



Mosaic Fertilizer, LLC
13830 Circa Crossing Drive
Lithia, FL 33547

January 18, 2011

Via email & Fedex

Ms. Trina Vielhaur, Bureau Chief
FDEP, Division of Air Resource Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED

JAN 20 2011

BUREAU OF
AIR REGULATION

Re: New Wales Plant, Multifos C Kiln
DEP Project No. 1050059-066-AC

Dear Ms. Vielhaur:

With respect to the letter dated July 23, 2010 on the referenced matter, Mosaic is pleased to provide below the response to the additional information requested, following the numbering in the letter.

1. Table 1 indicates NOx emissions data for tests conducted between 9/17/2002 through 10/20/2009. The table also includes NOx emissions data due to fuel combustion based on AP-42 factors. The data indicates that the test measured NOx emissions have always been higher when compared with NOx emissions based on the AP-42 factors except for the 8/12/2009 test date. In fact, the average of the test NOx emissions are 53 percent higher than the average of the NOx emissions based on AP-42 factors. If this adjustment is made to the maximum annual NOx calculated using AP-42 factors and realizing that NOx emissions due to dump chute method of operations will be higher for the requested 500 hours, the 40 tons per year threshold of NOx being PSD pollutant can be easily exceeded. In order to have reasonable assurance that the PSD threshold is not exceeded, the Department shall require the installation of a NOx continuous emission monitoring system (CEMS) if alternate methods of operation are to be approved. Please provide the vendor and cost information for the purchase and installation of such a system.

Lewis and Associates of Tampa, a reputable industrial instruments and control systems company, have informed us that the ballpark cost figure would be about \$45,000.00, with an additional annual charge of about \$4,000.00 for calibration and related activities. The CEM they have provided a cost estimate for is a Teledyne chemiluminescence analyzer unit, the specification information for which is included with this submission and Mosaic would install this or an equivalent instrument.

2. The video clips of the dump chute operation submitted in your response were done when the kiln was down. Please clarify if the dump chute operation is being utilized now while the kiln is operating. If it is being utilized, please provide video clips of the dump chute operation while the kiln is operating. The Department would like to get a sense of fugitive emissions taking place during dump chute operation.

The dump chute operation is being utilized on an as needed basis when unpredictable mechanical operational failure of the kiln occurs and it then becomes necessary to divert the resulting off-spec product from the kiln. A video clip of the dump chute operation while the kiln was operating the morning of December 14, 2010 is included on a diskette with this submission.

3. A warning letter (WL08-0044AS53SWD) was issued on June 24, 2010, regarding possible violations of steam to fuel ratios under normal operating conditions versus compliance testing conditions. Please provide data of steam to fuel ratios (lb/hr per cfm or gal/hr for oil) in a graphical form including the kiln production rate (tons per hour) on the same chart to the Department for a two year period (July 2008 - June 2010). The time scale should be at least a weekly average. Indicate on the chart in the kiln was operating under normal operating conditions or under dump chute operating conditions.

Charts showing kiln production, steam and fuel rates for the period July 2008 to June 2010 is included with this submission. Calculated steam to natural gas fuel ratio is shown and dump chute operation is indicated on the chart.

4. Please provide copy of the engineering study conducted by Mosaic which indicated the ratio of two key parameters (steam and fuel flow) appears to provide a basis for predicting NO_x emissions. Provide all the empirical data considered in the engineering study as well as any other data that was relied upon to determine an initial minimum steam to fuel ratio for normal operation, dump chute operation and hot/cold startup method of operation.

This engineering study is the one that was conducted on June 26, 2008 and it, as the Department correctly notes, *appears* to provide a basis for predicting NO_x emissions. As explained in our earlier RAI#1 item 5 response, only three data points, run numbers 6, 7 and 8 can be considered to depict dump chute operation conditions in terms of kiln feed belt values of 4.0 tons per hour and the corresponding NO_x values do not correlate in a manner that would allow one to confidently arrive at any correlation. This study data has been provided to the Department in the October 21, 2009 air permit application submission and that study data table has all the empirical data that was considered in that study, empirical data such as scrubber inlet temperature, scrubber liquor pH, and scrubber section pressure drop and so on. As we have stated, it was only an engineering study and not any full-fledged compliance type of stack testing and, as such, no formal report was completed other than a spreadsheet documentation of the NO_x analyses and the relevant operation data.

5. Please provide copies of the June 26, 2008 test report to the Department and Southwest District Office. The special test was conducted for NO_x measurements under normal and dump chute operation.

As explained in item 4 above, the June 26, 2008 engineering study was not a full-fledged stack test and no formal report was completed. The test results were summarized and captured in a spreadsheet format and this has been provided to the Department.

6. The response to our previous request for providing a marked up version of the existing synthetic minor source construction permit (1050059-024-AC) is inadequate. The applicant is not only requesting two methods of operation (1) the

dump chute method operation and (2) hot/cold startup method of operation, but also requesting to monitor and record the steam and fuel flow. Additionally, the applicant will be establishing minimum indicator values of the steam to fuel ratios during normal operation, dump chute and hot/cold startup operations. The NO_x emissions will be different under the dump chute method of operation which will require additional testing unless NO_x CEMS is installed. Therefore, considering all these changes, please provide a marked up version of the existing synthetic minor source permit with the changes mentioned above.

A marked up version of the existing synthetic minor source permit, viz. 1050059-024-AC is provided with this submission and it incorporates conditions and specifics of 1050059-044-AC which was subsequently issued.

As discussed with your permitting engineer, Ms. Marilyn Koletzke and in keeping with the Consent Order OGC File No. 10-3335, an air construction permit application for the installation, calibration and operation of a NO_x CEM is included with this submission. As this is a perfunctory application for a CEM with no process rates, emissions and such information, only the first fourteen pages of the long form application is being provided.

If you have any questions concerning the information in this response, please feel free to contact me at (813) 500-6478.

Sincerely,



Rama Iyer, P.E.
Senior Engineer
Environmental

RAI#2 PE Seal

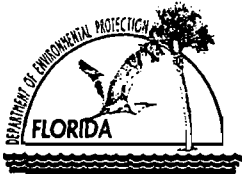
AIR CONSTRUCTION PERMIT APPLICATION

New Wales Facility

C Kiln NO_x CEM

January 2011





Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Mosaic Fertilizer LLC	
2. Site Name: New Wales Facility	
3. Facility Identification Number: 1050059	
4. Facility Location... Street Address or Other Locator: 3095 Highway 640 City: Mulberry County: Polk Zip Code: 33860	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Rama Iyer	
2. Application Contact Mailing Address... Organization/Firm: Mosaic Fertilizer LLC Street Address: 13830 Circa Crossing Drive City: Lithia State: FL Zip Code: 33547	
3. Application Contact Telephone Numbers... Telephone: (813) 500-6478 ext. Fax: (813) 571 - 6908	
4. Application Contact E-mail Address: rama.iyer@mosaicco.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3. PSD Number (if applicable):
2. Project Number(s):	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

- Air construction permit.
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

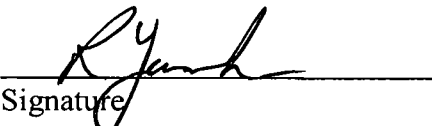
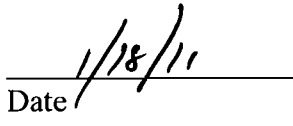
Application Comment

This application is submitted for installing a NO_x Continuous Emission Monitor (CEM) at the 'C' Kiln stack in emission unit EU074 at the New Wales Facility pursuant to Consent Order OGC File No. 10-3335. As such only pertinent nominal pages of this form are completed and no emissions information, flow diagrams or the like is being provided.

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name : Ron Yasurek, Plant Manager
2. Owner/Authorized Representative Mailing Address. Organization/Firm: Mosaic Fertilizer LLC Street Address: 13830 Circa Crossing Drive City: Lithia State: FL Zip Code: 33547
3. Owner/Authorized Representative Telephone Numbers... Telephone: Telephone: (863) 500-6300 Fax: (863) 571-7094
4. Owner/Authorized Representative E-mail Address: ronald.yasurek@mosaicco.com
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.</i>  Signature  Date

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the “application responsible official” need not be the “primary responsible official.”

1. Application Responsible Official Name:
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source or CAIR source.
3. Application Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
4. Application Responsible Official Telephone Numbers Telephone: () Fax: ()
5. Application Responsible Official E-mail Address:

APPLICATION INFORMATION

6. Application Responsible Official Certification:

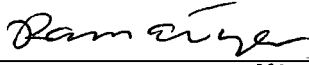
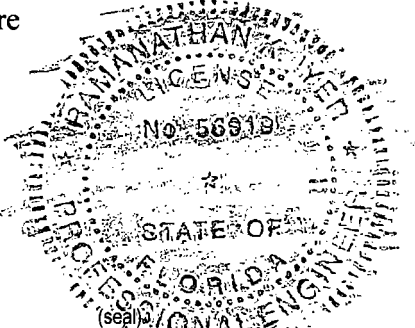
I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

Signature

Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Rama Iyer Registration Number: 56919
2. Professional Engineer Mailing Address... Organization/Firm: Mosaic Fertilizer, LLC Street Address: 13830 Circa Crossing Drive City: Lithia State: FL Zip Code: 33547
3. Professional Engineer Telephone Numbers... Telephone: (813) 500-6478 Fax: (813) 571-6908
4. Professional Engineer E-mail Address: rama.iyer@mosaicco.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> <p style="text-align: center;"> _____ Signature</p> <p style="text-align: right;"><i>January 18, 2011</i> _____ Date</p> <p style="text-align: center;"></p> <p style="text-align: right;">New Wales Facility C Kiln NO_x CEM AC Application</p>

* Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 396.6 North (km) 3078.9		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 27/49/56 Longitude (DD/MM/SS) 82/03/00	
3. Governmental Facility Code: O	4. Facility Status Code: A	5. Facility Major Group SIC Code: 28	6. Facility SIC(s) Primary: 2874, 2819
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: Rama Iyer
2. Facility Contact Mailing Address... Organization/Firm: same Street Address: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> City: State: Zip Code: </div>
3. Facility Contact Telephone Numbers: Telephone: () ext. Fax: ()
4. Facility Contact E-mail Address:

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> City: State: Zip Code: </div>
3. Facility Primary Responsible Official Telephone Numbers... Telephone: () - ext. Fax: () -
4. Facility Primary Responsible Official E-mail Address:

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a “major source” and a “synthetic minor source.”

1. <input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source	
3. <input type="checkbox"/> Title V Source	
4. <input type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. <input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7. <input type="checkbox"/> Synthetic Minor Source of HAPs	
8. <input type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. <input type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

FACILITY INFORMATION

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1.	Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____
2.	Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____
3.	Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____

Additional Requirements for Air Construction Permit Applications

1.	Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (existing permitted facility)
2.	Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): <input type="checkbox"/> Attached, Document ID: _____
3.	Rule Applicability Analysis: <input type="checkbox"/> Attached, Document ID: _____
4.	List of Exempt Emissions Units: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (no exempt units at facility)
5.	Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
6.	Air Quality Analysis (Rule 62-212.400(7), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
7.	Source Impact Analysis (Rule 62-212.400(5), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
8.	Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9.	Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
10.	Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

FACILITY INFORMATION

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications N/A

- | |
|---|
| 1. List of Exempt Emissions Units:
<input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (no exempt units at facility) |
|---|

Additional Requirements for Title V Air Operation Permit Applications NA

- | |
|--|
| 1. List of Insignificant Activities: (Required for initial/renewal applications only)
<input type="checkbox"/> Attached, Document ID: __ <input type="checkbox"/> Not Applicable (revision application) |
| 2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)
<input type="checkbox"/> Attached, Document ID: _____
<input type="checkbox"/> Not Applicable (revision application with no change in applicable requirements) |
| 3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)
<input type="checkbox"/> Attached, Document ID: _____
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing. |
| 4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only)
<input type="checkbox"/> Attached, Document ID: _____
<input type="checkbox"/> Equipment/Activities Onsite but Not Required to be Individually Listed
<input type="checkbox"/> Not Applicable |
| 5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)
<input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable |
| 6. Requested Changes to Current Title V Air Operation Permit:
<input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable |

FACILITY INFORMATION

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

1. Acid Rain Program Forms:

Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):

Attached, Document ID: _____ Previously Submitted, Date: _____

Not Applicable (not an Acid Rain source)

Phase II NO_x Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):

Attached, Document ID: _____ Previously Submitted, Date: _____

Not Applicable

New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):

Attached, Document ID: _____ Previously Submitted, Date: _____

Not Applicable

2. CAIR Part (DEP Form No. 62-210.900(1)(b)):

Attached, Document ID: _____ Previously Submitted, Date: _____

Not Applicable (not a CAIR source)

Additional Requirements Comment

Marked up 1050059-024-AC

PERMITTEE:

~~IMC AGRICO COMPANY~~
MOSAIC FERTILIZER, LLC
3095 Highway 640
Mulberry, Florida 33860

File No.: 1050059-~~02466~~-AC
Permit No.: PSD-FL-244

SIC No.: 2874
Project: Multifos Plant Expansion
Expires: ~~September 30, 2000~~ 1
year from issue date

PROJECT AND LOCATION:

Permit for the expansion/modification of the Multifos Plant by constructing a new ~~25~~17 TPH kiln (Kiln C), pug mill, cooler, crusher, screens, mills and associated processing and air pollution control equipment at the IMC Agrico (New Wales) facility, 3095 Highway 640, Mulberry, Polk County, Florida. UTM Coordinates are Zone 17; 396.6 km E; 3078.9 km N.

STATEMENT OF BASIS:

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application received October 27, 2009, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

Appendices and attachments made a part of this permit:

Appendix BD	Best Available Control Technology Determination
Appendix CSC	Emission Unit(s) Common Specific Conditions
Appendix GC	Construction Permit General Conditions

Howard L. Rhodes, Director
Division of Air Resources
Management

AIR CONSTRUCTION PERMIT 1050059-024-AC

SECTION I. FACILITY INFORMATION

FACILITY DESCRIPTION

The existing Multifos animal feed ingredient facility consists of a common mixed feed preparation section for feeding phosphate-containing material to ~~two~~three rotary defluorination kilns and associated processing and handling equipment. ~~This permit is for an expansion project to increase the capacity of the existing 30 tons per hour plant to 5547 tons per hour by installing a new kiln and higher capacity mixing equipment to prepare the feed material for all three kilns.~~ This permit is to also to allow the operation of the new "C" kiln in a dump chute method and hot/cold startup method of operation. A NO_x CEM will also be installed to ensure proper operation of the "C" kiln.

REGULATORY CLASSIFICATION

The Multifos plant is classified as a "Major or Title V Source" per Rule 62-210.200, F.A.C., Definitions, because emissions of at least one regulated air pollutant exceed 100 tons per year (TPY).

Phosphate processing plants are listed as a Major Facility Category in Table 62-212.400-1, F.A.C., "Major Facility Categories." Therefore, stack and fugitive emissions of over 100 TPY of a regulated pollutant are sufficient to classify the installation as a "Major Facility" per the definitions in **Rule 62-210.200, F.A.C.**, subject to the Significant Emission Rates given in Table 62-212.400-2, F.A.C. and the requirements of **Rule 62-212.400, F.A.C.**, Prevention of Significant Deterioration (PSD) and Best Available Control Technology (BACT).

PERMIT SCHEDULE:

- 07/31/98 Notice of Intent published in the Lakeland Ledger
- 07/23/98 ___ Distributed ——— Intent to Issue Permit
- 05/21/98 Application deemed complete
- 12/01/97 Received Application

RELEVANT DOCUMENTS:

The documents listed below are the basis of the permit. They are specifically related to this permitting action but do not supersede the conditions given in the permit. These documents are on file with the Department.

- Application received October 27, 2009
 - Departments's letters dated March 30, 2010 and July 23, 2010
 - Applicants completeness responses dated June 25, 2010 and January 19, 2011
 - Synthetic Minor Permit Application 1050059-044-AC received September 26, 2003 Department's Incompleteness Letter mailed October 24, 2003
 - Applicant's Incompleteness response received January 12, 2004
 - Department's letter mailed January 15, 2004 extending expiration date of permit PSD-FL-244 and confirming agreement with applicant to retest scrubbers for PSD permit revision
 - Applicant's letter received February 9, 2004 proposing a protocol and schedule for testing the scrubbers for PSD permit revision
-

AIR CONSTRUCTION PERMIT 1050059-024-AC

SECTION I. FACILITY INFORMATION

- Applicant's letter received June 10, 2004 requesting extension of PSD-FL-244 for reactivation of Synthetic Minor Permit Application 1050059-044-AC (see Permitting Note below)
- Application received December 1, 1997
- Department's letters dated December 16 and 31, 1997
- Comments from the National Park Service dated August 25, 1998
- Applicant's completeness responses dated March 5, April 15, April 23, and May 21, 1998
- Department's Intent to Issue dated July 23, 1998 and associated documents
- Applicant's letters dated August 11, August 13 and September 3, 1998
- Department's Final Determination accompanying permit

PERMITTING NOTE:

This Synthetic Minor Source Permit supersedes all conditions of Permit No. 1050059-024-AC/PSD-FL-244 that are applicable to Kiln C. However, Permit No. 1050059-024-AC shall continue to apply to the common feed preparation section and other sections of the Multifos Plant and Kilns A and B. Permit No. 1050059-024-AC contains conditions and requirements that resolve past permitting issues applicable to the rest of the Multifos facility that would otherwise have triggered PSD review had those issues been addressed prior to the issuance of PSD-FL-244. The Bureau of Air Regulation in Tallahassee should be consulted regarding future permit applications for physical modification of or a change in the method of operation of Kiln C or associated equipment.

AIR CONSTRUCTION PERMIT 1050059-024-AC

SECTION II. EMISSION UNIT(S) GENERAL REQUIREMENTS

GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications shall be submitted to the Department's Southwest District Office, ~~3804 Coconut Palm Drive, Tampa, Florida 33619-8218~~, 13051 North Telecom Parkway, Temple Terrace, FL 33637-0926. All applications for permits to construct or modify an emissions unit(s) *subject to the Prevention of Significant Deterioration or Nonattainment (NA) review requirements* should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), 2600 Blair Stone Road (MS 5505), Tallahassee, Florida 32399-2400 (phone number 850/488-0114).
2. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in *Appendix GC* of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. **[Rule 62-4.160, F.A.C.]**
- ~~3. Emission Unit(s) Common Specific Conditions: The owner and operator is subject to and shall operate under the attached Emission Unit(s) Common Specific Conditions listed in *Appendix CSC* of this permit. The Emission Unit(s) Common Specific Conditions are binding and enforceable pursuant to Chapters 62-204 through 62-297 of the Florida Administrative Code.~~
- 4.3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
- ~~5. Forms and Application Procedures: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. **[Rule 62-210.900, F.A.C.]**~~
- ~~6.4. Expiration: This air construction permit shall expire on ~~September 30, 2000~~ March 30, 2012 **[Rule 62-210.300(1), F.A.C.]**. The permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. However, the permittee shall promptly notify the Department's Southwest District Office of any delays in completion of the project which would affect the startup day by more than 90 days. **[Rule 62-4.090, F.A.C.]**~~
5. Application for Title V Permit: An application for a Title V operating permit, pursuant to Chapter 62-213, F.A.C., must be submitted to the Department's Southwest District Office. **[Chapter 62-213, F.A.C.]**
- 7.6. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-110, 62-204, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Title 40, Part 60, adopted by reference in the Florida Administrative Code (F.A.C.) regulations. The facility is subject to all applicable provisions of the Code of Federal Regulations Title 40, Part 63, Subpart BB. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. **[Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]**

AIR CONSTRUCTION PERMIT 1050059-024-AC

SECTION II. EMISSION UNIT(S) GENERAL REQUIREMENTS

Permit Approval: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21(r)(2)].

Annual Reports: Pursuant to Rule 62-210.370(2), F.A.C., Annual Operation Reports, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports using DEP Form 62-210.900(4) shall be sent to the DEP's Southwest District office by March 1st of each year.

Stack Testing Facilities: Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.

Quarterly Reports: Quarterly excess emission reports, in accordance with 40 CFR 60.7 (a)(7) (c) (1997 version), shall be submitted to the DEP's Southwest District office.

New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

AIR CONSTRUCTION PERMIT 1050059-024-AC

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

SPECIFIC CONDITIONS - MULTIFOS PRODUCTION PLANT:

The following Specific Conditions apply to the following emission units:

EMISSIONS UNIT NO.	EMISSIONS UNITS DESCRIPTION
030	Multifos Soda Ash Hopper Car Unloading System
031	Multifos Soda Ash Conveying System Baghouse
032	Multifos Kiln A Cooler Baghouse
033	Multifos Kiln B Cooler Baghouse
034	Multifos Plant Milling & Sizing West Baghouse
035	Multifos Plant Milling & Sizing East Baghouse
036	Multifos Production Plant
	Multifos Kiln C Cooler Baghouse
	Multifos Kiln C Milling & Sizing Baghouse
038	Multifos Milling & Sizing System Surge Bin Baghouse

The following Specific Conditions apply only to the following Kiln C emission units:

EMISSION UNIT NO.	EMISSION UNITS DESCRIPTION
074	Kiln C Scrubber Stack
075	Kiln C Cooler Baghouse
076	Kiln C Milling & Sizing Baghouse

- The above emissions units shall comply with all applicable provisions of Chapter 62-296, Stationary Sources - Emission Standards, Florida Administrative Code (F.A.C.).
- Emissions from the above emissions units shall not exceed the following limits (PM includes PM₁₀):
[Rules 62-204.800(7)(b)10; 62-210.200; 62-212.400, F.A.C.]

POLLUTANT	EMISSION LIMIT	LIMIT BASIS
-F (Kiln A/B Stack)	4.2 lb/hr	Current limit for scrubbers
-F (" C Stack)	0.36 lb/hr	0.038 lb F/ton P ₂ O ₅ input to kiln (BACT)
-PM (" A/B Stk)	29.8 lb/hr	Current limit for scrubbers
-PM (" C Stack)	14.3 lb/hr	1.50 lb/ton P ₂ O ₅ input to kilns (BACT)
-SO ₂ (" A/B Stack)	Min. caustic flow in lieu of limit	15 gph 50% NaOH (Resolution of past permitting)
-SO ₂ (" C Stack)	8.7 lb/hr	98% Efficient Scrubber based on 4/9/98 test
-NO _x (" A/B Stack)	Max. fuel usage in lieu of limit	56 MM BTU/hr maximum for each kiln
-NO _x (" C Stack)	To be determined following testing	Test will determine need for limit
-Metals (" C Stack)	To be determined following testing	Test will determine need for limit
-VE (" A/B Stack)	<20% opacity	Current limit for scrubbers
-VE (" C Stack)	15% opacity	BACT limit for scrubbers
-VE ("A/B baghses.)	<20% opacity	Current permit limit
-VE ("C baghouses)	5% opacity	BACT limit for baghouses
POLLUTANT	EMISSION LIMIT	LIMIT BASIS

AIR CONSTRUCTION PERMIT 1050059-024-AC

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

F (Stack)	0.66 lb/hr(1) and 2.90 TPY	Synthetic minor status
PM/PM10 (Stack)	5.68 lb/hr(2) and 24.90 TPY	Synthetic minor status
PM10 (Stack)	3.40 lb/hr(3) and 14.90 TPY	Synthetic minor status
SO2 (Stack)	9.11 lb/hr and 39.90 TPY	Synthetic minor status
NOx (Stack)	9.11 lb/hr and 39.90 TPY	Synthetic minor status
VE (Stack)	15% opacity	Test Data
VE (Baghouses)	5% opacity	Test Data

3. ~~The input rate of the mixed feed preparation section of the Multifos plant (includes all equipment for processing and storing mixed feed) Kiln C shall not exceed 10017 tons per hour and 148,920 tons per year of raw materials. Since the most recent test (March 2004) was at 11 tons of feed per hour, the production rate is limited to 110 percent of that rate, or 12.1 tons of feed per hour, above which additional compliance testing is required to gain a higher rate. [Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]~~
4. ~~The input rate of the kilns, screens, mills and product section of the Multifos plant (includes all equipment for feeding materials to the kilns, all thermal processing equipment, coolers, crushers, screens, mills and associated materials storage and handling equipment) shall not exceed the values listed below.~~

UNIT	MAXIMUM HOURLY INPUT RATE*
Kiln A	15 tons/hr (5.7 tons P ₂ O ₅ /hr)
Kiln B	15 tons/hr (5.7 tons P ₂ O ₅ /hr)
Kiln C	25 tons/hr (9.5 tons P ₂ O ₅ /hr)
Product Handling Operations	75 tons/hr

- 5.4. ~~The above emission units shall be allowed to operate continuously (8760 hours/year). The total annual production rate of Kilns A & B combined shall not exceed 140,000 tons of multifos. The total annual input rate to Kiln C shall not exceed 219,000 tons of mixed feed. [Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]~~
- 6.5. ~~A new stack shall be installed for the Kiln C exhaust. To control emissions from Kiln C, the permittee shall install and operate a pond water/caustic scrubbing system designed for 99.9+% removal of fluorides and 98.0+% removal of SO₂. To prevent recovered SO₂ from being stripped out of acidic pond water that may be recirculated to other scrubbers, no effluent from caustic scrubbing shall be discharged to the existing process water pond system or any other acidic waste water that can be recirculated to any scrubber. Spent caustic solution from the Kiln C scrubbing system shall be routed to the scrubbing systems for Kilns A and B. The 50% caustic makeup flow to the Kiln C caustic scrubber shall be measured and recorded by an inline totalizing flowmeter with certified accuracy of ± 5%. The disposition of caustic scrubber effluent shall be in accordance with the applicant's letter dated June 16, 1999. Prior to startup of Kiln C, the permittee shall obtain approval from the Bureau of Air Regulation in Tallahassee regarding the disposition of caustic scrubber effluent. A new stack shall be installed for the exhaust from Kiln C. A NOx emission limit shall be established for Kiln C following the initial performance test. Kiln C shall be fired with natural gas unless it is not available, in which case only new No. 2 fuel oil having a maximum sulfur content of 0.5% (wt.) may be fired for up to 1,225 hours per year. The maximum fuel firing rate of Kiln C shall be 56 MMBTU/hr. [Rules 62-4.070 and 62-212.400, F.A.C.]~~

AIR CONSTRUCTION PERMIT 1050059-024-AC

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

~~7. To resolve the issue of past permitting decisions on Kilns A & B, the permittee agrees to scrub each kiln's exhaust gases with a minimum of 100 gpm of recirculated sodium sulfite solution injected onto the packing or demisting sections of the existing Kiln A & B scrubbers. The scrubbing solution shall consist of spent caustic solution from the Kiln C scrubbing system, when operating, and a minimum of 15 gallons per hour of 50% caustic solution (total for both kilns) with the 50% caustic makeup flow measured and recorded by an inline totalizing flowmeter with certified accuracy of $\pm 5\%$. To prevent recovered SO_2 from being stripped out of acidic pond water that may be recirculated to other scrubbers, no effluent from caustic scrubbing shall be discharged to the existing process water pond system or any other acidic waste water that can be recirculated to any scrubber. Prior to startup of caustic scrubbing, the permittee shall obtain approval from the Bureau of Air Regulation in Tallahassee regarding the disposition of caustic scrubber effluent. To limit NO_x emissions, fuel input to Kilns A and B shall be limited to 56 MMBTU/hr for each kiln. An initial EPA Method 8 performance test for SO_2 and a Method 7E test for NO_x emissions from the Kiln A/B stack shall be required to establish emissions offsets for future contemporaneous production increases that may be applied for by the permittee as a result of installing and operating the caustic scrubbing system. The permittee shall also conduct a one-time test for total fluoride emissions in the mixed feed storage building while the input rate to the mixed feed preparation section is at least 90 tons per hour. Results of these tests shall be sent to the Bureau of Air Regulation in Tallahassee for placement in the permittee's file. The test results shall be used for future reference only and shall not be used for current compliance or enforcement purposes. The Bureau of Air Regulation in Tallahassee shall be consulted regarding future applications for physical modification of or a change in the method of operation of any of the three kilns or associated equipment. [Rules 62-4.070 and 62-212.400, F.A.C.]~~

~~5. Fuels burned in the phosphate rock dryer shall be either natural gas or new No. 6 or a better grade of fuel oil, except that annual fuel oil usage shall not exceed 50% of natural gas usage on an equivalent heat content basis unless gas curtailment forces greater usage of oil. The same fuel restrictions shall apply to Kilns A & B except that on-specification used oil containing no hazardous wastes (and generated on-site only) may be burned in quantities up to 10% of the total annual fuel consumption on an equivalent heat content basis. [Rule 62-210.200, F.A.C.]~~

~~6. As provided in the current operation permit (AO53-206083B) for disposal purposes, petroleum-contaminated soils from the cleanup of on-site spills of petroleum products may be added to the kiln feed at a maximum rate of 220 ft^3 per week for all three kilns combined. Each kiln receiving petroleum-contaminated soil shall be operating normally at a minimum feed rate of 8 tons per hour when the soil is fed to the kiln. [Rule 62-210.200, F.A.C.]~~

~~7. Compliance with the emission limits for F, PM/ PM_{10} , SO_{25} , NO_x and VE shall be determined using the following reference methods as described in 40 CFR 60, Appendix A (1996, version), adopted by reference in Chapter 62-204, F.A.C.~~

~~Method 13A/B Determination of Total Fluoride Emissions from Stationary Sources~~

~~Method 5 Determination of Particulate Emissions from Stationary Sources~~

~~Method 7E Determination of Nitrogen Oxides from Stationary Sources.~~

~~Method 8 Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources.~~

~~Method 9 Visual Determination of the Opacity of Emissions from Stationary Sources.~~

AIR CONSTRUCTION PERMIT 1050059-024-AC

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

~~In addition to the test methods specified above, as part of the performance testing requirements, a special test for metals (Cr, Hg, Ni, Cd) emissions shall be conducted for Kiln C according to the following reference method as described in 40 CFR 60, Appendix A cited above.~~

~~Method 29~~ Determination of Metals Emissions from Stationary Sources

~~The permittee shall provide reasonable assurance of compliance by maintaining a continuous written record (log) of the operating parameters for all scrubbers in the Multifos plant. At a minimum, the following information shall be manually recorded during each hour of operation: scrubber liquid flow rates, scrubber gas pressure drop, fan motor amperage, name of person recording the information. The log shall be maintained as required by Specific Condition No. 10 below.~~

~~The above emissions units shall comply with all applicable requirements of Rule 62-297.310, F.A.C. General Test Requirements and 40 CFR 60.8 Performance Tests. [Rule 62-4.070, F.A.C.]~~

- ~~8. Testing of emissions shall be conducted with the emissions units operating at permitted capacity, which is defined as 90-100% of the maximum operating rate allowed by the permit. This also applies to the mixed feed preparation section. If it is impracticable to test at permitted capacity, then the unit may be tested at less than 90% of the maximum operating rate allowed by the permit; in this case, subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen consecutive days for the purpose of additional compliance testing to regain the permitted capacity in the permit. [Rules 62-204.800, 62-297.310, 62-297.400, 62-297.401, F.A.C., and 40 CFR 60 Appendix A and 40 CFR 60.8, Subpart A]~~
- ~~9. This facility shall maintain a central file containing all measurements, records, and other data that are required to be collected pursuant to this permit. For all air pollution control equipment affected by this permit, the permittee shall keep a daily operation and maintenance log to include, at a minimum, calibration logs for all instruments, maintenance/repair logs for any work performed on equipment or instruments, all measurements, records, and any other data required to be maintained by the permittee shall be retained for at least five (5) years following the data on which such measurements, records, or data are recorded. These data shall be made available to Department staff upon request. [Rule 62-4.070(3), F.A.C.]~~
- ~~10. Plant and emission control equipment operating parameters determined during compliance testing and/or inspection that will establish the proper operation of each emissions unit shall be included in the Title V permit. [Rule 62-297.310, F.A.C. and 62-4.070(3), F.A.C.]~~
- ~~11. The permittee shall install, calibrate, maintain, and operate monitoring devices to determine the mass flow to the mixed feed pug mill and to each of the three kilns. The monitoring devices shall have an accuracy of $\pm 5\%$ over their operating ranges. The permittee shall maintain a daily record of equivalent P_2O_5 feed by first determining the total mass rate in tons/hour of phosphorus-bearing feed using a flow monitoring device meeting the requirements of 40 CFR 60.223(a) and then by proceeding according to 40 CFR 60.224(b)(3). [Rule 62-296.800, F.A.C.; 40 CFR 60.223(b)]~~
- ~~12. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320, F.A.C.]~~
- ~~13. The permittee shall not allow any air pollution control device to be circumvented or allow the emission of air pollutants while the applicable air pollution control device is operating improperly. [Rule 62-210.650, F.A.C.]~~
- ~~14. The subject emissions units shall be subject to the following:~~

AIR CONSTRUCTION PERMIT 1050059-024-AC

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

- ~~Excess emissions resulting from startup, shutdown or malfunction of any source shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700, F.A.C.]~~
- ~~Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. [Rule 62-210.700, F.A.C.]~~
- ~~Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest. [Rule 62-210.700, F.A.C.]~~
- ~~In case of excess emissions resulting from malfunctions, each source shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700, F.A.C.]~~

~~15. The permittee shall submit an Annual Operating Report using DEP Form 62-210.900(4) to the Department's Southwest District office by March 1 of the following year for the previous year's operation. [Rule 62-210.370, F.A.C.]~~

6. Kiln C shall be fired with natural gas unless it is not available, in which case only new No. 2 fuel oil having a maximum sulfur content of 0.5% (wt.) may be fired for up to 1,225 hours per year. The maximum fuel firing rate of Kiln C shall be 56 MMBTU/hr. [Rule 62-212.400, F.A.C., PSD-FL-244]

7. As provided in the current operation permit, for disposal purposes, petroleum contaminated soils from the cleanup of on-site spills of petroleum products may be added to the kiln feed at a maximum rate of 220 ft³ per week for all three kilns combined. Each kiln receiving petroleum contaminated soil shall be operating normally at a minimum feed rate of 8 tons per hour when the soil is fed to the kiln. [Rule 62-210.200, F.A.C., PSD-FL-244]

8. Annual compliance with the emission limits for F, PM/PM₁₀, PM₁₀, SO₂, NO_x and VE shall be determined using the following reference methods as described in 40CFR60, Appendix A and 40CFR51, Appendix M, adopted by reference in Chapter 62-204, F.A.C. Quarterly compliance testing for total fluorides is required for the first year prior to obtaining a Title V permit, then annual testing thereafter.

<u>Method 5</u>	<u>Determination of Particulate Emissions from Stationary Sources</u>
<u>Method 7E</u>	<u>Determination of Nitrogen Oxides Emissions from Stationary Sources</u>
<u>Method 8</u>	<u>Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources</u>
<u>Method 9</u>	<u>Visual Determination of Opacity of Emissions from Stationary Sources</u>
<u>Method 13A/B</u>	<u>Determination of Total Fluoride Emissions from Stationary Sources</u>
<u>Method 201A</u>	<u>Determination of PM₁₀ Emissions</u>

The permittee shall provide reasonable assurance of compliance by maintaining a continuous written record (log) of the operating parameters for the Kiln C scrubbers. At a minimum, the following

AIR CONSTRUCTION PERMIT 1050059-024-AC

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

information shall be manually recorded during each hour of operation: scrubber liquid flow rates, scrubber gas pressure drop, fan motor amperage, name of person recording the information. The log shall be maintained as required by Specific Condition No. 10 below. The permittee shall provide reasonable assurance of compliance with NO_x limit of Specific Condition 2 by the installation, operation and maintenance of a continuous emission monitor following all applicable rules and regulations and as stipulated in Consent Order OGC File No. 10-3335. The NO_x compliance CEM parts per million (ppm) value or equivalent pounds/hour will be established and updated based on the annual compliance test following Method 7E. [Rules 62-297.401 and 204.800, F.A.C., PSD-FL-224]

9. The above emissions units shall comply with all applicable requirements of Rule 62-297.310, F.A.C., General Test Requirements and 40 CFR 60.8 Performance Tests. Testing of emissions shall be conducted with the emissions units operating at permitted capacity, which is defined as 90-100% of the maximum operating rate allowed by the permit. This also applies to the mixed feed preparation section. If it is impracticable to test at permitted capacity, then the unit may be tested at less than 90% of the maximum operating rate allowed by the permit; in this case, subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen consecutive days for the purpose of additional compliance testing to regain the permitted capacity in the permit. Quarterly compliance testing for total fluorides is required for the first year under this permit, followed by annual testing thereafter. [Rules 62-4.070, 62-204.800, 62-297.310, 62-297.400, 62-297.401, F.A.C., and 40 CFR 60 Appendix A and 40 CFR 60.8, Subpart A].
10. This facility shall maintain a central file containing all measurements, records, and other data that are required to be collected pursuant to this permit. For all air pollution control equipment affected by this permit, the permittee shall keep a daily operation and maintenance log to include, at a minimum, calibration logs for all instruments, maintenance/repair logs for any work performed on equipment or instruments, all measurements, records, and any other data required to be maintained by the permittee shall be retained for at least five (5) years following the data on which such measurements, records, or data are recorded. These data shall be made available to Department staff upon request. [Rule 62-204.800, F.A.C., PSD-FL-224]
11. Plant and emission control equipment operating parameters determined during compliance testing and/or inspection that will establish the proper operation of Kiln C shall be included in the Title V permit. [Rule 62-297.310, F.A.C. and 62-4.070, F.A.C.]
12. The permittee shall install, calibrate, maintain, and operate monitoring devices to determine the mass flow to the mixed feed pug mill and to Kiln C. The monitoring devices shall have an accuracy of $\pm 5\%$ over their operating ranges. The permittee shall maintain a daily record of equivalent P₂O₅ feed by first ~~determining~~ the total mass rate in tons/hour of phosphorus-bearing feed using a flow monitoring devices meeting the requirements of 40 CFR 60.223(a) and then by proceeding according to 40 CFR 60.224(b)(3). [Rule 62-296.800, F.A.C.; 40 CFR 60.223(b), PSD-FL-224]
13. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320, F.A.C., PSD-FL-224]
14. The permittee shall not allow any air pollution control device to be circumvented or allow the emission of air pollutants while the applicable air pollution control device is operating improperly. [Rule 62-210.650, F.A.C., PSD-FL-224]
15. The subject emissions units shall be subject to the following:

AIR CONSTRUCTION PERMIT 1050059-024-AC

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

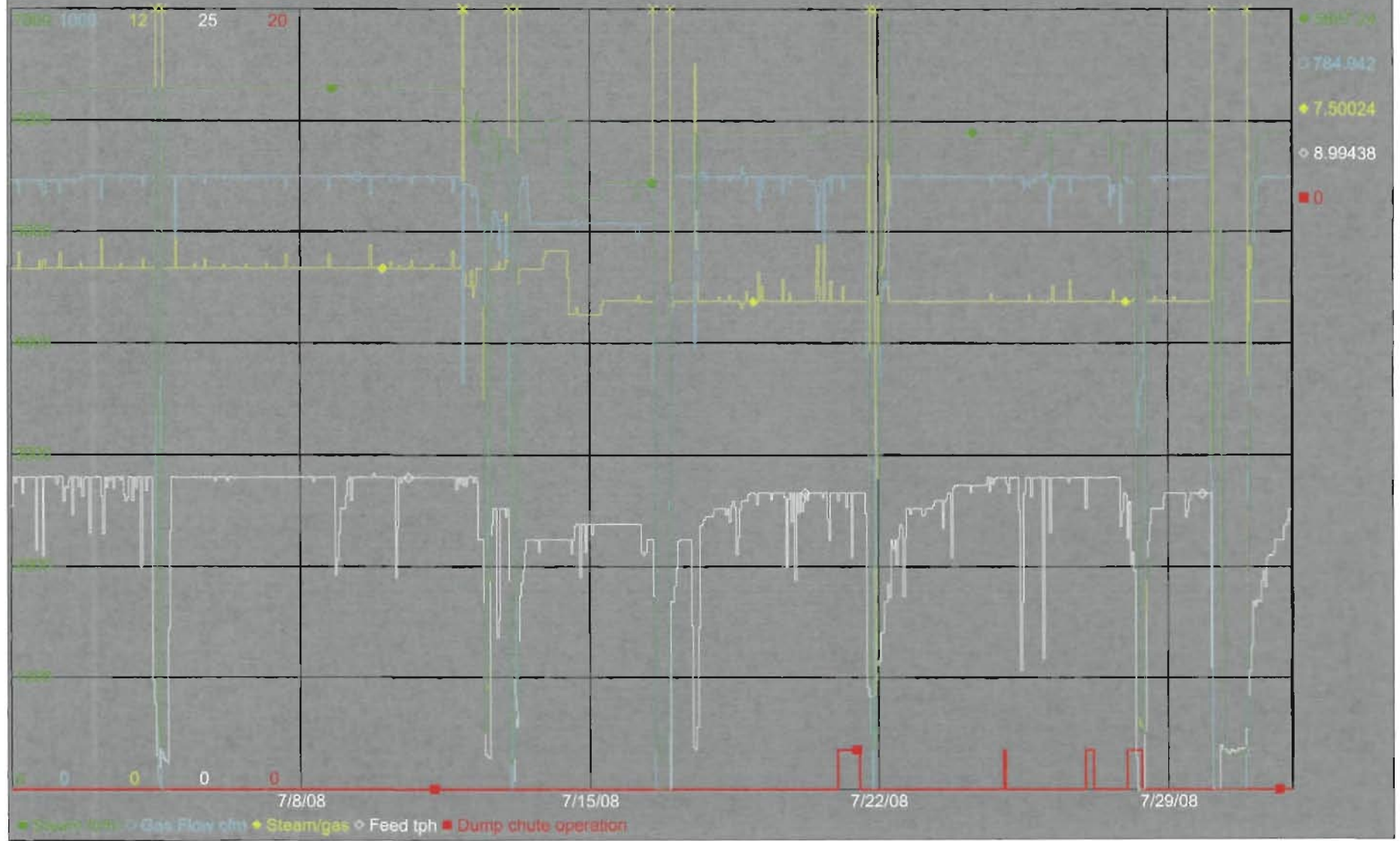
- Excess emissions resulting from startup, shutdown or malfunction of any source shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700, F.A.C., PSD-FL-224]
 - Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. [Rule 62-210.700, F.A.C., PSD-FL-224]
 - Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest. [Rule 62-210.700, F.A.C., PSD-FL-224]
 - In case of excess emissions resulting from malfunctions, each source shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700, F.A.C., PSD-FL-224]
16. The permittee shall submit an Annual Operating Report using DEP Form 62-210.900(4) to the Department's Southwest District office by March 1 of the following year for the previous year's operation. [Rule 62-210.370, F.A.C., PSD-FL-224]

C Kiln Operation Charts

July 2008 thru June 2010

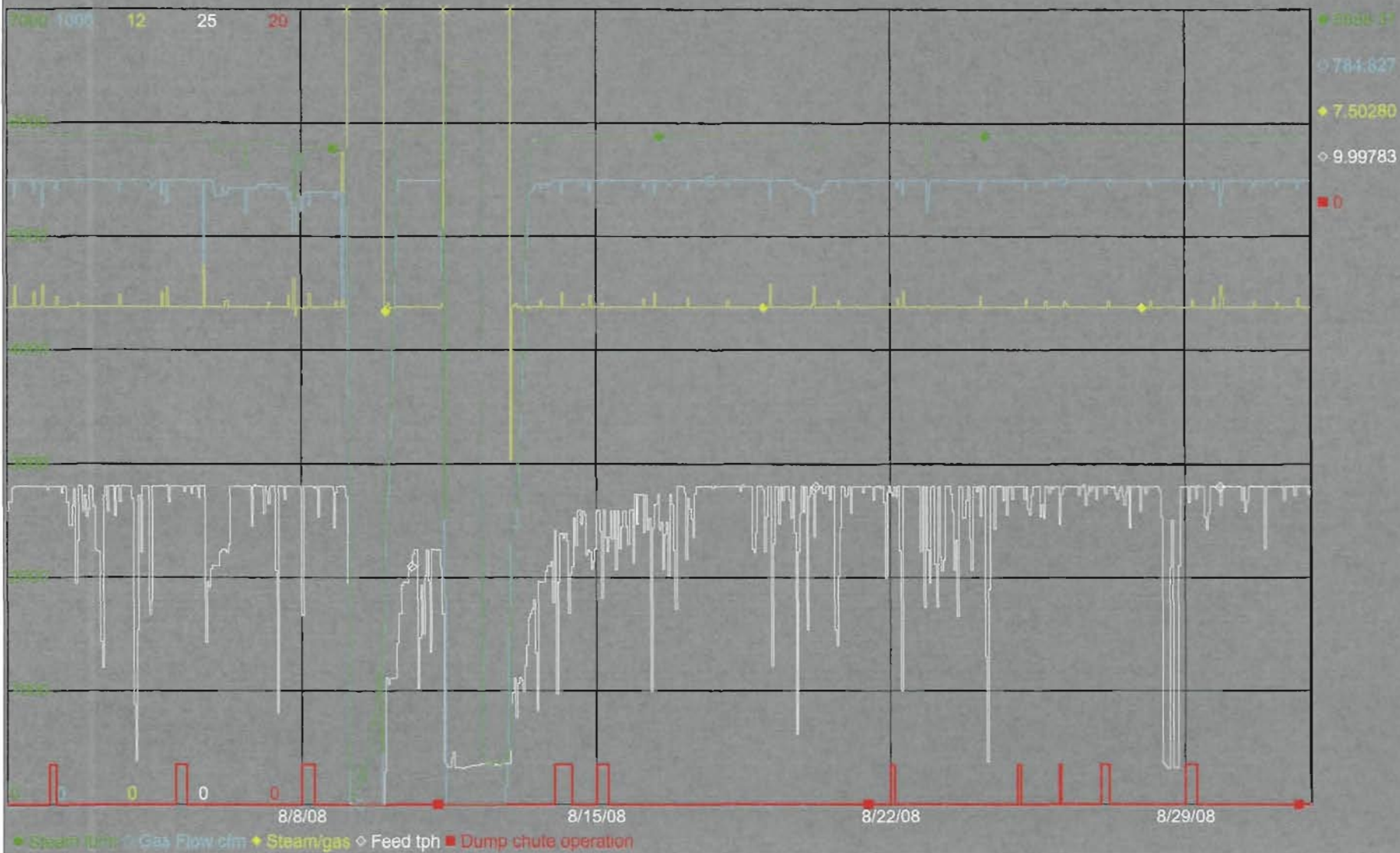
Plot-0

8/1/2008 12:00:00 AM



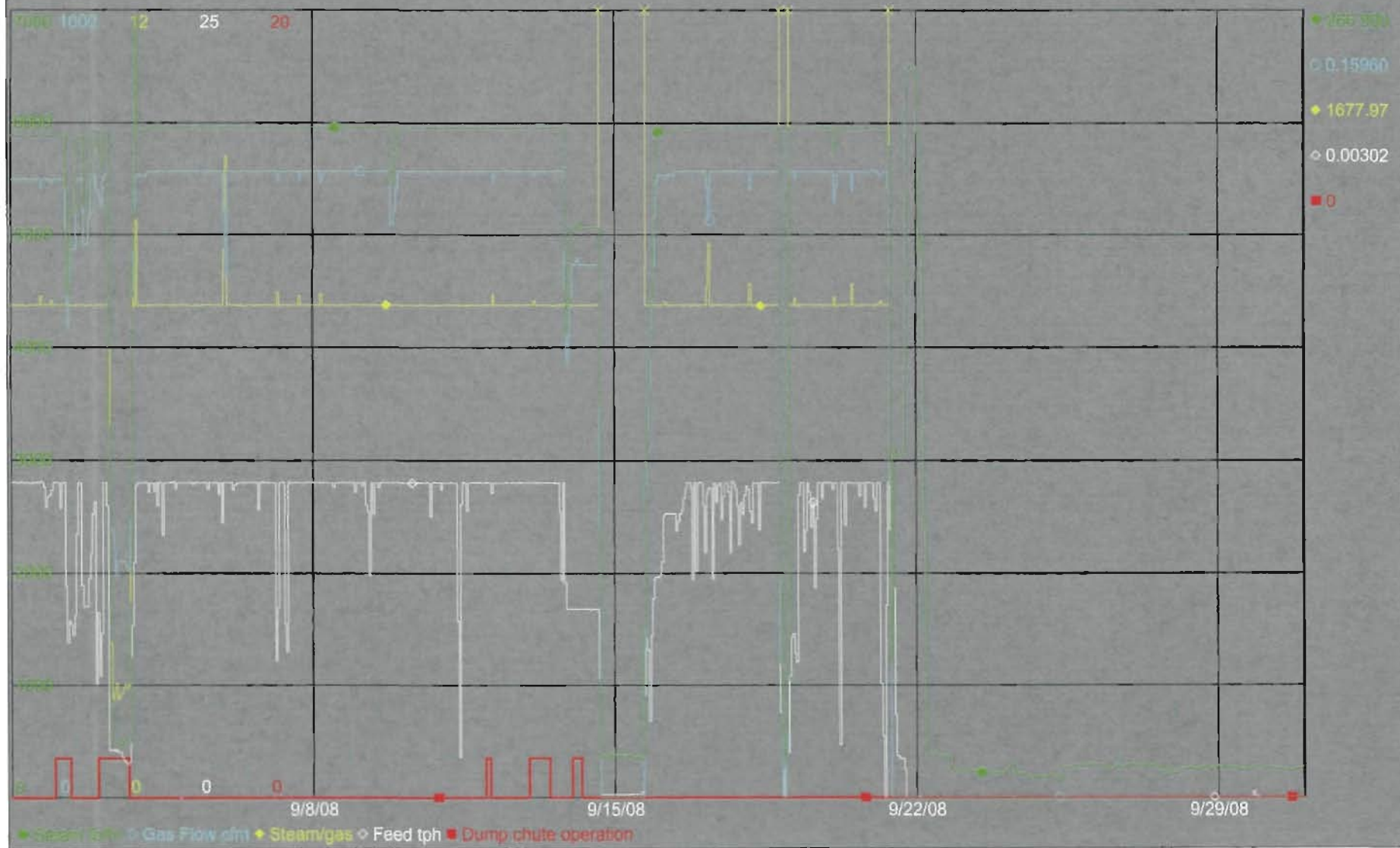
Plot-0

9/1/2008 12:00:00 AM



Plot-0

10/1/2008 12:00:00 AM



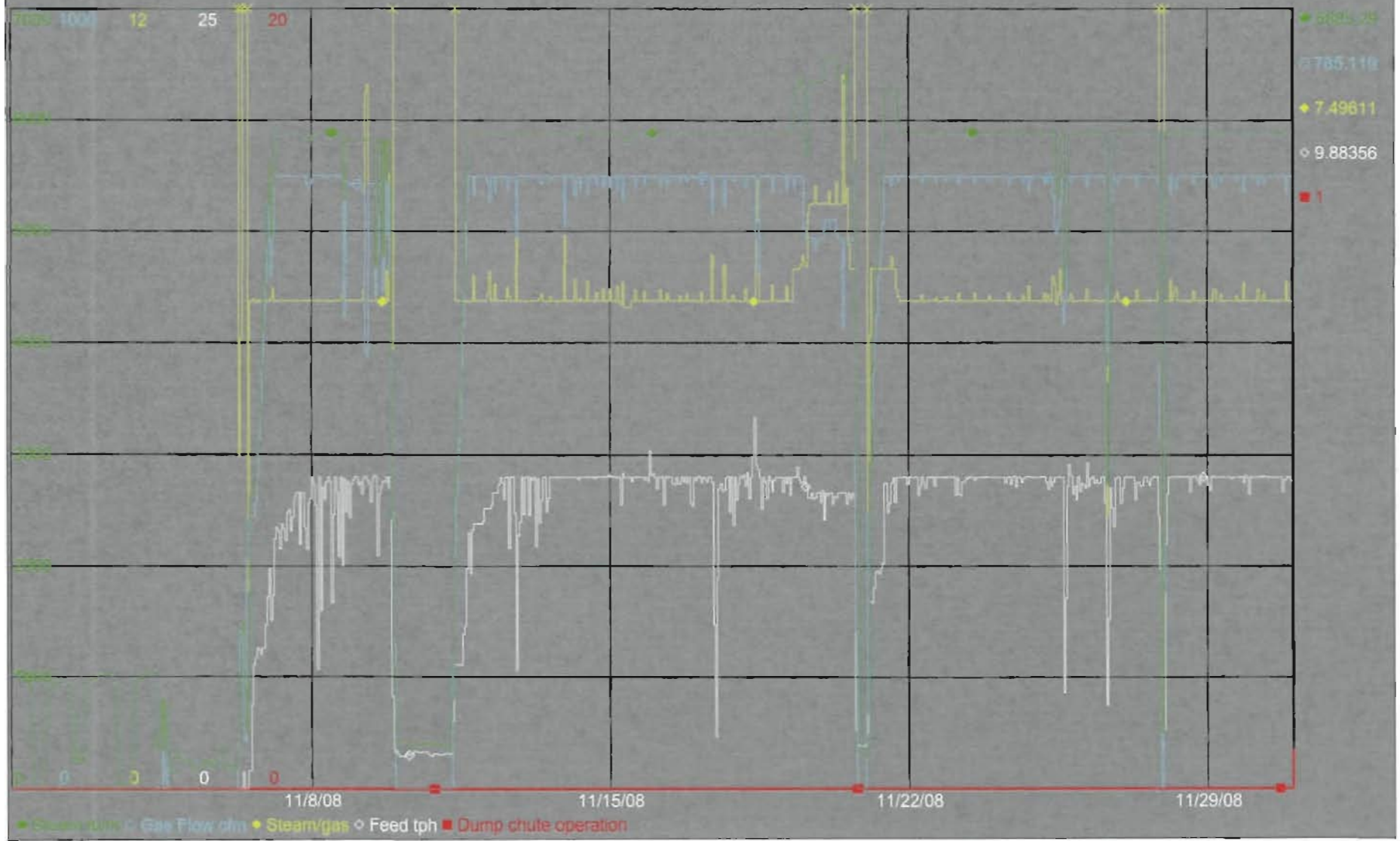
Plot-0

11/1/2008 12:00:00 AM



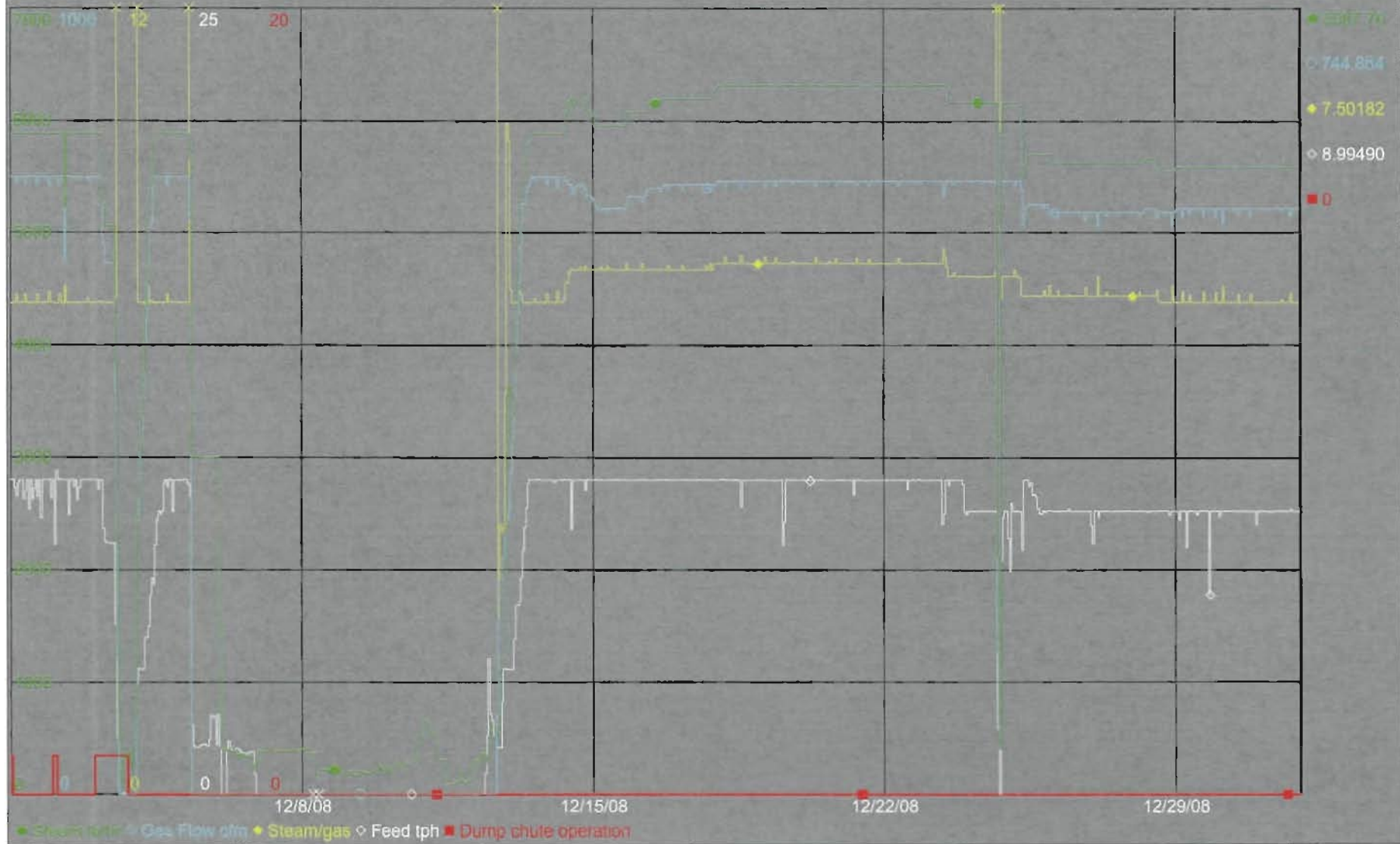
Plot-0

12/1/2008 12:00:00 AM



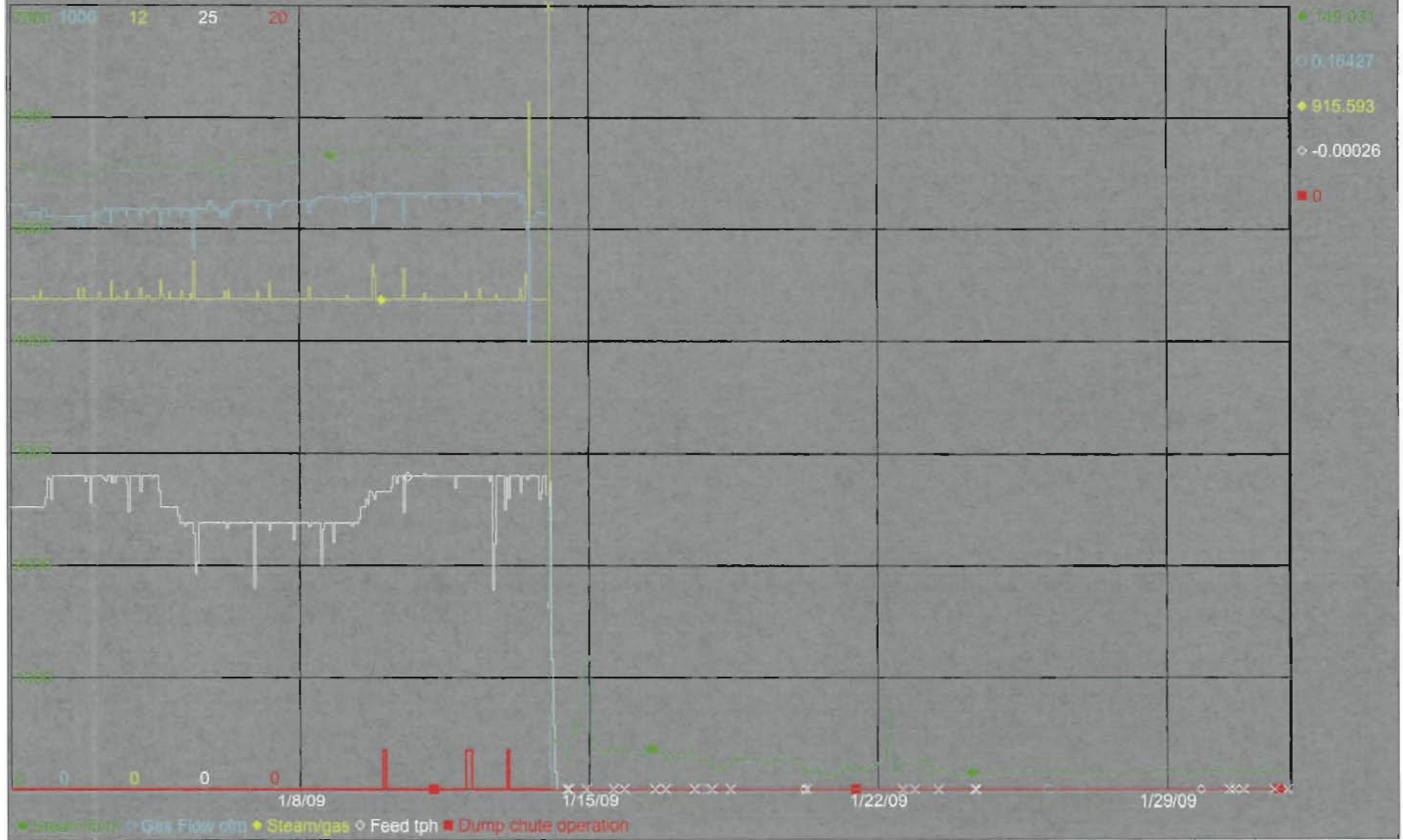
Plot-0

1/1/2009 12:00:00 AM



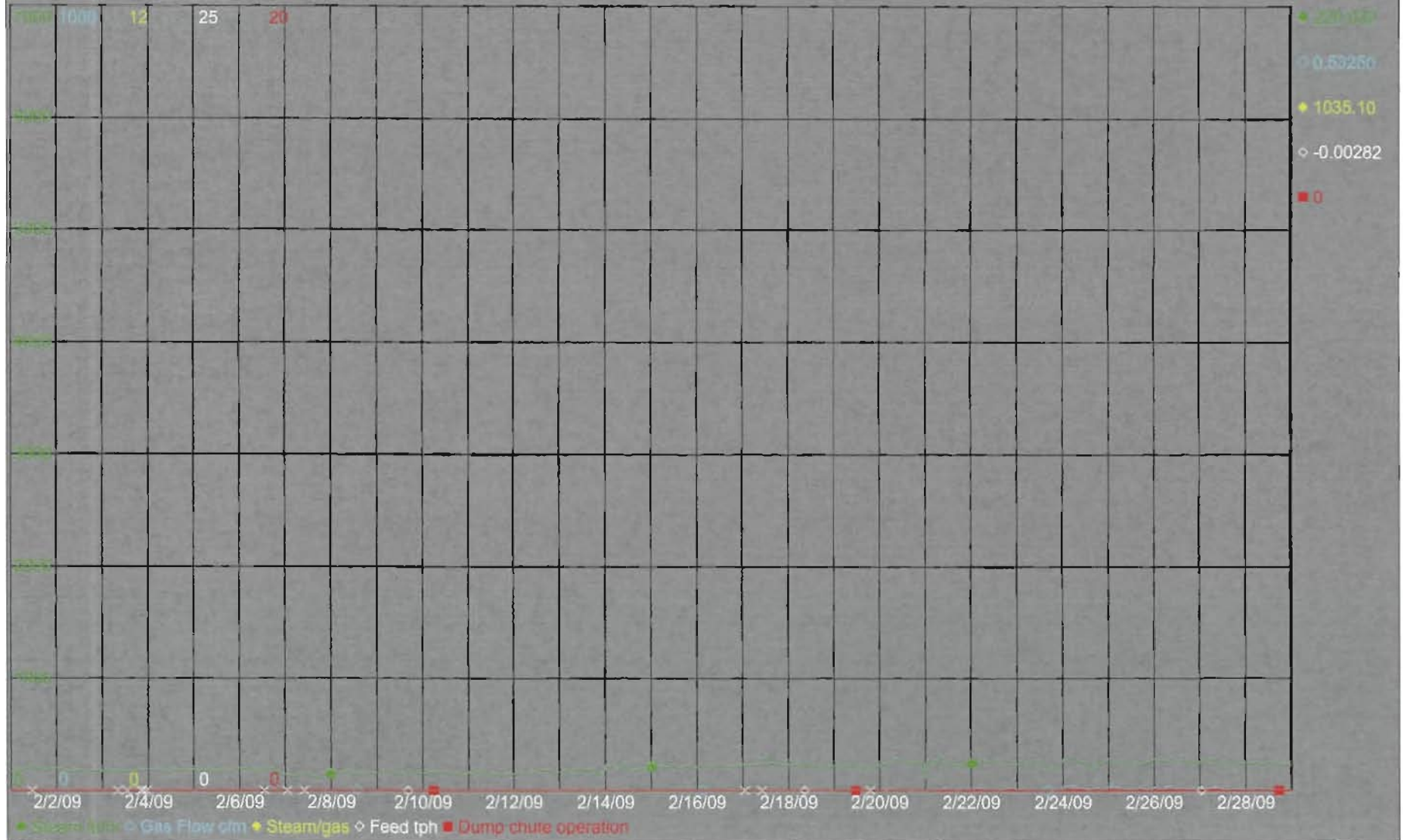
Plot-0

2/1/2009 12:00:00 AM



Plot-0

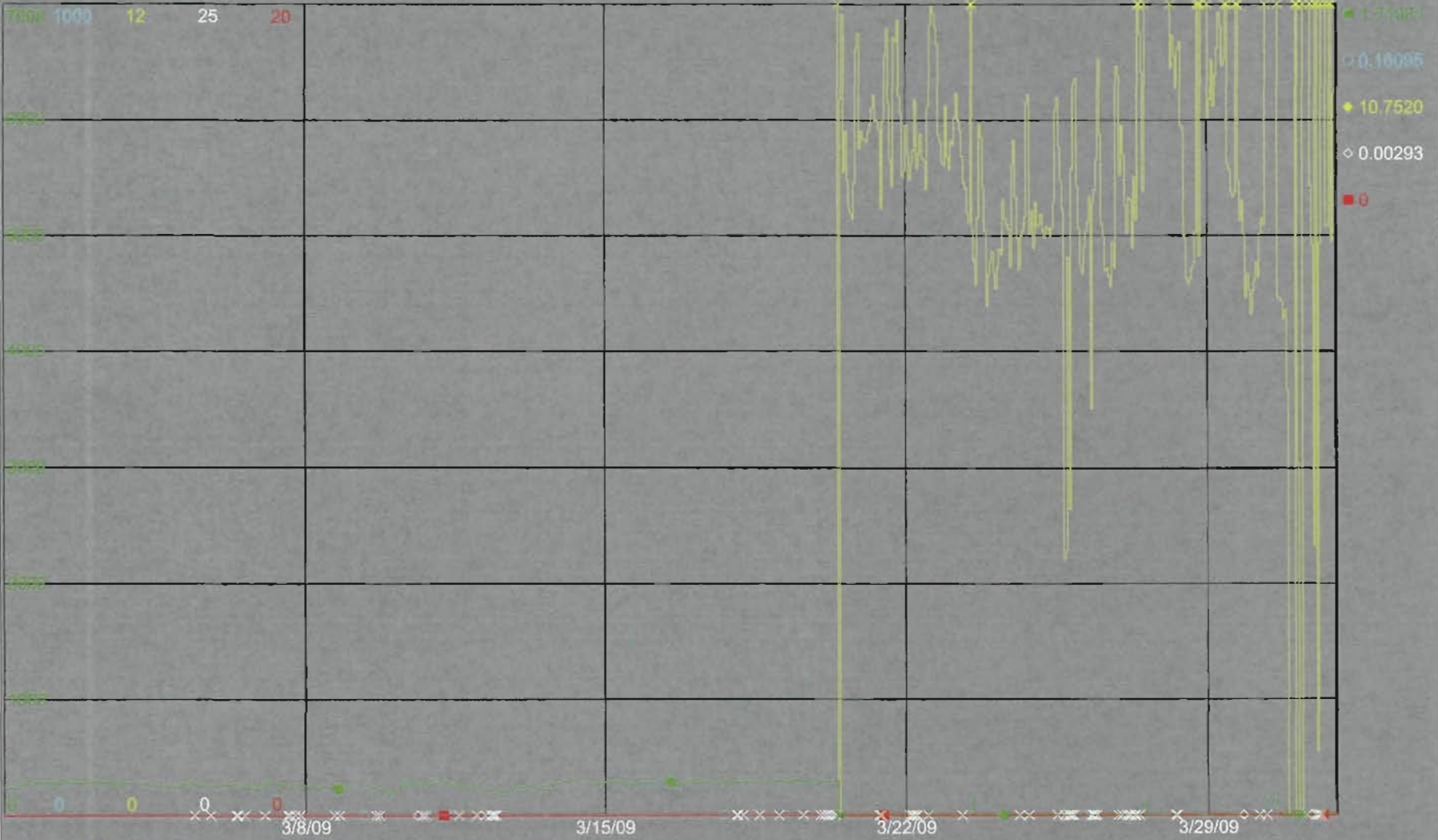
3/1/2009 12:00:00 AM



Plot-0

4/1/2009 12:00:00 AM

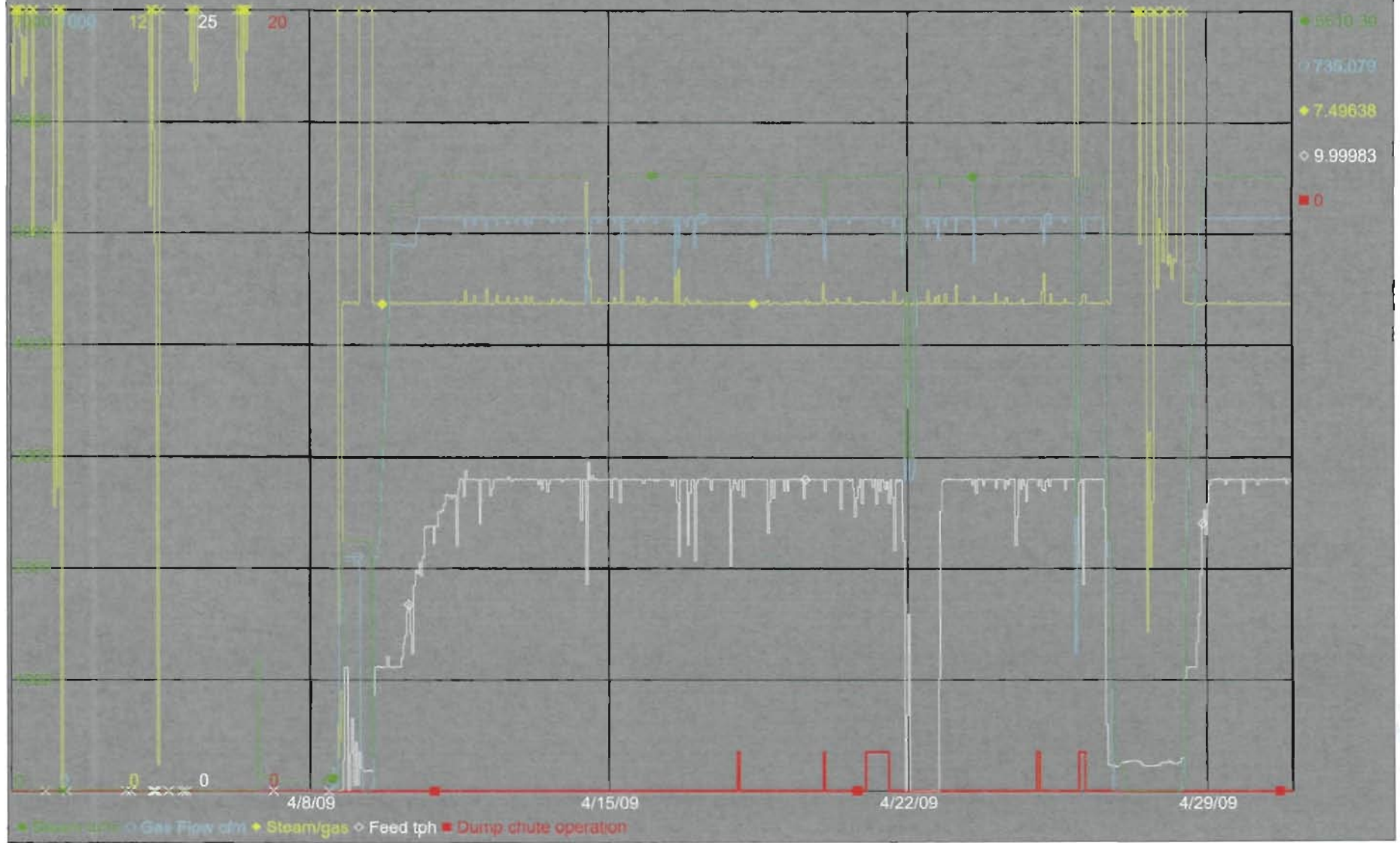
7000 1000 12 25 20



● Steam (tph) ○ Gas Flow (cfm) ◆ Steam/gas ◇ Feed (tph) ■ Dump chute operation

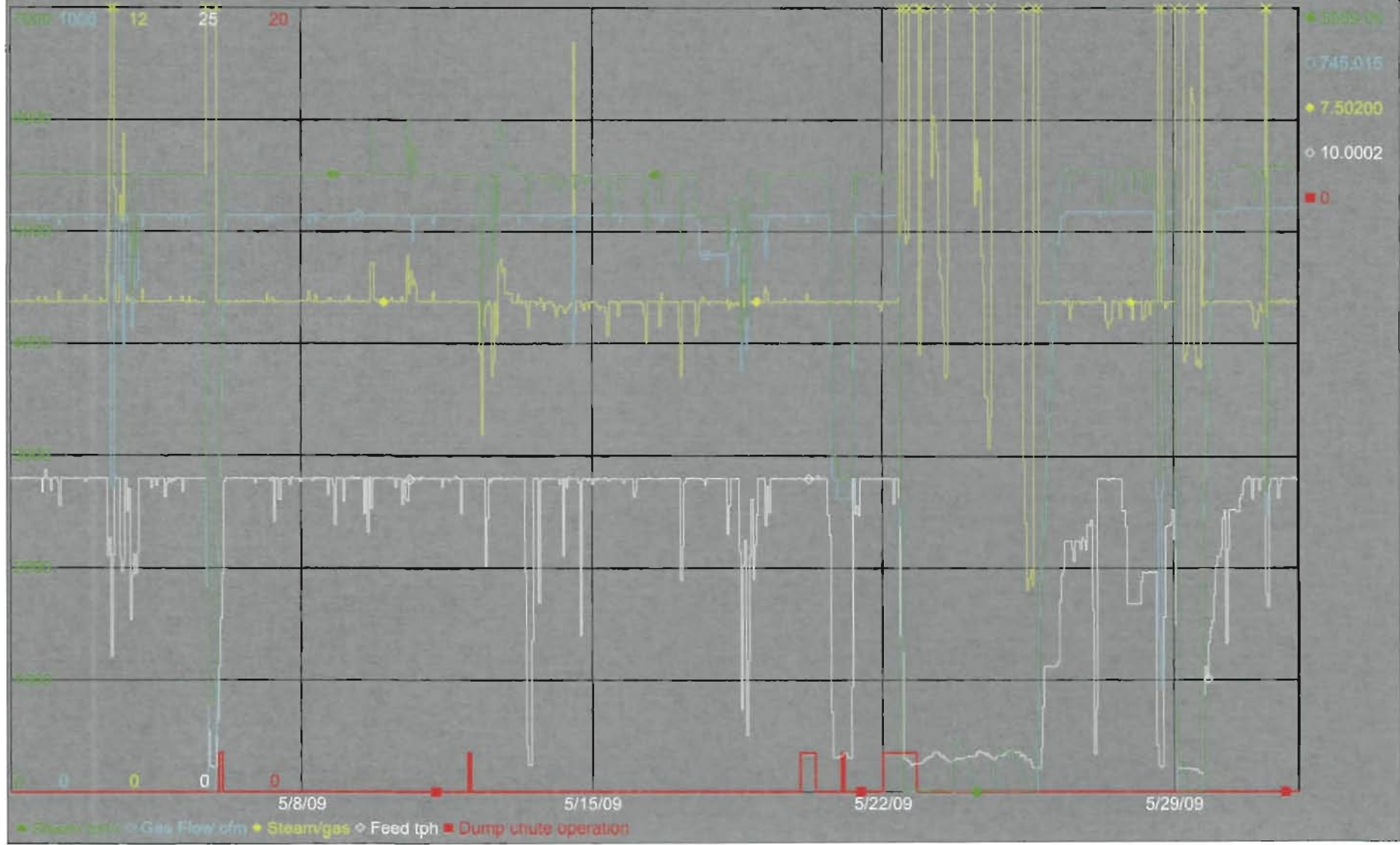
Plot-0

5/1/2009 12:00:00 AM



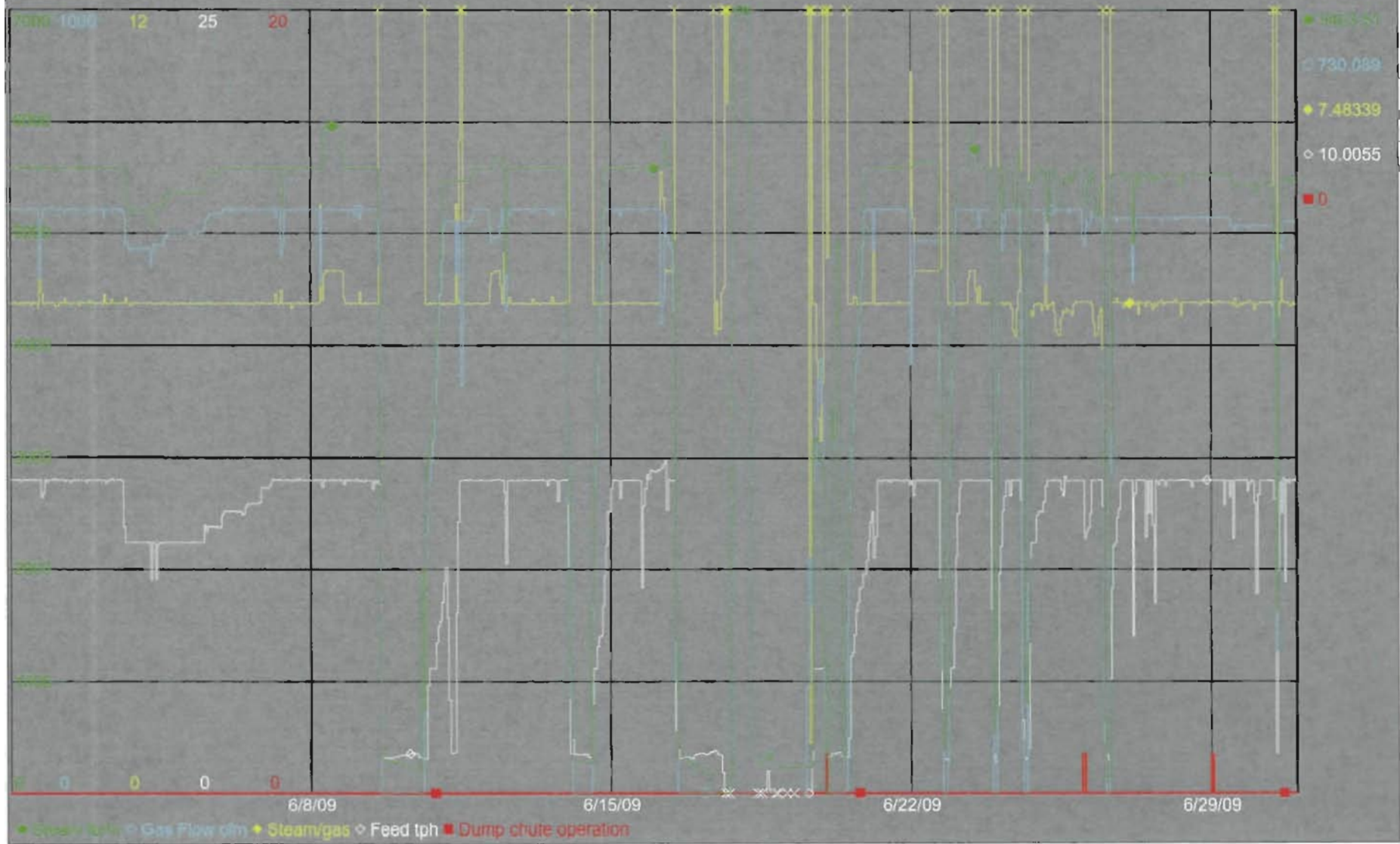
Plot-0

6/1/2009 12:00:00 AM



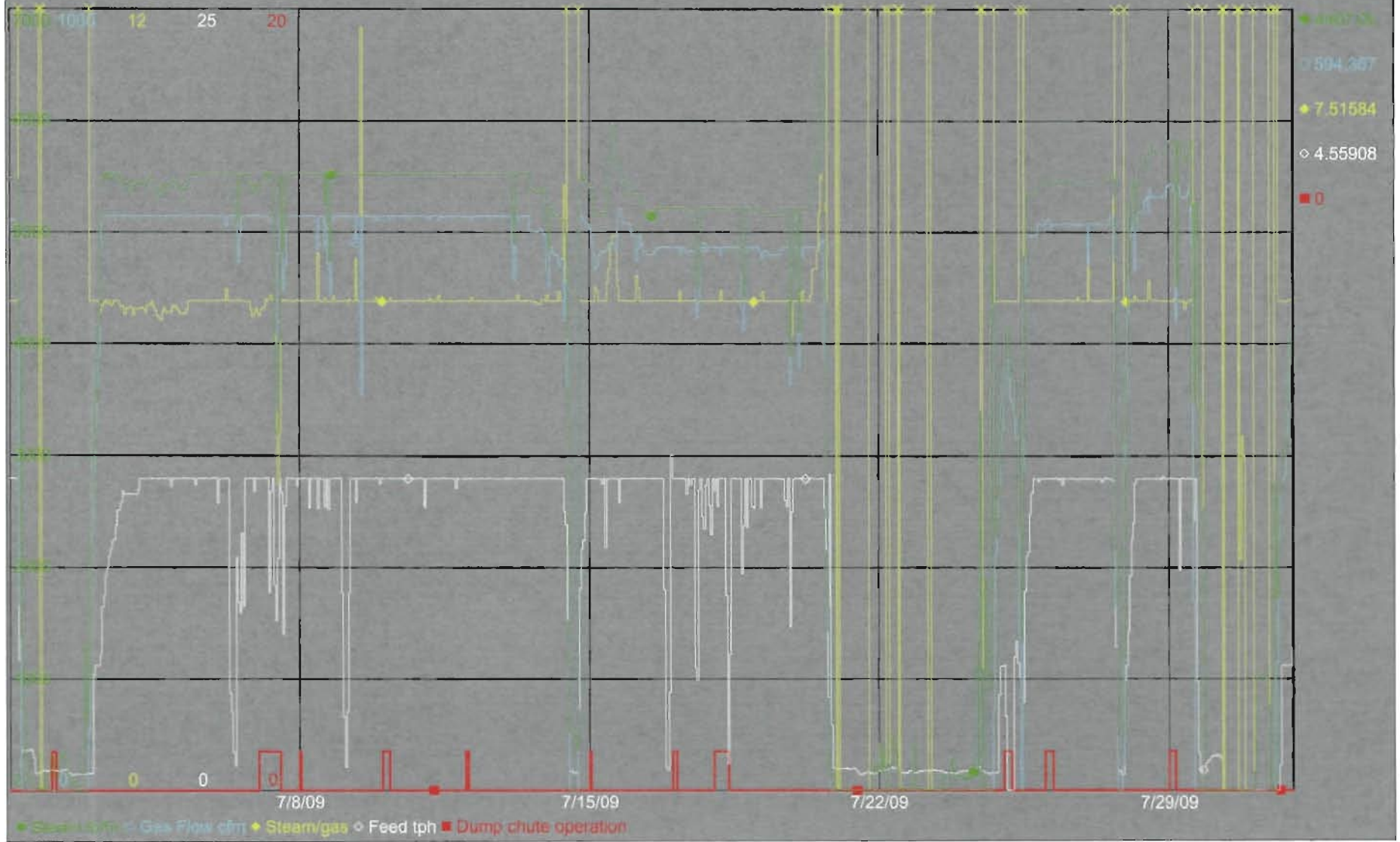
Plot-0

7/1/2009 12:00:00 AM



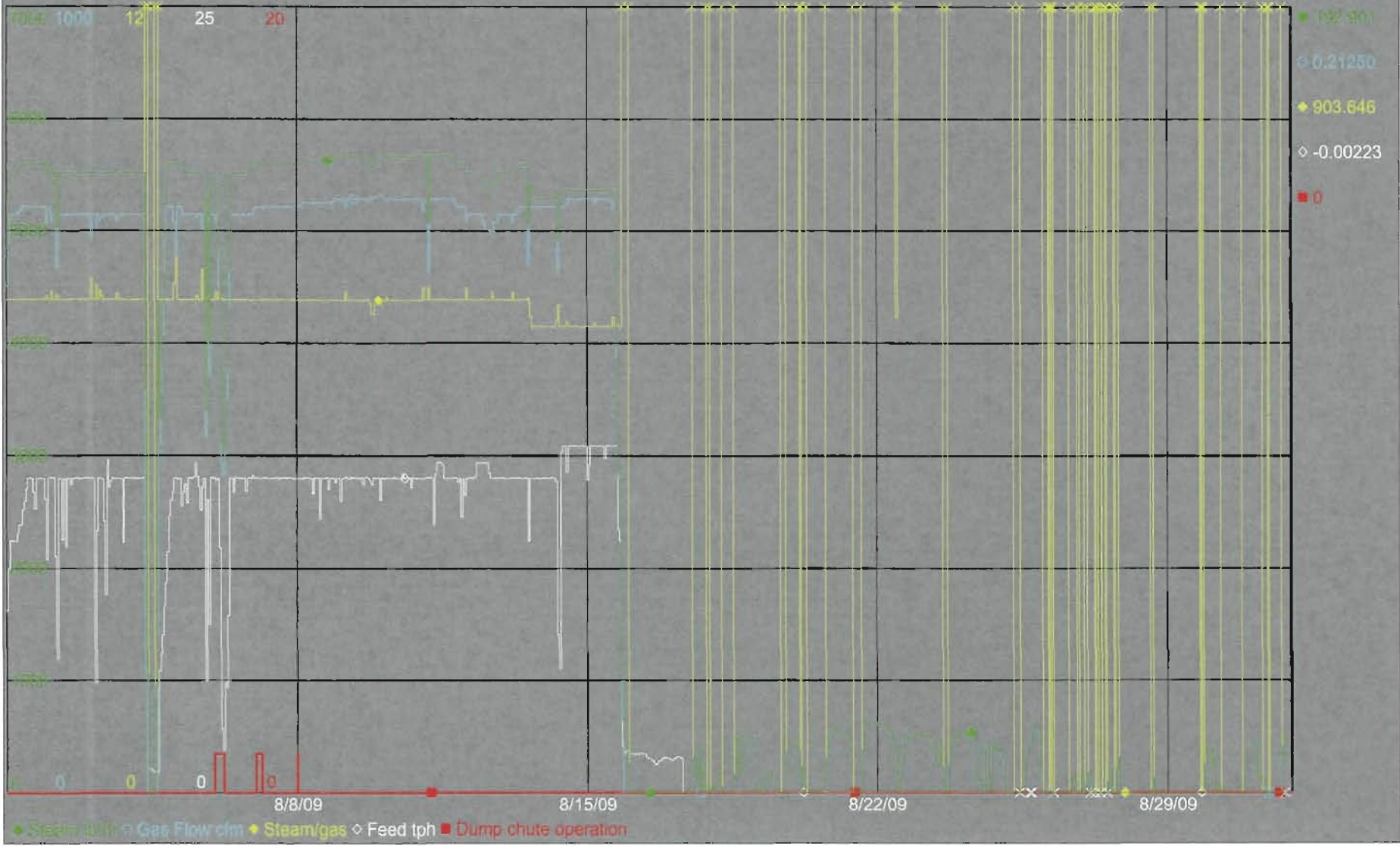
Plot-0

8/1/2009 12:00:00 AM



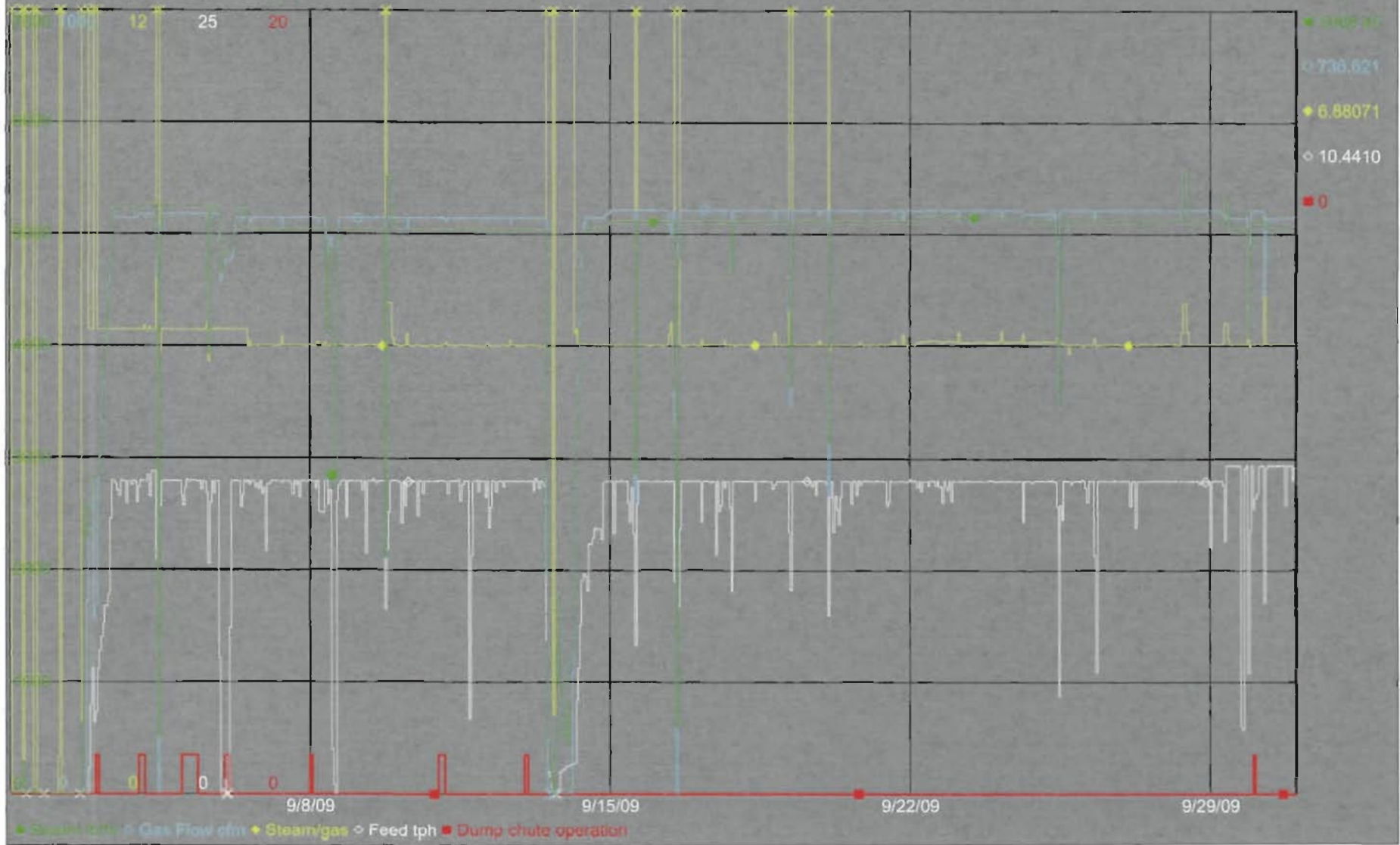
Plot-0

9/1/2009 12:00:00 AM



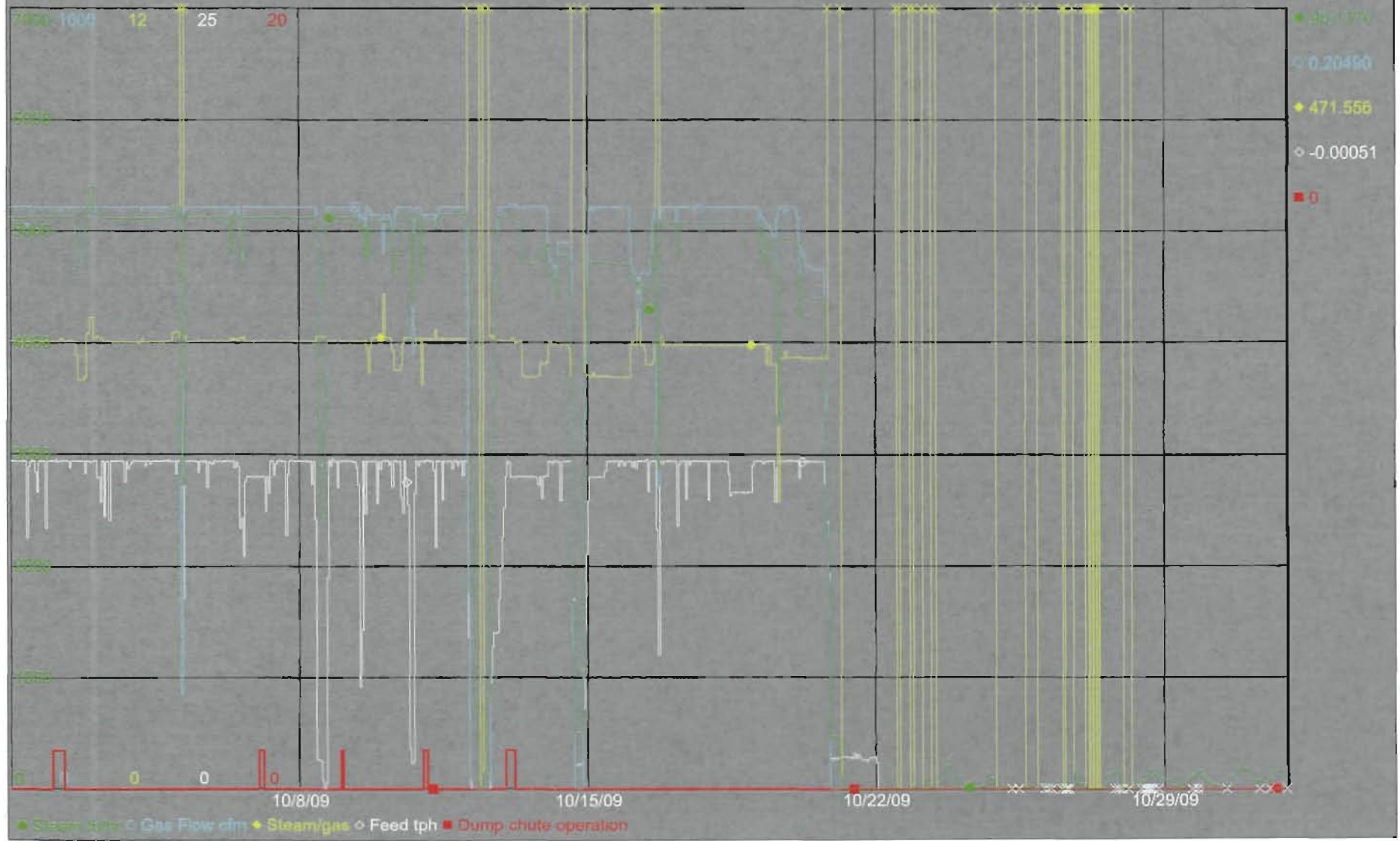
Plot-0

10/1/2009 12:00:00 AM



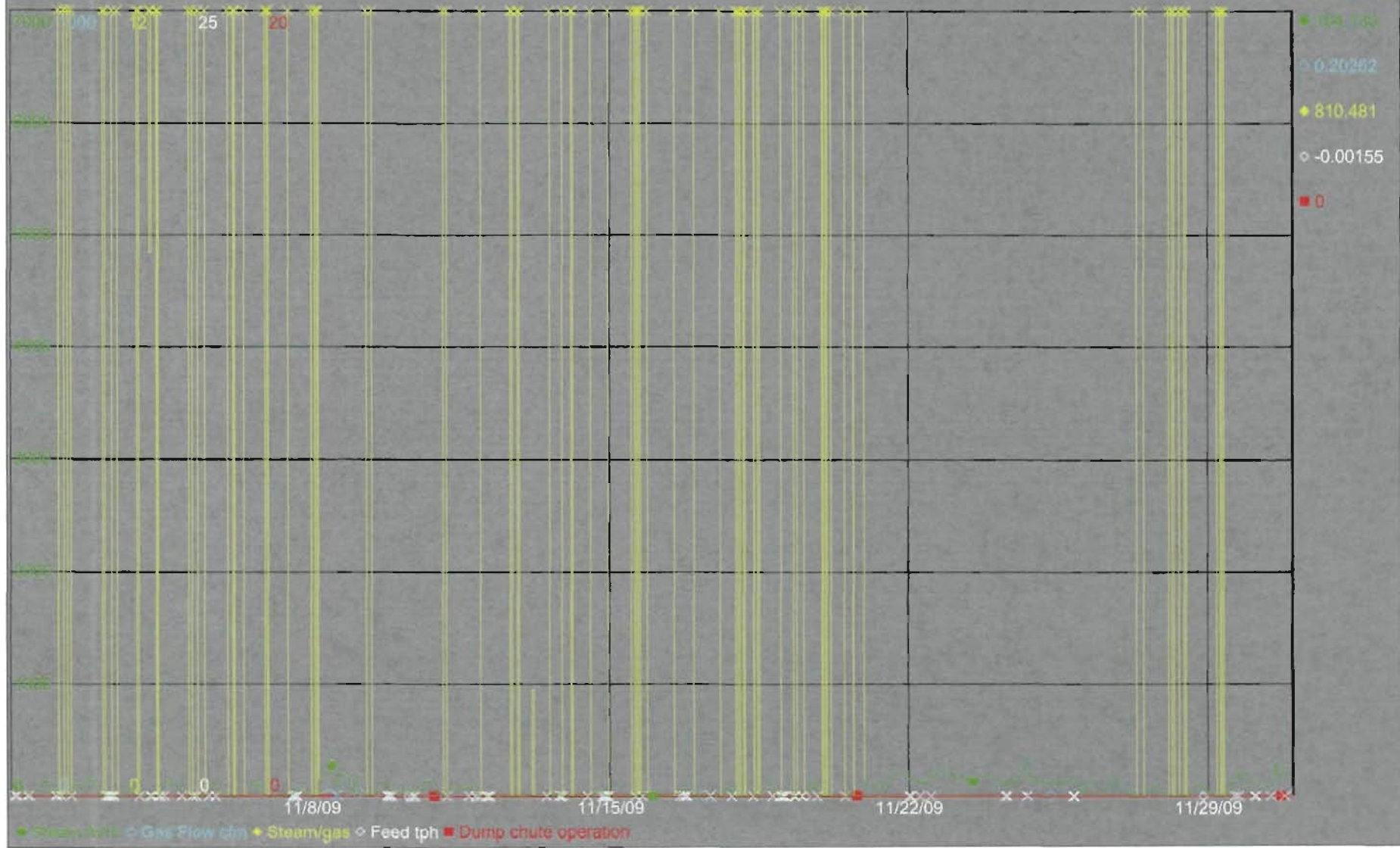
Plot-0

11/1/2009 12:00:00 AM



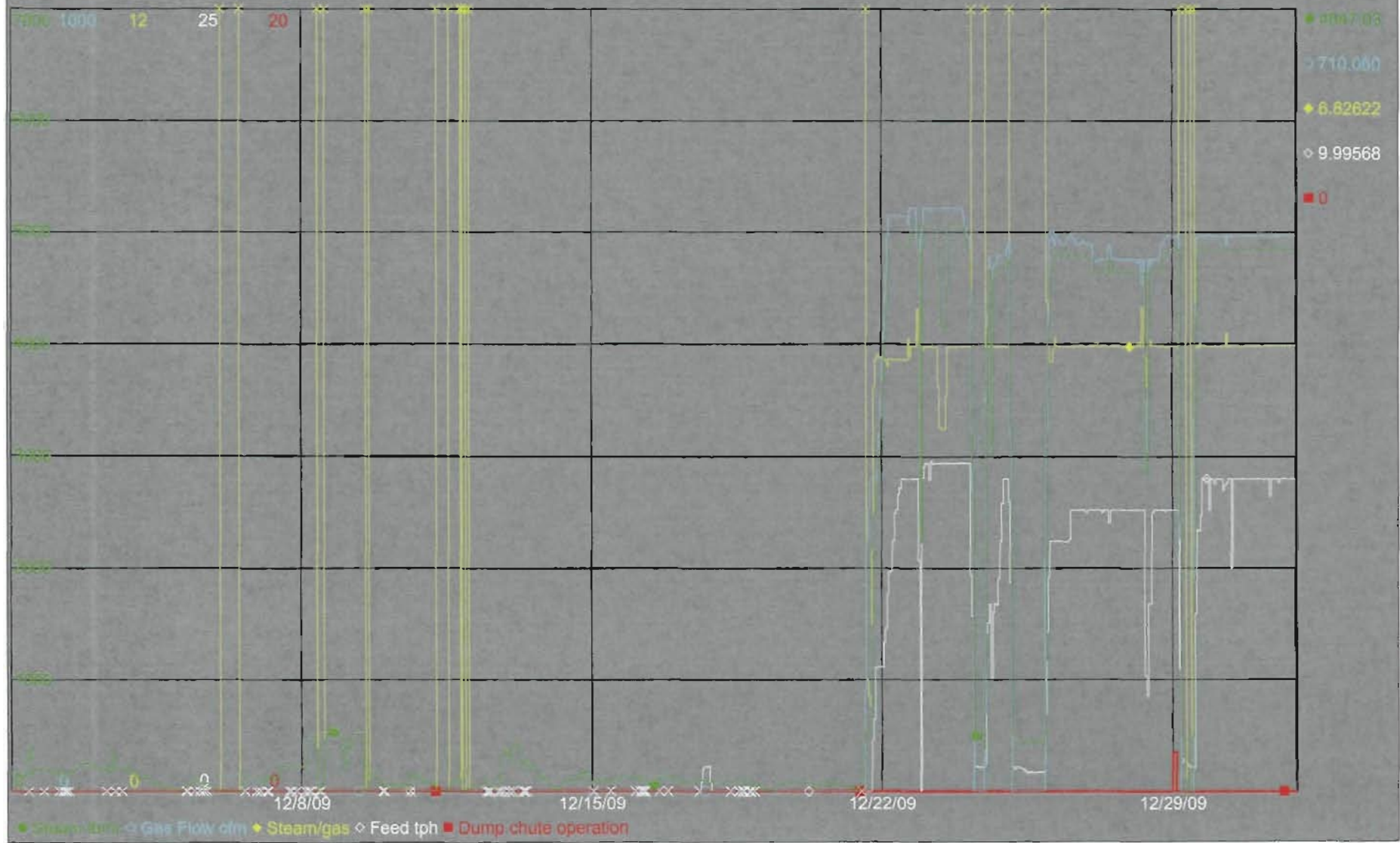
Plot-0

12/1/2009 12:00:00 AM



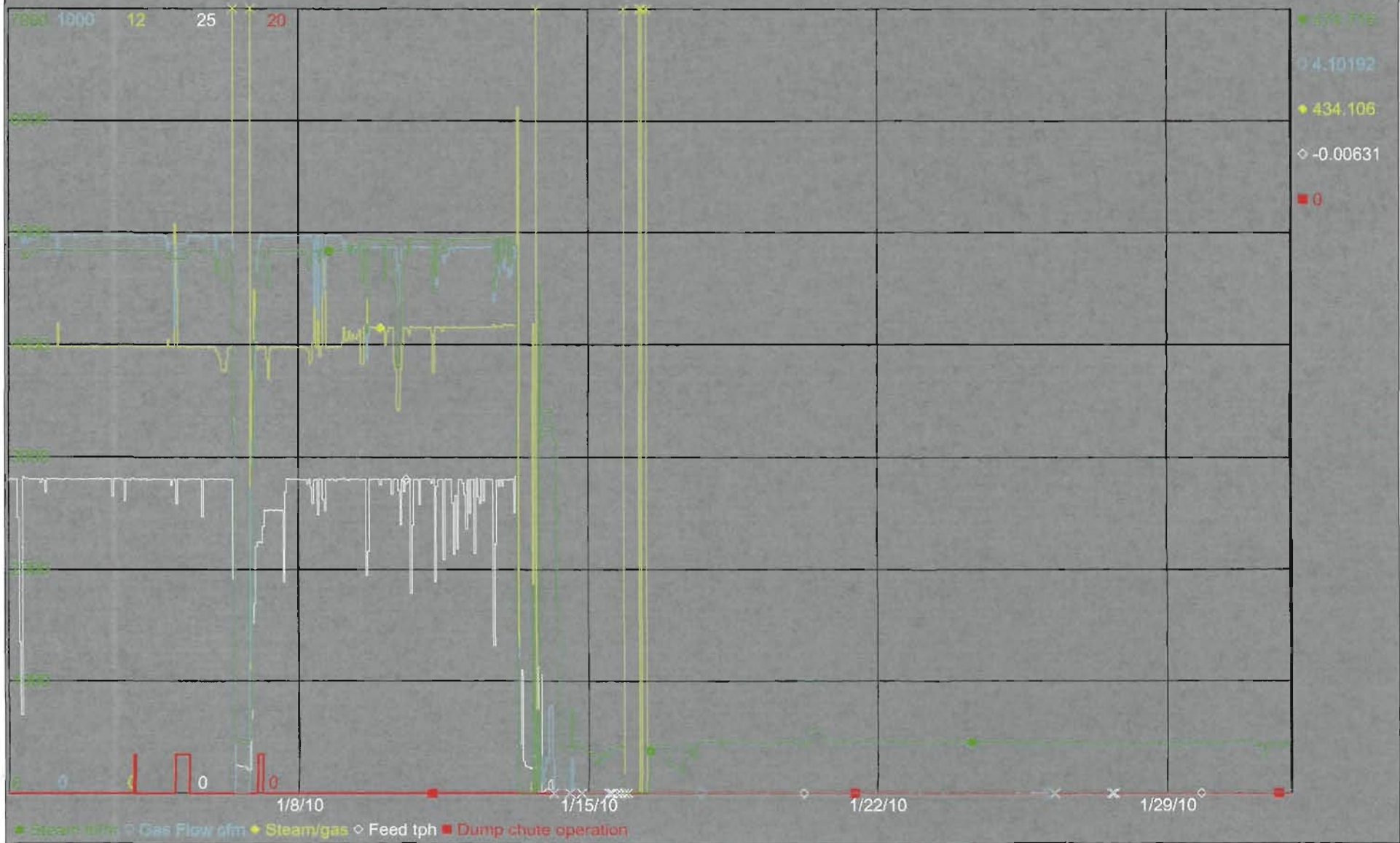
Plot-0

1/1/2010 12:00:00 AM



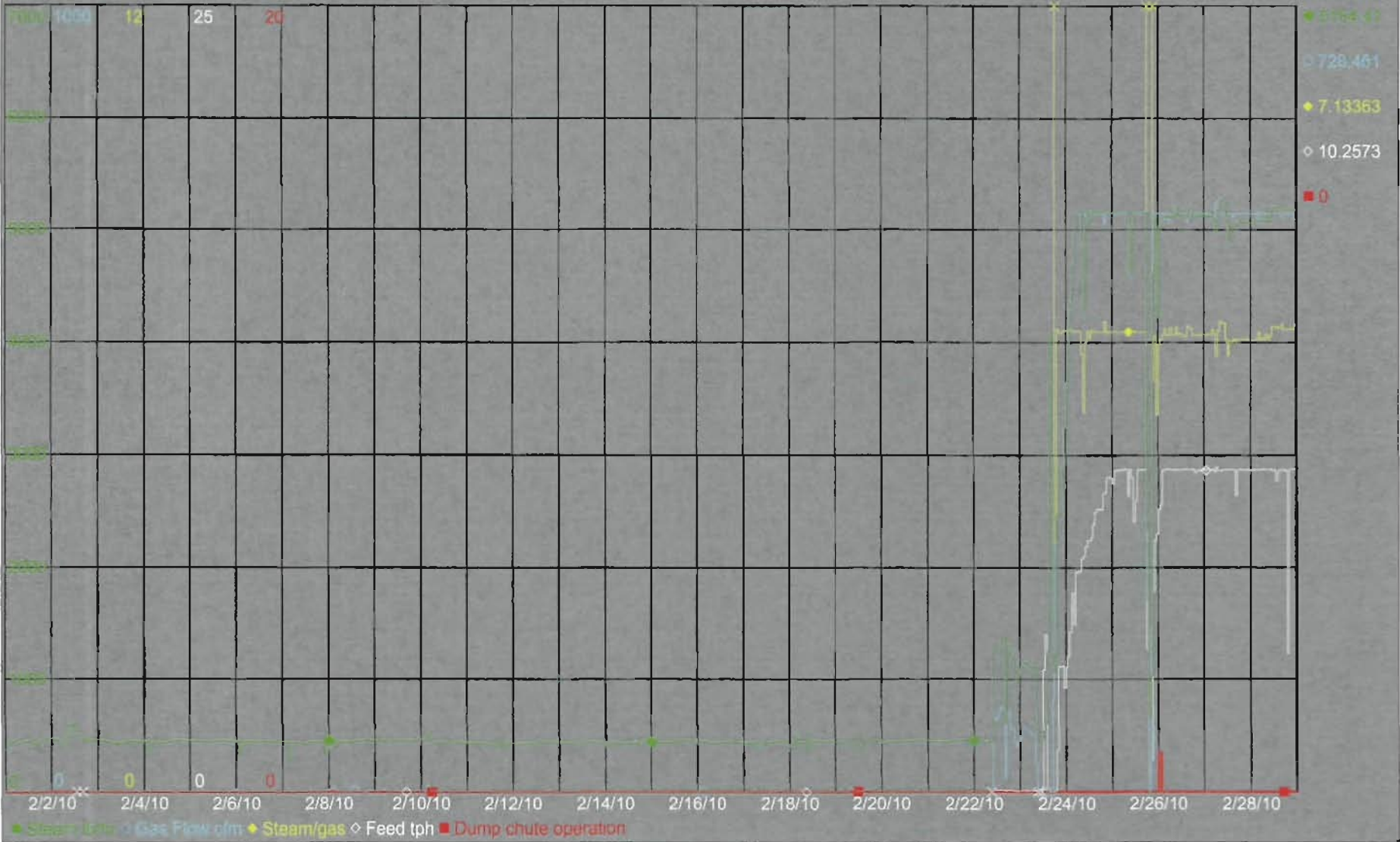
Plot-0

2/1/2010 12:00:00 AM



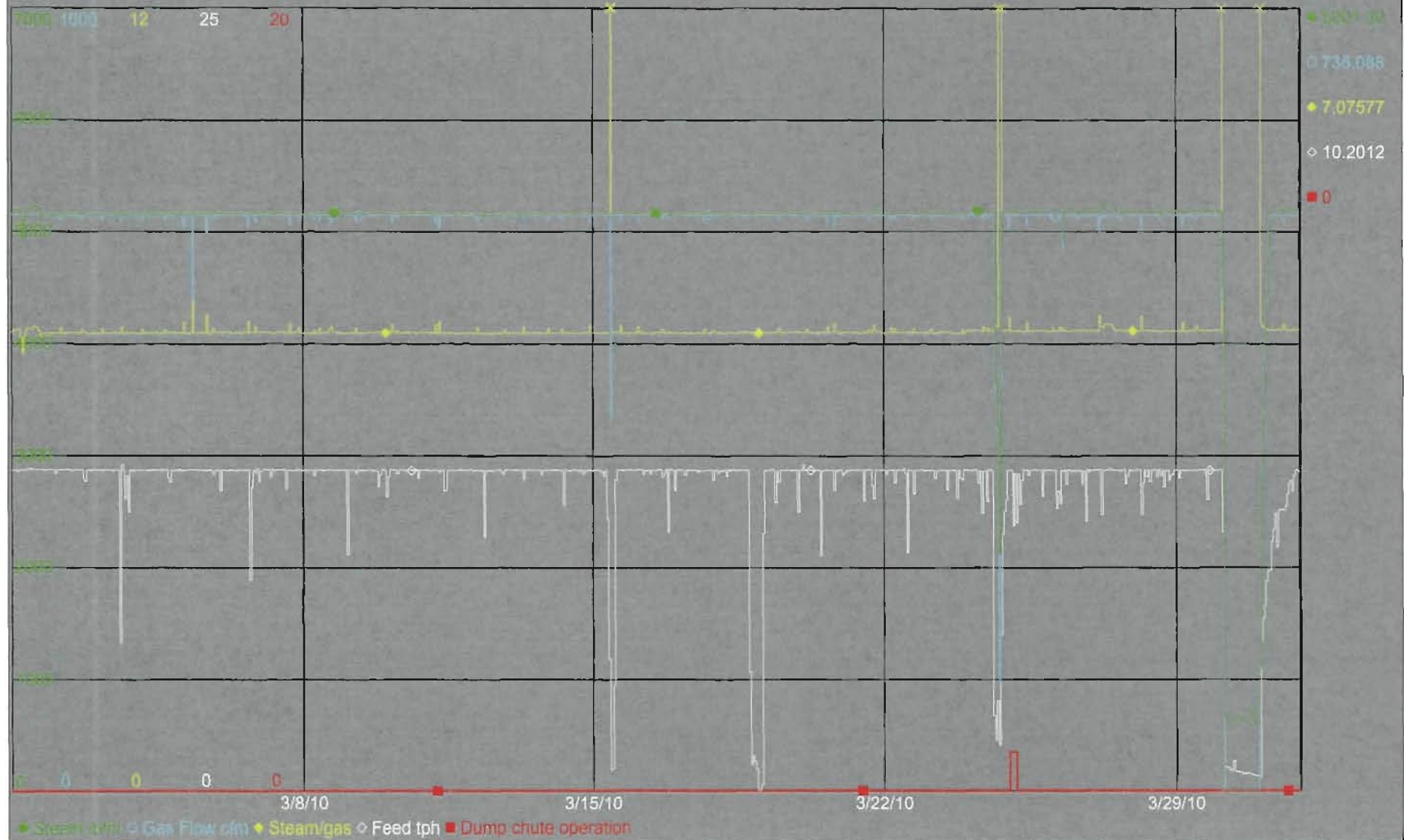
Plot-0

3/1/2010 12:00:00 AM



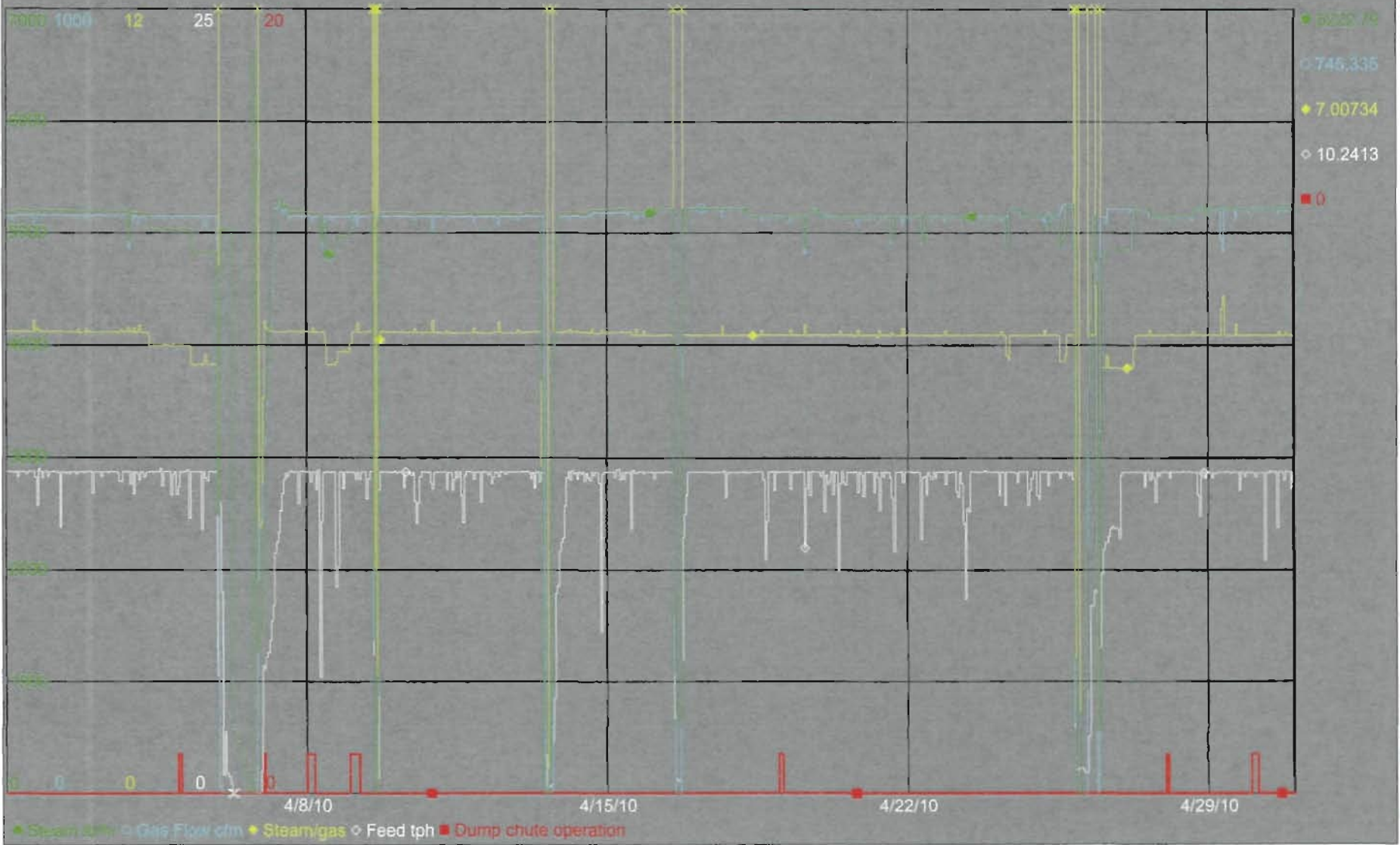
Plot-0

4/1/2010 12:00:00 AM



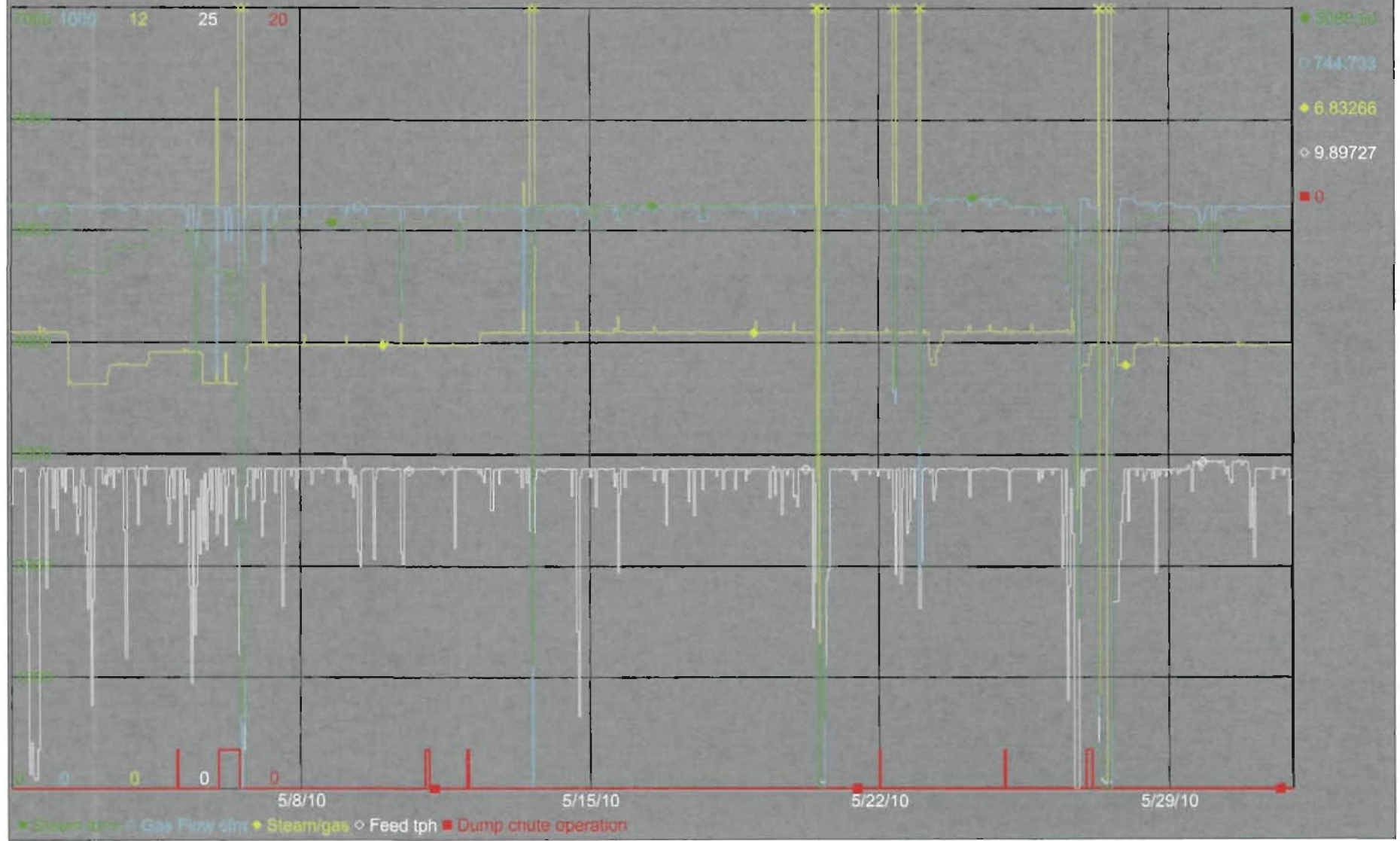
Plot-0

5/1/2010 12:00:00 AM



Plot-0

6/1/2010 12:00:00 AM



Flow 1010 12 25 20

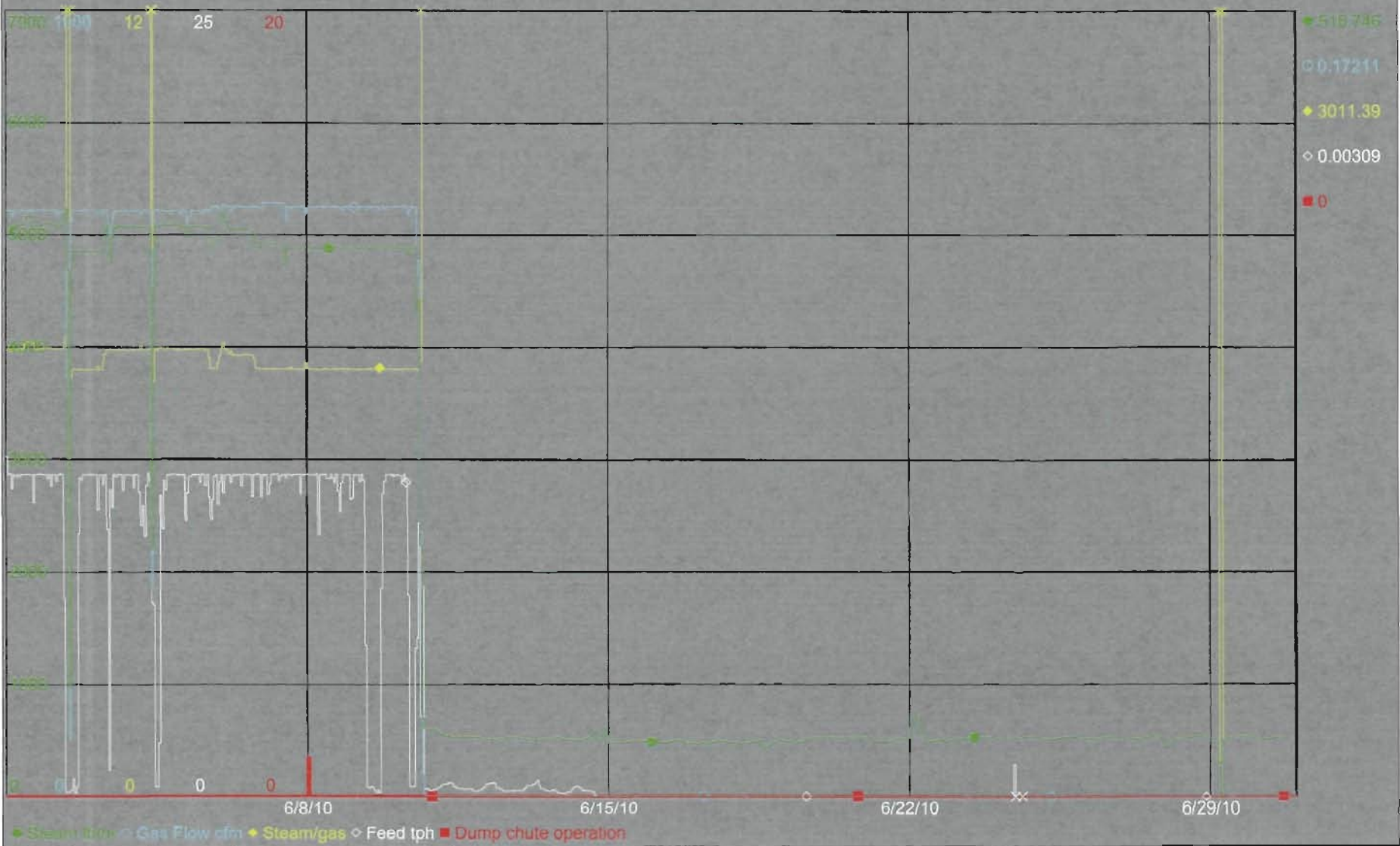
- ◆ 5089.30
- 744.733
- ◆ 6.83266
- 9.89727
- 0

◆ Steam flow (slm) ◆ Steam/gas ○ Feed tph ■ Dump chute operation

5/8/10 5/15/10 5/22/10 5/29/10

Plot-0

7/1/2010 12:00:00 AM



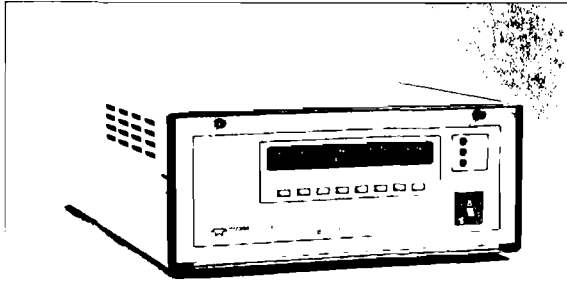
NO_x CEM Specifications



TELEDYNE INSTRUMENTS
Advanced Pollution Instrumentation
A Teledyne Technologies Company

MODEL **200E**

Chemiluminescence NO/NO₂/NO_x Analyzer



- ▶▶ Ranges, 0-50 ppb to 0-20 ppm, user selectable
- ▶▶ Independent ranges for NO, NO₂, NO_x
- ▶▶ Microprocessor controlled for versatility
- ▶▶ Multi-tasking software allows viewing test variables while operating
- ▶▶ Continuous self checking with alarms
- ▶▶ Permeation drier on ozone generator
- ▶▶ Dual bi-directional RS-232 ports for remote operation (optional RS-485 or Ethernet)
- ▶▶ Digital status outputs provide instrument operating condition
- ▶▶ Adaptive signal filtering optimizes response time
- ▶▶ Temperature & Pressure compensation
- ▶▶ Converter efficiency correction software
- ▶▶ Continuous automatic zero correction
- ▶▶ Catalytic ozone scrubber
- ▶▶ Internal Zero & Span check (optional)
- ▶▶ Internal data logging with 1 min to 365 day multiple averages

EPA APPROVAL RFNA-1194-099
MCERTS certified Sira MC050068/00

The Model 200E uses the proven chemiluminescence detection principle, coupled with state-of-the-art microprocessor technology to provide the sensitivity, stability and ease of use needed for ambient or dilution CEM monitoring requirements.

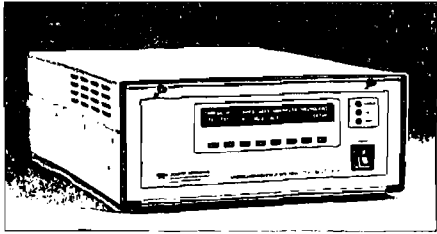
The analyzer uses multi-tasking software which allows complete control of all functions while providing online indication of important operating parameters. Measurements are automatically compensated for temperature and pressure changes.

In addition, stability is enhanced by an Auto-Zero circuit that continuously provides a true zero reference. The result is sensitive, accurate, and dependable performance under the harshest operating conditions.

All instruments in the TAPI E Series include built-in data acquisition capability using the analyzer's internal memory. This allows the logging of multiple parameters including averaged or instantaneous concentration values, calibration data, and operating parameters such as pressures and temperatures.

Stored data are easily retrieved through the serial port or optional Ethernet port via APIcom or from the front panel, allowing the operator to perform predictive diagnostics and enhanced data analysis by tracking parameter trends.

The Model 200E combines lighter weight, rugged construction, ease of use, powerful diagnostics, modular design and outstanding performance to yield the ideal tool for today's air monitoring requirements.



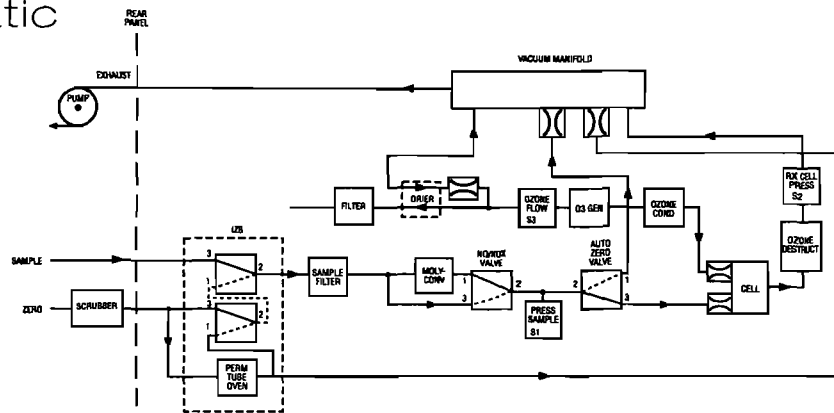
MODEL 200E Chemiluminescence NO/NO₂/NO_x Analyzer

Specifications

Ranges:	0-50 ppb to 0-20,000 ppb full scale, user selectable, independent NO, NO ₂ , NO _x ranges and aut-ranging supported	Dimensions (HxWxD):	7" (178 mm) x 17" (432 mm) x 23.5" (597 mm)
Units:	ppb, ppm, µg/m ³ , mg/m ³	Weight:	Analyzer 40 lbs (18 kg) External Pump 15 lbs (7 kg)
Zero Noise:	<0.2 ppb (RMS)	Power:	100V - 120V, 220V - 240V, 50/60 Hz, 250W
Span Noise:	<0.5% of reading (RMS) above 50 ppb	Analog Outputs:	10V, 5V, 1V, 0.1V selectable
Lower Detectable Limit (LDL):	0.4 ppb	Recorder Offset:	±10%
Zero Drift:	<0.5 ppb/24 hours, <1 ppb/7 days	Serial Outputs:	Serial Port 1: RS-232 (DB-9M) Serial Port 2: standard RS-232 or optional RS-485 (DB-9F), Ethernet
Span Drift:	<0.5% of reading/24 hours, <1% of reading/ 7 days	Status (Digital)	8 outputs, 6 inputs (opto-isolated), 4 alarm outputs (optional)
Lag Time:	20 seconds	Current Output:	Optional 4-20mA, select up to three channels
Rise and Fall Time:	<60 seconds to 95%	Approvals:	USEPA RFNA-1194-099, CE MCERTS certified Sira MC050068/00
Linearity:	1% of full scale		
Precision:	0.5% of reading		
Sample Flow Rate:	500 cm ³ /min ±10%		
Operating Temperature Range:	5 - 40°C (with EPA Equivalency)		

NOTE: The values expressed above are in accordance with EPA definitions. All error specifications are based on constant conditions. Specifications exceed US EPA and Eignungsgeprüft requirements.

Schematic



How to Order

Model 200E Chemiluminescence NO₂, NO_x Analyzer includes:

- External pump
- Permeation air dryer for ozone generator air supply
- Independent NO, NO₂, NO_x ranges
- Auto ranging
- 47mm diameter particulate filter
- 8 digital status outputs, 6 inputs
- Dual bi-directional RS-232
- APIcom remote control software

Specify input AC voltage & frequency:

- 100V - 115V 50Hz
 220V - 240V 60Hz

Specify output DC voltage:

- 10V 5V 1V 0.1V

Calibration Options:

- Dual calibration valves for selection of customer-specified zero and span gas
- Internal zero and permeation tube oven for calibration check (requires permeation tube, available as option)
- Triple gas valve manifold

Optional Equipment:

- Rack mount brackets (19") with chassis slides
- Rack mount brackets only
- 4-20mA outputs (specify up to three channels)

- Multi-drop RS-232 connection
- Ethernet port includes 7 ft. CAT-5 cable (disables one serial port)
- Permeation dryer for sample gas
- Permeation dryer combination for ozone and sample air

Accessories:

- RS-232 Cable
- Expendables Kit
- Spare Parts Kit
- Chassis carrying handle
- Zero Air Scrubber

Specifications subject to change without notice. M200E/01.06



TELEDYNE INSTRUMENTS
Advanced Pollution Instrumentation

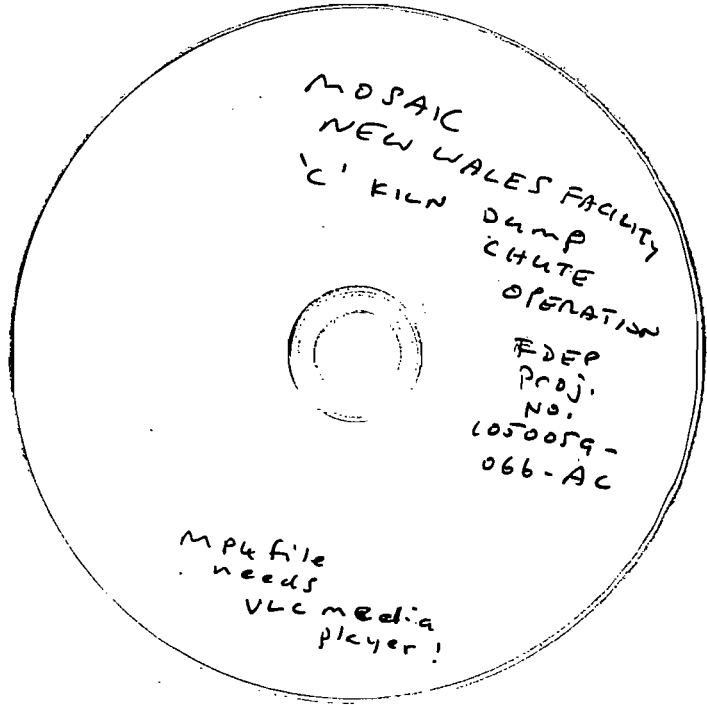
A Teledyne Technologies Company

9480 Carroll Park Drive ■ San Diego, CA 92121-5201
Ph. 858-657-9800 Fax 858-657-9816
Email api-sales@teledyne.com

For more information about the Teledyne API family of monitoring instrumentation products, call us or visit our website at

www.teledyne-api.com





MOSAIC
NEW WALES FACILITY
C' KILN DUMP
CHUTE
OPERATION

E DEP
PROJ.
NO.
1050059-
066-AC

MP4 file
needs
VLC media
player!