Texas Commission on Environmental Quality
Investigation Report
ARKEMA INC
CN600124044

ARKEMA BEAUMONT PLANT
RN100216373

Investigation # 841281 **Incident #**

Investigator: NEADRA RICHARD **Site Classification** MAJOR SOURCE

Conducted: 07/09/2010 -- 07/09/2010 **SIC Code:** 2869 **NAIC Code:** 325199

Program(s): AIR NEW SOURCE PERMITS

Investigation Type : Compliance Invest File Review **Location :** 2810 GULF STATES RD

Additional ID(s) : 865A
JE0074L
PSDTX1016M1

Address: 2810 GULF STATES RD; BEAUMONT, TX 77704 **Activity Type :** REGION 10 - BEAUMONT
RRGR - General Report Review

Principal(s) :

Role	Name
RESPONDENT	ARKEMA INC

Contact(s) :

Role	Title	Name	Phone	
Regulated Entity Contact	ENVIRONMENTAL MANAGER	MR DERRICK B STANLEY	Work	(409) 951-5304
Regulated Entity Mail Contact	PLANT MANAGER	MR WENDAL TURLEY	Work	(409) 838-3981 (409) 951-5311

Other Staff Member(s) :

Role	Name
QA Reviewer	JOHN COTTON
Supervisor	KATHRYN SAUCEDA

Associated Check List

Checklist Name	Unit Name
AIR GENERIC INVESTIGATION (10 ITEMS)	rrgr

Investigation Comments :

INTRODUCTION

On July 9, 2010, Ms. Neadra Richard, Texas Commission on Environmental Quality (TCEQ) Environmental Investigator, conducted a General Report Review of Arkema Inc. Beaumont Plant, in Beaumont (Jefferson County), Texas. Arkema is required by New Source Review Permit 865A and Prevention of Significant Deterioration (PSD)-TX Permit 1016 to submit a Monitor System Performance report for the Continuous Emissions Monitoring System (CEMS) located on the Incinerator, Emission Point Number (EPN) INCIN. The first semi-annual report was dated November 15, 2009, received in the Beaumont Regional Office (BRO) on November 18, 2009, and covered the

compliance period of April 15, 2009, through October 14, 2009. The second semi-annual report was dated May 10, 2010, received in the BRO on May 12, 2010, and covered the compliance period of October 15, 2009, through April 14, 2010 (see Attachment 1).

The Incinerator is not applicable to the New Source Performance Standards (NSPS) found in 40 CFR Part 60; however, Special Condition 26F states that the flow meter, analyzers, and data recorders are only allowed downtime for a maximum of 5 percent (%) of the year based on a rolling 12-month period.

The regulated entity (RE) reported that the downtime of the sulfur dioxide (SO2) analyzer exceeded 5% of the total operating time during the compliance period of April 15, 2009, through October 14, 2009. The total operating time during the reporting period was 262,300 minutes. There were approximately 15,380 minutes of downtime associated with the SO2 analyzer; therefore, the CEMS downtime percentage for the reporting period is 5.8%.

During the reporting period of October 15, 2009, through April 14, 2010, the RE reported a total CEMS downtime of 1,322 minutes with a total operating time of 219,600 minutes. Therefore, the CEMS downtime percentage for the reporting period is 0.6%.

Total operating time for the 12-month period (April 15, 2009 - April 14, 2010) was 481,900 minutes. There was a total CEMS downtime of 16,702 minutes; therefore, the CEMS downtime total percentage for the 12-month period is 3.5%.

GENERAL FACLITY & PROCESS INFORMATION

Arkema operates an industrial organic chemicals plant located at 2810 Gulf States Road in Beaumont (Jefferson County), Texas. The corresponding Standard Industrial Classification (SIC) code is 2869 (Industrial Organic Chemicals). Additional information regarding Arkema including the process description and facility location map can be found in the regulated entity's public files.

BACKGROUND

Current Enforcement Actions

The investigator did not document any violations during the investigation.

Prior Violations and Enforcement Issues

In the past, violations concerning notification and recordkeeping requirements (see Investigation 512057 and 611295) and the exceedance of permitted limits for Particulate Matter (PM) [see Investigation 509523] were documented. Additional information concerning the facility's enforcement history can be found in Arkema's compliance history database and in the facility's public files.

The regulated entity has entered into the following Agreed Orders: 2005-0356-AIR-E; 2006-0614-AIR-E; and 2008-030-AIR-E.

Further details concerning the prior enforcement issues can be found in the associated facility public files.

Complaints

File review indicated that the facility has not received any complaints within the past five years.

ADDITIONAL INFORMATION

The investigator concluded that the facility has complied with Special Condition 26F of Permit 865A/PSD-TX-1016.

ATTACHMENTS

Attachment 1 - CEMS report

No Violations Associated to this Investigation

Signed _____ **Date** 7/28/10
Environmental Investigator

Signed KB Saucedo **Date** 8/13/10
Supervisor

Attachments: (in order of final report submittal)

___Enforcement Action Request (EAR)

___Letter to Facility (specify type) : _____

Investigation Report

___Sample Analysis Results

___Manifests

___NOR

___Maps, Plans, Sketches

___Photographs

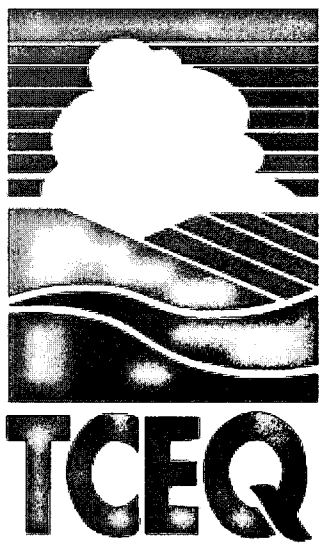
✓Correspondence from the facility

___Other (specify) :

_____

_____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



Arkema Beaumont Plant

RN100216373
CCEDS: 841281
Account No. JE0074L
Inv. Date: 07/09/2010

ATTACHMENT 1

CEMS report

ARKEMA

~~15 August 2009~~ WFR
15 November 2009

UNITED PARCEL SERVICE

Dr. Alfredo "Al" Armendariz
Regional Administrator
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 700
Dallas, TX 75202-2733

Re: Arkema Inc.
Beaumont, Texas
Account Number JE-0074-L
NSPS CEMS "Excessive Emission" REPORT

Dear Administrator:

Arkema Inc., (Arkema) - Beaumont, TX Facility is providing this Report In accordance with 40 CFR 60.7(c). Specifically, the total CEMs downtime of the SO2 analyzer located on the facility Incinerator (CIN-INCIN) exceeded 5% of the total operating period. The Summary Report also required by regulation was submitted to the Agency under separate cover.

- The magnitude of excess emissions computed in accordance with §60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

The total operating time during the reporting period was 262,300 minutes. Between April 28, 2009 – May 20, 2009, there were approximately 12,420 minutes of malfunction/downtime associated with the Sulfur Dioxide (SO2) Analyzer.

Based on a review of routine operating data, Arkema believes that no unauthorized emissions occurred during the analyzer downtime periods.

- Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

During the period between April 28, 2009 – May 20, 2009, the Plant experienced operational issues with the methanol recovery tower in the mercaptan process unit. The operational issues created more than normal analyzer pluggage. As a result, the analyzer was taken off-line several times for maintenance. Subsequently, Arkema corrected the tower issues, which also resolved the analyzer pluggage issues.

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- The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or

adjustments.

DATE	CATEGORY	DURATION (minutes)
4/27/2009	Monitor Equipment Malfunction/Due to Pluggage	120
4/28/2009	Monitor Equipment Malfunction/Due to Pluggage	960
4/29/2009	Monitor Equipment Malfunction/Due to Pluggage	660
4/30/2009	Monitor Equipment Malfunction/Due to Pluggage	540
	April CEMS Downtime	**2,280**
5/1/2009	Monitor Equipment Malfunction/Due to Pluggage	960
5/2/2009	Monitor Equipment Malfunction/Due to Pluggage	600
5/3/2009	Monitor Equipment Malfunction/Due to Pluggage	660
5/4/2009	Monitor Equipment Malfunction/Due to Pluggage	1,260
5/5/2009	Monitor Equipment Malfunction/Due to Pluggage	720
5/6/2009	Monitor Equipment Malfunction/Due to Pluggage	480
5/13/2009	Monitor Equipment Malfunction/Due to Pluggage	300
5/14/2009	Monitor Equipment Malfunction/Due to Pluggage	1,140
5/15/2009	Monitor Equipment Malfunction/Due to Pluggage	480
5/17/2009	Monitor Equipment Malfunction/Due to Pluggage	720
5/18/2009	Monitor Equipment Malfunction/Due to Pluggage	960
5/19/2009	Monitor Equipment Malfunction/Due to Pluggage	1,200
5/20/2009	Monitor Equipment Malfunction/Due to Pluggage	480
	May CEMS Downtime	**10,140**

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Pollutant: SO2

Reporting period dates: From 4/15/2009 to 10/14/2009

Company: Arkema Inc.
2810 Gulf States Road
Beaumont, TX 77701

Emission Limitation: 139 lb/hr

Monitor Manufacturer and Model No. Weston Research Series 400/AY-921WGP-9330-1

Date of Latest CMS Certification or Audit: 08/31/2009

Process Unit(s) Description

Beaumont 1 (BMT 1) Mercaptan MFG Process/Beaumont II (BMT II) Mercaptan MFG Process:

The reaction section of BMT 1 and BMT II takes liquid H2S feed from the feed preparation section, vaporizes it, then creates a recycle loop of H2S gas that is circulated through the reaction loop by a recycle compressor. Rich methanol is injected into the reaction loop at the entrance of the reactor, and products (MESH and H2O) are flashed out and separated. The remainder of the H2S is then recycled around the reaction loop. The products are separated first by a product separator via decantation, then fed into the H2S Recycle Tower. The recycle tower releases more H2S for recycle and feeds forward crude product to the Distillation Section for refining.

The distillation section takes the crude MESH feed and first separates the DMS byproduct from the MESH product in the product tower. The DMS byproduct is taken to the DMS Unit for refining. The MESH product is delivered to the sweetener tower for further distillation to attain final product quality. The final product is then passed through molecular sieve dryers to remove trace amount of water, then stored in day tanks for quality testing. Any off- specification material is stored in off-specification day tanks and can be recycled to the product tower for recovery.

The Sour Water Stripper Units are used to recover organics from the waste water generated by the processes prior to disposal in the WWTP or transfer to LNVA. Heat is used to boil off the organics which are typically sent to the MEOH scrubber for recovery, but can also be sent to the flare or incinerator. BI Unit can use either T-171, T-2171 or T-3171 Sour Water Stripper (SWS). T-171 is dedicated to BI where T-3171 is common to BI and BII Units. The following description is based on the operation of T-3171. The operation of T-171/2171 is very similar. Feed to the Sour Water Stripper T-3171 comes from D-2311A/B.

The Methanol Scrubber is a vent recovery system that recovers MeSH, H2S and DMS from process off-gases. The off-gases are scrubbed with fresh MEOH, absorbing the MeSH, H2S and DMS before being sent to the Incinerator. The MeSH, H2S and DMS rich Methanol solution is returned for re-use in the process. Off gases are collected from various MeSH tanks and MeSH process vessels in the plant such as: day tanks, spheres (MeSH), and distillation units. These gases are segregated into high or low-pressure sources and are routed separately to the Product Recovery Tower. Sources at or below 100 PSIG are considered low pressure, and are sent to the Off-Gas Knock-out Drum. Sources at, nominally, 100 PSIG or above are piped directly to the scrubbing column. The off gases are routed through a low pressure header to the off-gas knock-out drum D-602 where all liquid is removed. The off gases are compressed in the off-gas compressor C-601 A/B and transferred to D-613 surge tank and then to T-611, the Product Recovery Tower.

The gases are scrubbed in T-611 by fresh Methanol entering the top of the column. The MEOH is drawn from storage by P-609 A/B (P-311 A/B may also feed the Methanol Scrubber) and is chilled by the propane refrigeration system in three separate heat exchangers: E-639 chills the MEOH to -20°F before entering the top of T-611, E-640 Chiller chills the mid section of T-611 to 0°F, E-641 chills the bottom section to -5°F.

Inert gases and small remainders of insoluble sour gas flow to the incinerator through the tower top. The rich methanol, containing traces of MeSH, H2S and DMS is pumped by P-608 A/B to D-603. D-603 returns the rich Methanol to Phase I and Phase II reactors Via P-606 A/B and P-607 A/B. (When both units are running, fresh Methanol must be added to D-603 to maintain a level.)

Thank you for your attention to this matter. If you have any questions or comments, please do not hesitate to contact me at (409) 951-5304.

Respectfully,
Arkema Inc.

Derrick B. Stanley
Manager,
Health, Environment, and Safety

/dbs

cc: Air Program Manager
TCEQ – Region 10
3870 Eastex Frwy
Beaumont, TX 77708

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ARKEMA

13 Nov 2009

United Parcel Service

Air Section Manager
Texas Commission on Environmental Quality – Region 10
3870 Eastex Freeway, Suite 110
Beaumont, Texas 77703

RE: ARKEMA Chemicals, Inc.
Beaumont, Texas Facility
TCEQ Account No. JE-0074-L
CEMS Downtime Report (EPN INCIN)

Dear Ms. Ross,

Arkema Inc. respectfully submits this semi annual downtime report for the reporting period 15 Oct 2008 to 14 Apr 2009 in accordance with Special Condition 25.F of TCEQ Air Permit 865A/PSD-TX-1016. The facility maintains oxygen (O2) and carbon monoxide (CO) analyzers in accordance with the permit and also maintains a sulfur dioxide (SO2) analyzer for facility process information. The following downtime durations for each month of the period are reported below:

MONTH SO2 Analyzer	DURATION (minutes)
April 15 CEMS Downtime	2,280
May CEMS Downtime	10,140
June CEMS Downtime	720
July CEMS Downtime	240
August CEMS Downtime	1,320
September CEMS Downtime	450
October 14 CEMS Downtime	230
Total CEMS Downtime	15,380

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The total CEMS downtime for the reporting period is 15,380 minutes. The total INCIN operating time for the reporting period is 262,800 minutes. Therefore, the CEMS downtime percentage for the reporting period is 5.8%.

MONTH CO Analyzer	DURATION (minutes)
April 15 CEMS Downtime	230
May CEMS Downtime	450
June CEMS Downtime	510
July CEMS Downtime	510
August CEMS Downtime	5580
September CEMS Downtime	1860
October 14 CEMS Downtime	450
Total CEMS Downtime	9,590

The total CEMS downtime for the reporting period is 9,590 minutes. The total INCIN operating time for the reporting period is 262,800 minutes. Therefore, the CEMS downtime percentage for the reporting period is 3.6%.

MONTH O2 Analyzer	DURATION (minutes)
April 15 CEMS Downtime	450
May CEMS Downtime	450
June CEMS Downtime	450
July CEMS Downtime	450
August CEMS Downtime	930
September CEMS Downtime	2,250
October 14 CEMS Downtime	210
Total CEMS Downtime	5,190

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The total CEMS downtime for the reporting period is 5,190 minutes. The total INCIN operating time for the reporting period is 262,800 minutes. Therefore, the CEMS downtime percentage for the reporting period is 2.0%.

Thank you for your attention to this matter. If you have any questions or comments, please feel free to contact me at (409) 951-5304.

Respectfully,
ARKEMA INC.

Derrick B. Stanley
Manager,
Health, Environmental, and Safety

DBS:

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ARKEMA
The world is our inspiration

10 May 2010 **United Parcel Service**

Ms. Heather Ross
Texas Commission on Environmental Quality – Region 10
3870 Eastex Freeway, Suite 110
Beaumont, Texas 77703

RE: ARKEMA Chemicals, Inc.
Beaumont, Texas Facility
TCEQ Account No. JE-0074-L
CEMS Downtime Report (EPN INCIN)

Dear Ms. Ross,

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MONTH	DURATION (minutes)
October 15 CEMS Downtime	110
November CEMS Downtime	205
December CEMS Downtime	193
January CEMS Downtime	536
February CEMS Downtime	200
March CEMS Downtime	Plant S/D
April 14 CEMS Downtime	78
Total CEMS Downtime	1322

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The total CEMS downtime for the reporting period is 1,322 minutes. The total INCIN operating time for the reporting period is 219,600 minutes. Therefore, the CEMS downtime percentage for the reporting period is 0.6%.

Thank you for your attention to this matter. If you have any questions or comments, please feel free to contact me at (409) 951-5304.

Respectfully,
ARKEMA INC.

Derrick B. Stanley
Manager,
Health, Environmental, and Safety

DBS:

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Attachment 1
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