14.4953		0.185196		22.294			
05/31/2016	13:59	19.4763	12.8889	14.3784		0.185142		22.263			
05/31/2016	**14:00**	**19.4732**	**12.8061**	**14.2274**	**13.870**	0.185113	**10.06**	**22.294**	**22.42**	**0.449**	
05/31/2016	14:01	19.4735	12.9849	14.5460		0.185115		22.157			
05/31/2016	14:02	19.4707	12.9110	14.4025		0.185088		22.407			
05/31/2016	14:03	19.4713	12.8726	14.3326		0.185094		22.157			
05/31/2016	14:04	19.4680	12.8728	14.3440		0.185062		22.219			
05/31/2016	14:05	19.4687	12.9209	14.4273		0.185069		22.188			
05/31/2016	14:06	19.4707	12.8088	14.2301		0.185089		22.251			
05/31/2016	14:07	19.4682	12.7767	14.1725		0.185064		22.232			
05/31/2016	14:08	19.4718	12.8869	14.3689		0.185099		22.201			
05/31/2016	14:09	19.4661	12.7567	14.1342		0.185045		22.201			
05/31/2016	14:10	19.4649	12.7127	14.0591		0.185033		22.313			
05/31/2016	14:11	19.4719	12.8408	14.2853		0.185099		22.263			

Date	Time	Raw NOx	Raw O2	O2	NOx 3 Hour Average	Mass Emitted lbs/min	Mass Emitted lbs/hr	Instantaneous Megawatts/Hr	Totalized Megawatts/Hr	3 Hr Avg lbs NOx/MWhr	3 Hr Avg lbs NOx/MWhr
[illegible]	14:12	19.4698	12.7607	14.1460		0.185080		22.044			
[illegible]	14:13	19.4733	12.7767	14.1763		0.185113		22.057			
[illegible]	14:14	19.4738	12.7928	14.2054		0.185118		22.219			
[illegible]	14:15	19.4731	12.8088	14.2319		0.185111		22.026			
[illegible]	14:16	19.4716	12.7928	14.2028		0.185097		21.951			
[illegible]	14:17	19.4759	12.7447	14.1200		0.185138		21.982			
[illegible]	14:18	19.6873	12.6963	14.1924		0.187147		22.263			
[illegible]	14:19	19.6901	12.7507	14.3060		0.187174		22.057			
[illegible]	14:20	19.6906	12.6967	14.1954		0.187179		22.219			
[illegible]	14:21	19.6945	12.7447	14.2823		0.187216		21.963			
[illegible]	14:22	19.6816	12.6780	14.1620		0.187093		22.119			
[illegible]	14:23	19.6871	12.7323	14.2545		0.187146		21.963			
[illegible]	14:24	19.9015	12.7609	14.4694		0.189183		22.013			
[illegible]	14:25	19.8987	12.7127	14.3733		0.189157		22.232			
[illegible]	14:26	19.8981	12.8088	14.5425		0.189151		21.869			
[illegible]	14:27	20.0881	12.6806	14.4548		0.190957		22.263			
[illegible]	14:28	20.0916	12.7928	14.6560		0.190990		21.951			
[illegible]	14:29	20.0883	12.7447	14.5659		0.190959		22.026			
[illegible]	14:30	19.8988	12.7120	14.3724		0.189158		22.157			
[illegible]	14:31	19.9033	13.6090	16.1192		0.189200		22.119			
[illegible]	14:32	19.4776	14.1541	17.0532		0.185154		22.076			
[illegible]	14:33	19.0680	13.9440	16.1983		0.181260		22.107			
[illegible]	14:34	18.6822	13.5135	14.9471		0.177593		22.251			
[illegible]	14:35	18.2893	13.4974	14.6019		0.173858		22.282			
[illegible]	14:36	17.6625	13.7537	14.6024		0.167900		22.344			
[illegible]	14:37	17.4683	13.8655	14.6716		0.166053		22.251			
[illegible]	14:38	17.2740	13.7868	14.3496		0.164206		22.188			
[illegible]	14:39	17.0806	13.6096	13.8460		0.162368		22.076			
[illegible]	14:40	16.8803	12.5947	12.0500		0.160464		22.188			
[illegible]	14:41	17.0718	13.1467	12.9993		0.162284		22.157			
[illegible]	14:42	17.0809	13.7053	14.0284		0.162371		21.951			
[illegible]	14:43	17.4668	12.9625	13.0198		0.166040		22.188			
[illegible]	14:44	17.8808	13.1402	13.6126		0.169975		22.188			
[illegible]	14:45	18.0692	13.4014	14.2446		0.171766		21.869			
[illegible]	14:46	18.2929	13.1771	14.0029		0.173892		22.076			
[illegible]	14:47	18.6838	13.1297	14.2154		0.177608		22.251			
[illegible]	14:48	18.8763	13.2412	14.5696		0.179438		21.963			
[illegible]	14:49	18.8764	13.2582	14.6031		0.179439		22.219			
[illegible]	14:50	19.0728	13.2572	14.7508		0.181305		22.044			
[illegible]	14:51	19.0685	13.3533	14.9351		0.181265		22.044			
[illegible]	14:52	19.0681	12.6535	13.6750		0.181261		22.188			
[illegible]	14:53	19.2695	12.6964	13.8817		0.183176		22.026			
[illegible]	14:54	19.0719	13.9936	16.3126		0.181297		22.026			
[illegible]	14:55	18.8779	13.6465	15.3899		0.179453		22.107			
[illegible]	14:56	18.8761	12.5149	13.3075		0.179436		22.169			
[illegible]	14:57	18.8757	13.2460	14.5650		0.179433		21.994			
[illegible]	14:58	18.6841	13.5335	14.9888		0.177611		22.119			
[illegible]	14:59	18.6831	13.1733	14.3009		0.177601		22.107			

Date	Time	Raw NOx	Raw O2	O2	NOx 3 Hour Average	Mass Emitted lbs/min	Mass Emitted lbs/hr	Instantaneous Megawatts/Hr	Totalized Megawatts/Hr	3 Hr Avg lbs NOx/MWhr	
05/31/2016	15:00	18.8751	13.2252	14.5384	14.282	0.179426	10.85	22.119	22.13	0.490	
05/31/2016	15:01	18.8757	13.4174	14.9099		0.179432		21.951			
05/31/2016	15:02	18.6847	13.3213	14.5721		0.177617		21.982			
05/31/2016	15:03	18.8773	13.2843	14.6538		0.179448		22.119			
05/31/2016	15:04	18.8764	13.7057	15.5035		0.179439		22.294			
05/31/2016	15:05	18.4835	13.8648	15.5221		0.175704		21.963			
05/31/2016	15:06	18.2877	13.7539	15.1258		0.173843		22.169			
05/31/2016	15:07	18.2898	13.1605	13.9706		0.173862		22.232			
05/31/2016	15:08	18.0811	13.3347	14.1173		0.171879		22.138			
05/31/2016	15:09	17.8822	13.5935	14.4622		0.169988		22.057			
05/31/2016	15:10	17.8818	13.4266	14.1478		0.169984		22.107			
05/31/2016	15:11	18.0716	13.0821	13.6665		0.171789		22.188			
05/31/2016	15:12	18.2975	13.2857	14.2049		0.173936		22.232			
05/31/2016	15:13	18.2909	13.4494	14.5096		0.173873		21.913			
05/31/2016	15:14	18.4859	12.8568	13.5859		0.175727		22.376			
05/31/2016	15:15	18.6829	12.8248	13.6813		0.177600		22.088			
05/31/2016	15:16	18.8756	12.7767	13.7411		0.179431		22.119			
05/31/2016	15:17	19.0687	12.7607	13.8546		0.181267		21.838			
05/31/2016	15:18	19.2687	12.6967	13.8912		0.183168		22.469			
05/31/2016	15:19	19.4749	12.7277	14.0909		0.185129		21.726			
05/31/2016	15:20	19.4804	12.6486	13.9625		0.185180		22.026			
05/31/2016	15:21	19.6858	12.6806	14.1596		0.187133		22.026			
05/31/2016	15:22	19.9019	12.7767	14.4882		0.189188		21.744			
05/31/2016	15:23	20.0908	12.7310	14.5443		0.190983		21.951			
05/31/2016	15:24	20.2836	12.7927	14.7939		0.192815		21.513			
05/31/2016	15:25	20.4771	12.8058	14.9602		0.194655		22.057			
05/31/2016	15:26	20.4794	12.9651	15.2561		0.194677		21.982			
05/31/2016	15:27	20.4805	13.0537	15.4324		0.194687		22.157			
05/31/2016	15:28	20.4781	12.8627	15.0743		0.194665		21.982			
05/31/2016	15:29	20.4792	12.9748	15.2787		0.194675		22.044			
05/31/2016	15:30	20.2843	12.8793	14.9543		0.192823		21.819			
05/31/2016	15:31	20.2855	12.8408	14.8842		0.192834		22.201			
05/31/2016	15:32	20.0924	12.7314	14.5454		0.190998		21.851			
05/31/2016	15:33	19.8946	12.7767	14.4835		0.189118		22.169			
05/31/2016	15:34	19.6922	12.5950	14.0164		0.187194		22.107			
05/31/2016	15:35	19.6803	13.0330	14.7913		0.187081		21.982			
05/31/2016	15:36	19.6958	12.6808	14.1753		0.187228		22.157			
05/31/2016	15:37	19.6863	12.8179	14.4039		0.187138		22.088			
05/31/2016	15:38	19.9005	12.8267	14.5887		0.189174		22.107			
05/31/2016	15:39	19.8952	12.6781	14.3106		0.189123		22.057			
05/31/2016	15:40	19.8963	13.0804	15.0404		0.189134		22.201			
05/31/2016	15:41	19.9019	12.7287	14.4033		0.189187		21.913			
05/31/2016	15:42	19.8995	12.5531	14.1007		0.189164		22.057			
05/31/2016	15:43	19.8986	12.7535	14.4448		0.189156		22.344			
05/31/2016	15:44	19.8997	12.9325	14.7657		0.189167		22.119			
05/31/2016	15:45	20.0896	12.6646	14.4270		0.190972		21.851			
05/31/2016	15:46	20.0893	12.7566	14.5835		0.190968		22.169			
05/31/2016	15:47	20.0939	12.8568	14.7728		0.191013		22.026			

Date	Time	Raw NOx	Raw O2	O2	NOx 3 Hour Average	Mass Emitted lbs/min	Mass Emitted lbs/hr	Instantaneous Megawatts/Hr	Totalized Megawatts/Hr	lbs NOx/MWhr	3 Hr Avg lbs NOx/MWhr
[illegible]	15:48	20.2846	12.7607	14.7370		0.192825		21.932			
[illegible]	15:49	20.2839	12.7767	14.7663		0.192818		22.157			
[illegible]	15:50	20.0940	12.7767	14.6262		0.191013		22.107			
[illegible]	15:51	20.0956	12.8081	14.6856		0.191028		21.807			
[illegible]	15:52	20.0906	12.4418	14.0498		0.190981		21.951			
[illegible]	15:53	19.9019	12.7300	14.4024		0.189187		21.901			
[illegible]	15:54	19.9013	12.9114	14.7368		0.189181		21.913			
[illegible]	15:55	19.8969	11.6264	12.7112		0.189140		21.994			
[illegible]	15:56	20.0883	11.3513	12.4523		0.190960		21.869			
[illegible]	15:57	20.0903	11.3193	12.4089		0.190978		9.900			
05/31/2016	15:58	29.0672	15.8025	33.5625		0.276313		11.857			
05/31/2016	15:59	36.4945	20.8823			0.346916		11.619			
05/31/2016	**16:00**	**33.0989**	**21.0513**		**14.435**	0.314638	**11.53**	**11.519**	**21.33**	**0.541**	**0.493**
05/31/2016	16:01	29.2719	21.0764			0.278258		16.438			
05/31/2016	16:02	25.2709	21.0791			0.240225		18.107			
05/31/2016	16:03	21.0684	14.9421	20.8652		0.200276		18.044			
05/31/2016	16:04	39.1193	14.7930	37.8043		0.371867		18.538			
05/31/2016	16:05	67.3636	19.2520			0.640358		17.744			
05/31/2016	16:06	73.3855	17.2778	118.9050		0.697602		17.851			
05/31/2016	16:07	93.8857	14.8428	91.4087		0.892477		18.819			
05/31/2016	16:08	115.0692	14.4420	105.2040		1.093847		17.407			
05/31/2016	16:09	115.2828	14.1381	100.6900		1.095877		18.394			
05/31/2016	16:10	116.4359	13.5289	93.4885		1.106839		18.569			
05/31/2016	16:11	140.2674	13.0705	105.9194		1.333381		17.488			
05/31/2016	16:12	150.0050	12.4798	105.3727		1.425946		18.251			
05/31/2016	16:13	150.0050	12.7062	108.1212		1.425946		18.776			
05/31/2016	16:14	150.6456	12.8528	110.5737		1.432036		17.407			
05/31/2016	16:15	151.2728	14.2653	134.6475		1.437998		18.057			
05/31/2016	16:16	151.2702	13.9651	128.9567		1.437974		19.219			
05/31/2016	16:17	150.6456	13.3115	117.4215		1.432036		18.994			
05/31/2016	16:18	146.2734	13.3693	114.8104		1.390474		20.726			
05/31/2016	16:19	132.2141	12.8814	97.5620		1.256827		20.694			
05/31/2016	16:20	107.8515	14.1861	94.8741		1.025235		22.282			
05/31/2016	16:21	80.6887	14.1580	70.6856		0.767026		22.426			
05/31/2016	16:22	54.2516	13.1780	41.5569		0.515715		22.569			
05/31/2016	16:23	32.3033	13.9881	27.5883		0.307075		22.501			
05/31/2016	16:24	18.6848	13.9779	15.3463		0.177618		22.376			
[illegible]	16:25	15.6727	13.2424	12.0988		0.148985		22.532			
[illegible]	16:26	15.8677	13.4005	12.4968		0.150838		22.582			
[illegible]	16:27	15.4749	13.6204	12.5711		0.147105		22.519			
[illegible]	16:28	15.0883	13.4300	11.9383		0.143429		22.426			
[illegible]	16:29	15.4798	13.4510	12.2786		0.147151		22.344			
[illegible]	16:30	15.4785	13.5775	12.4920		0.147138		22.376			
[illegible]	16:31	15.4783	13.4974	12.3577		0.147137		22.426			
[illegible]	16:32	15.6710	13.5615	12.5200		0.148969		22.313			
[illegible]	16:33	15.8642	13.5935	12.8322		0.150805		22.469			
[illegible]	16:34	15.8623	13.5935	12.8297		0.150787		22.344			
[illegible]	16:35	16.0567	13.5493	12.9169		0.152635		22.313			

Date	Time	[illegible] Raw NOx	[illegible] Raw O2	[illegible] O2	NOx 3 Hour Average	Mass Emitted lbs/min	Mass Emitted lbs/hr	Instantaneous Megawatts/Hr	Totalized Megawatts/Hr	lbs NOx/MWhr	3 Hr Avg lbs NOx/MWhr
[illegible]	16:36	16.2693	13.5004	12.9934		0.154655		22.138			
[illegible]	16:37	16.4617	13.4654	13.0865		0.156485		22.188			
[illegible]	16:38	16.6783	13.2892	12.9537		0.158544		22.088			
[illegible]	16:39	16.8814	13.2319	13.0182		0.160474		22.157			
[illegible]	16:40	17.2766	13.0074	12.9424		0.164231		22.282			
[illegible]	16:41	17.4664	13.3958	13.7476		0.166036		22.282			
[illegible]	16:42	17.6715	13.3810	13.8875		0.167985		22.294			
[illegible]	16:43	17.8886	13.1932	13.7217		0.170049		22.119			
[illegible]	16:44	18.0776	13.3533	14.1591		0.171846		22.251			
[illegible]	16:45	18.2918	13.5240	14.6561		0.173882		22.219			
[illegible]	16:46	18.2935	13.3553	14.3312		0.173898		22.282			
[illegible]	16:47	18.2929	13.4562	14.5171		0.173892		22.107			
[illegible]	16:48	18.2905	13.5768	14.7584		0.173869		22.188			
[illegible]	16:49	18.2955	13.5615	14.7335		0.173917		22.138			
[illegible]	16:50	18.0780	13.5772	14.5882		0.171850		22.219			
[illegible]	16:51	18.0868	13.6082	14.6563		0.171933		22.251			
[illegible]	16:52	17.8893	13.5720	14.4144		0.170055		22.219			
[illegible]	16:53	17.6708	13.5775	14.2613		0.167978		22.201			
[illegible]	16:54	17.4692	13.6096	14.1601		0.166062		22.326			
[illegible]	16:55	17.4676	13.6331	14.2134		0.166047		22.532			
[illegible]	16:56	17.2764	13.5137	13.8334		0.164229		22.344			
[illegible]	16:57	17.2745	13.5135	13.8214		0.164212		22.294			
[illegible]	16:58	17.2708	13.5769	13.9375		0.164176		22.251			
[illegible]	16:59	17.2718	13.5295	13.8490		0.164185		22.282			
05/31/2016	**17:00**	**17.2713**	**13.4814**	**13.7589**	**23.128**	0.164181	**27.79**	**22.263**	**21.07**	**1.319**	**0.783**
[illegible]	17:01	17.2738	13.4010	13.6146		0.164205		22.169			
[illegible]	17:02	17.2725	13.4879	13.7630		0.164193		22.138			
[illegible]	17:03	17.2736	13.5052	13.8106		0.164203		22.119			
[illegible]	17:04	17.4682	13.3693	13.7106		0.166052		22.201			
[illegible]	17:05	17.4655	13.4337	13.8254		0.166027		22.088			
[illegible]	17:06	17.6678	13.4014	13.9261		0.167950		22.169			
[illegible]	17:07	17.6713	13.4087	13.9417		0.167983		22.044			
[illegible]	17:08	17.8822	13.3563	14.0150		0.169988		22.138			
[illegible]	17:09	17.8828	13.2572	13.8319		0.169994		21.963			
[illegible]	17:10	17.8811	13.3242	13.9474		0.169978		22.201			
[illegible]	17:11	18.0773	13.3056	14.0205		0.171843		22.188			
[illegible]	17:12	17.8842	13.3373	14.0315		0.170007		22.119			
[illegible]	17:13	17.8751	13.3373	13.9745		0.169920		22.169			
[illegible]	17:14	17.8867	13.4219	14.1450		0.170030		22.107			
[illegible]	17:15	17.8808	13.5296	14.3375		0.169975		22.138			
[illegible]	17:16	17.8813	13.5295	14.3367		0.169979		22.057			
[illegible]	17:17	17.8839	13.5083	14.2991		0.170004		22.076			
[illegible]	17:18	17.8858	13.4886	14.2539		0.170060		22.157			
[illegible]	17:19	17.6631	13.4268	13.9607		0.167905		22.076			
[illegible]	17:20	17.6633	13.3034	13.7326		0.167907		22.169			
[illegible]	17:21	17.6637	13.3373	13.8078		0.167911		22.344			
[illegible]	17:22	17.6675	13.4308	13.9844		0.167947		22.188			
[illegible]	17:23	17.6658	13.4971	14.1035		0.167931		22.201			

Date	Time	Raw NOx	Raw O2	O2	NOx 3 Hour Average	Mass Emitted lbs/min	Mass Emitted lbs/hr	Instantaneous Megawatts/Hr	Totalized Megawatts/Hr	3 Hr Avg lbs NOx/MWhr	3 Hr Avg lbs NOx/MWhr
[illegible]	17:24	17.6718	13.4306	13.9771		0.167988		22.188			
[illegible]	17:25	17.6698	13.4518	14.0231		0.167969		22.138			
[illegible]	17:26	17.6679	13.5035	14.1173		0.167951		22.044			
[illegible]	17:27	17.6635	13.4145	13.9385		0.167909		22.138			
[illegible]	17:28	17.6694	13.3337	13.8057		0.167965		22.119			
[illegible]	17:29	17.6774	13.4174	13.9638		0.168041		22.219			
[illegible]	17:30	17.8814	13.5400	14.3582		0.169980		22.119			
[illegible]	17:31	17.6630	13.5135	14.1323		0.167905		22.157			
[illegible]	17:32	17.8769	13.5135	14.3064		0.169937		22.119			
[illegible]	17:33	17.8829	13.4527	14.1900		0.169995		22.157			
[illegible]	17:34	17.6696	13.3528	13.8384		0.167967		22.169			
[illegible]	17:35	17.6655	13.4315	13.9801		0.167928		22.219			
[illegible]	17:36	17.6725	13.4569	14.0396		0.167995		22.138			
[illegible]	17:37	17.6698	13.5295	14.1682		0.167969		22.107			
[illegible]	17:38	17.6681	13.4036	13.9305		0.167953		22.088			
[illegible]	17:39	17.6683	13.3061	13.7605		0.167955		22.119			
[illegible]	17:40	17.6695	13.4654	14.0467		0.167966		22.119			
[illegible]	17:41	17.6627	13.4814	14.0712		0.167901		22.169			
[illegible]	17:42	17.6608	13.3533	13.8326		0.167884		22.201			
[illegible]	17:43	17.6629	13.3814	13.8864		0.167903		22.263			
[illegible]	17:44	17.6726	13.5305	14.1702		0.167996		22.119			
[illegible]	17:45	17.6704	13.4320	13.9849		0.167974		22.232			
[illegible]	17:46	17.6595	13.3373	13.8025		0.167871		22.219			
[illegible]	17:47	17.8814	13.4294	14.1491		0.169980		22.188			
[illegible]	17:48	17.8873	13.4974	14.2830		0.170037		22.201			
[illegible]	17:49	17.8791	13.5453	14.3667		0.169958		22.188			
[illegible]	17:50	17.8848	13.4262	14.1437		0.170013		22.188			
[illegible]	17:51	17.6696	13.3056	13.7530		0.167967		22.251			
[illegible]	17:52	17.6666	13.4327	13.9833		0.167938		22.251			
[illegible]	17:53	17.6659	13.5135	14.1346		0.167932		22.219			
[illegible]	17:54	17.6677	13.4092	13.9404		0.167949		22.169			
[illegible]	17:55	17.6667	13.3815	13.8806		0.167939		22.294			
[illegible]	17:56	17.6705	13.3347	13.8122		0.167975		22.219			
[illegible]	17:57	17.6706	13.4785	14.0722		0.167976		22.251			
[illegible]	17:58	17.6618	13.5455	14.1924		0.167893		22.313			
[illegible]	17:59	17.6708	13.4974	14.1091		0.167978		22.188			
05/31/2016	**18:00**	**17.6659**	**13.4333**	**13.9830**	**22.997**	0.167932	**10.10**	**22.251**	**22.17**	**0.456**	**0.772**
[illegible]	18:01	17.6692	13.3104	13.7614		0.167963		23.582			
[illegible]	18:02	17.6652	13.2998	13.7488		0.167925		23.532			
[illegible]	18:03	17.6670	13.4324	13.9831		0.167943		23.532			
[illegible]	18:04	17.6672	13.5298	14.1658		0.167944		23.569			
[illegible]	18:05	17.6637	13.5003	14.1015		0.167911		23.663			
[illegible]	18:06	17.6716	13.3373	13.8119		0.167987		23.601			
[illegible]	18:07	17.6602	13.3837	13.8878		0.167878		23.582			
[illegible]	18:08	17.6607	13.5135	14.1286		0.167883		23.551			
[illegible]	18:09	17.6595	13.4654	14.0404		0.167871		23.644			
[illegible]	18:10	17.6628	13.3813	13.8865		0.167903		23.501			
[illegible]	18:11	17.6700	13.4174	13.9575		0.167971		23.613			

Date	Time	[illegible] Raw NOx	[illegible] Raw O2	[illegible] NOx corrected to 15% O2	NOx 3 Hour Average	Mass Emitted lbs/min	Mass Emitted lbs/hr	Instantaneous Megawatts/Hr	Totalized Megawatts/Hr	Totalized lbs NOx/MWhr	3 Hr Avg lbs NOx/MWhr
05/31/2016	18:12	17.6749	13.4975	14.1096		0.168017		23.438			
05/31/2016	18:13	17.6671	13.4514	14.0185		0.167943		23.707			
05/31/2016	18:14	17.6695	13.3691	13.8597		0.167967		23.663			
05/31/2016	18:15	17.6660	13.2733	13.6950		0.167932		23.601			
05/31/2016	18:16	17.6720	13.4105	13.9524		0.167990		23.601			
05/31/2016	18:17	17.6768	13.4989	14.1186		0.168035		23.663			
05/31/2016	18:18	17.6680	13.5135	14.1352		0.167951		23.569			
05/31/2016	18:19	17.6671	13.4309	13.9804		0.167943		23.551			
05/31/2016	18:20	17.6728	13.3543	13.8438		0.167998		23.519			
05/31/2016	18:21	17.6720	13.3834	13.8964		0.167990		23.676			
05/31/2016	18:22	17.6620	13.4760	14.0606		0.167895		23.601			
05/31/2016	18:23	17.8810	13.5283	14.3237		0.169977		23.582			
05/31/2016	18:24	17.8856	13.4320	14.1553		0.170020		23.663			
05/31/2016	18:25	17.8835	13.4040	14.1012		0.170001		23.726			
05/31/2016	18:26	17.8810	13.4654	14.2148		0.169977		23.676			
05/31/2016	18:27	17.8838	13.4174	14.1264		0.170004		23.613			
05/31/2016	18:28	17.8829	13.4654	14.2152		0.169995		23.851			
05/31/2016	18:29	17.8859	13.3853	14.0691		0.170024		23.726			
05/31/2016	18:30	17.8773	13.4974	14.2730		0.169942		23.488			
05/31/2016	18:31	17.6601	13.4814	14.0726		0.167877		23.694			
05/31/2016	18:32	17.8845	13.5133	14.3002		0.170010		23.788			
05/31/2016	18:33	17.6659	13.5455	14.1936		0.167932		23.632			
05/31/2016	18:34	17.6642	13.4974	14.1028		0.167916		23.613			
05/31/2016	18:35	17.6635	13.5288	14.1610		0.167909		23.726			
05/31/2016	18:36	17.6697	13.6072	14.3181		0.167968		23.788			
05/31/2016	18:37	17.4672	13.5455	14.0360		0.166043		23.776			
05/31/2016	18:38	17.4658	13.5548	14.0526		0.166030		23.569			
05/31/2016	18:39	17.4638	13.5519	14.0454		0.166011		23.757			
05/31/2016	18:40	17.4653	13.5788	14.0955		0.166025		23.644			
05/31/2016	18:41	17.4663	13.5555	14.0544		0.166035		23.394			
05/31/2016	18:42	17.4674	13.5551	14.0520		0.166045		23.694			
05/31/2016	18:43	17.4669	13.5135	13.9753		0.166040		23.613			
05/31/2016	18:44	17.2707	13.5285	13.8458		0.164175		23.488			
05/31/2016	18:45	17.2730	13.5615	13.9101		0.164197		23.644			
05/31/2016	18:46	17.2741	13.5775	13.9412		0.164207		23.694			
05/31/2016	18:47	17.2723	13.5561	13.8983		0.164190		23.601			
05/31/2016	18:48	17.2708	13.5922	13.9664		0.164177		23.807			
05/31/2016	18:49	17.2660	13.5615	13.9044		0.164131		23.632			
05/31/2016	18:50	17.2744	13.5776	13.9416		0.164210		23.644			
05/31/2016	18:51	17.2744	13.4818	13.7641		0.164211		23.726			
05/31/2016	18:52	17.4674	13.6256	14.1896		0.166045		23.676			
05/31/2016	18:53	17.4694	13.7203	14.3773		0.166064		23.644			
05/31/2016	18:54	17.4685	13.5749	14.0930		0.166055		23.707			
05/31/2016	18:55	17.4673	13.5455	14.0351		0.166044		23.551			
05/31/2016	18:56	17.4694	13.5560	14.0576		0.166064		23.663			
05/31/2016	18:57	17.4649	13.3680	13.7057		0.166022		23.707			
05/31/2016	18:58	17.4654	13.4818	13.9148		0.166026		23.644			
05/31/2016	18:59	17.6608	13.5131	14.1299		0.167884		23.532			

Date	Time	Raw NOx	Raw O2	O2	NOx 3 Hour Average	Mass Emitted lbs/min	Mass Emitted lbs/hr	Instantaneous Megawatts/Hr	Totalized Megawatts/Hr	lbs NOx/MWhr	3 Hr Avg lbs NOx/MWhr
05/31/2016	19:00	17.6694	13.4334	13.9848	22.662	0.167965	10.04	23.469	23.63	0.425	0.733
[illegible]	19:01	17.6565	13.4779	14.0677		0.167937		22.582			
[illegible]	19:02	17.6673	13.5131	14.1350		0.167945		22.501			
[illegible]	19:03	17.6637	13.5935	14.2864		0.167911		22.519			
[illegible]	19:04	17.6667	13.6579	14.4173		0.167940		22.569			
[illegible]	19:05	17.6626	13.6416	14.3776		0.167901		22.582			
[illegible]	19:06	17.4661	13.5779	14.0968		0.166033		22.488			
[illegible]	19:07	17.4669	13.5935	14.1256		0.166041		22.519			
[illegible]	19:08	17.4669	13.5041	13.9577		0.166040		22.501			
[illegible]	19:09	17.4641	13.4964	13.9412		0.166013		22.532			
[illegible]	19:10	17.4649	13.5135	13.9737		0.166021		22.501			
[illegible]	19:11	17.4652	13.5305	14.0066		0.166024		22.601			
[illegible]	19:12	17.4650	13.5925	14.1242		0.166022		22.569			
[illegible]	19:13	17.4649	13.6416	14.2187		0.166021		22.601			
[illegible]	19:14	17.4630	13.6736	14.2761		0.166004		22.663			
[illegible]	19:15	17.4644	13.6579	14.2502		0.166017		22.438			
[illegible]	19:16	17.4642	13.6706	14.2749		0.166015		22.582			
[illegible]	19:17	17.2712	13.6736	14.1229		0.164180		22.501			
[illegible]	19:18	17.2731	13.6416	14.0626		0.164198		22.551			
[illegible]	19:19	17.2741	13.6056	13.9944		0.164207		22.488			
[illegible]	19:20	17.2734	13.6096	14.0014		0.164200		22.601			
[illegible]	19:21	17.2747	13.6096	14.0025		0.164213		22.519			
[illegible]	19:22	17.2753	13.5775	13.9421		0.164219		22.613			
[illegible]	19:23	17.4673	13.5788	14.0996		0.166044		22.582			
[illegible]	19:24	17.4662	13.5775	14.0963		0.166034		22.601			
[illegible]	19:25	17.4670	13.5775	14.0975		0.166041		22.569			
[illegible]	19:26	14.0521	17.4690	13.5535		0.133579		22.551			
[illegible]	19:27	14.0972	17.4674	13.5775		0.134008		22.551			
[illegible]	19:28	14.0970	17.4671	13.5775		0.134006		22.613			
[illegible]	19:29	14.0458	17.4673	13.5511		0.133520		22.532			
[illegible]	19:30	13.9767	17.4683	13.5135		0.132862		22.501			
[illegible]	19:31	13.5351	17.4663	13.2719		0.128665		22.582			
[illegible]	19:32	14.1046	17.6664	13.4974		0.134079		22.569			
[illegible]	19:33	14.1131	17.6770	13.4975		0.134159		22.569			
[illegible]	19:34	13.9882	17.6713	13.4334		0.132977		22.644			
[illegible]	19:35	14.2786	17.8843	13.4974		0.135732		22.569			
[illegible]	19:36	14.0986	17.8881	13.4007		0.134021		22.632			
[illegible]	19:37	14.4386	17.8896	13.5775		0.137253		22.519			
[illegible]	19:38	13.7600	17.6727	13.3081		0.130803		22.632			
[illegible]	19:39	14.0669	17.8817	13.3853		0.133720		22.663			
[illegible]	19:40	13.9894	17.6723	13.4336		0.132983		22.676			
[illegible]	19:41	13.8977	17.6691	13.3853		0.132111		22.644			
[illegible]	19:42	13.9577	17.6711	13.4170		0.132682		22.601			
[illegible]	19:43	14.1956	17.8969	13.4429		0.134943		22.707			
[illegible]	19:44	14.2196	17.8871	13.4654		0.135172		22.676			
[illegible]	19:45	14.2828	17.8895	13.4974		0.135772		22.757			
[illegible]	19:46	14.2481	17.8846	13.4814		0.135443		22.726			
[illegible]	19:47	14.3103	17.8866	13.5135		0.136033		22.757			

Date	Time	[illegible] Raw NOx	[illegible] Raw O2	[illegible] O2	NOx 3 Hour Average	Mass Emitted lbs/min	Mass Emitted lbs/hr	Instantaneous Megawatts/Hr	Totalized Megawatts/Hr	lbs NOx/MWhr	3 Hr Avg lbs NOx/MWhr
[illegible]	19:48	14.2142	17.6750	13.5502		0.135120		22.776			
[illegible]	19:49	14.1459	17.6693	13.5180		0.134471		22.757			
[illegible]	19:50	14.1063	17.6661	13.4974		0.134095		22.776			
[illegible]	19:51	14.1838	17.6681	13.5384		0.134831		22.776			
[illegible]	19:52	13.9745	17.4658	13.5135		0.132841		22.738			
[illegible]	19:53	14.0483	17.4666	13.5515		0.133543		22.776			
[illegible]	19:54	14.0242	17.4656	13.5400		0.133314		22.726			
[illegible]	19:55	14.1099	17.4653	13.5851		0.134128		22.807			
[illegible]	19:56	14.0278	17.4660	13.5416		0.133348		22.819			
[illegible]	19:57	13.7716	17.4657	13.4075		0.130913		22.726			
[illegible]	19:58	13.9150	17.4664	13.4814		0.132276		22.838			
[illegible]	19:59	13.9447	17.4662	13.4974		0.132559		22.757			
05/31/2016	20:00	13.9438	17.4651	13.4974	13.929	0.132550	8.83	22.838	22.63	0.390	0.424

EXCESS EMISSION CALCULATIONS - 27 MINUTE BREAKDOWN PERIOD

BREAKDOWN PERIOD: May 31, 2016, 15:58-16:24

Date	Time	Raw NOx	NOx lbs/min	Megawatts/Hr	Megawatts
05/31/2016	15:58	29.0672	0.276313	11.857	0.198
05/31/2016	15:59	36.4945	0.346916	11.619	0.194
05/31/2016	16:00	33.0989	0.314638	11.519	0.192
05/31/2016	16:01	29.2719	0.278258	16.438	0.274
05/31/2016	16:02	25.2709	0.240225	18.107	0.302
05/31/2016	16:03	21.0684	0.200276	18.044	0.301
05/31/2016	16:04	39.1193	0.371867	18.538	0.309
05/31/2016	16:05	67.3636	0.640358	17.744	0.296
05/31/2016	16:06	73.3855	0.697602	17.851	0.298
05/31/2016	16:07	93.8857	0.892477	18.819	0.314
05/31/2016	16:08	115.0692	1.093847	17.407	0.290
05/31/2016	16:09	115.2828	1.095877	18.394	0.307
05/31/2016	16:10	116.4359	1.106839	18.569	0.309
05/31/2016	16:11	140.2674	1.333381	17.488	0.291
05/31/2016	16:12	150.0050	1.425946	18.251	0.304
05/31/2016	16:13	150.0050	1.425946	18.776	0.313
05/31/2016	16:14	150.6456	1.432036	17.407	0.290
05/31/2016	16:15	151.2728	1.437998	18.057	0.301
05/31/2016	16:16	151.2702	1.437974	19.219	0.320
05/31/2016	16:17	150.6456	1.432036	18.994	0.317
05/31/2016	16:18	146.2734	1.390474	20.726	0.345
05/31/2016	16:19	132.2141	1.256827	20.694	0.345
05/31/2016	16:20	107.8515	1.025235	22.282	0.371
05/31/2016	16:21	80.6887	0.767026	22.426	0.374
05/31/2016	16:22	54.2516	0.515715	22.569	0.376
05/31/2016	16:23	32.3033	0.307075	22.501	0.375
05/31/2016	16:24	18.6848	0.177618	22.376	0.373

Breakdown Period 27 minutes	**22.9**	**lbs NOx**	**8.278**	**MW**
Allowable NOx, basis: 0.70 lbs NOx/MWhr	**2.6**	**lbs NOx**		
Excess NOx Emission	**20.3**	**lbs NOx**		

Estimated Flowate	
121913	dscfm
Conversion Factors	
28.32	sL/scf
24.0	sL/mole
30.0	gm/mole as NO
454.0	gm/lbs
NOx Permit Limits	
0.70	lbs/MWhr
15	ppmv @ 15% O2