

To: File
From: John Legg
Date: May 26, 2015

John Legg
3/26/15

Id. No. _____ Reg. _____
Company _____
Facility _____ Region 2
Initials *JL Legg*

Subj: **R13-2120I** (Class II Administrative Update)
Surfactants Manufacturing Unit
CYTEC Industries Inc., Willow Island Plant, Pleasants County, WV
Permit Application **R13-2120I**; Plant ID No. **073-00003**

On May 3, 2015, the Division of Air Quality (DAQ) received a Class II Administrative Update from Cytec Industries Inc. (Cytec) to update their current Rule 13 permit (R13-2120H) for the Surfactants Manufacturing Unit.

On March 5, 2015, Cytec's legal advertisement ran in *The Parkersburg News and Sentinel*. The public comment period from that ad will end on April 4, 2015.

On March 13, 2015 the \$300.00 application fee was paid.

Cytec estimates that the potential to discharge regulated air pollutants, in this case particulate matter (PM), will not increase above what is currently allowable in the permit, i.e.,
⁽¹⁾ No changes to emission limits are proposed by this permitting action. The company is proposing to make the changes summarized below in Table 1.

(1) Cytec is not requesting any increase to the existing R13-2120H Section 4.1.1 emission limitations for PM, VOC, or SO₂ as a result of adding two (2) new bulk bag unloaders (WH-4BB1 & WH-4BB2) and their associated dust collectors (WH-4DC1 & WH-4DC2) which vent through new emission point 05BE. Cytec will continue to assure compliance with the R13-2120H Section 4.1.1 emission limits by following the R13-2120H permit's existing requirements for calculation of actual emissions, monitoring, recordkeeping and reporting. See the Emission Calculations section given below for details.

Permit Section	Revisions
1.0	Update Section 1.0 equipment list in order to add the new bulk bag unloaders (WH-4BB1 & WH-4BB2), and their associated dust collectors (WH-4DC1 & WH-4DC2), which vent through new emission point 05BE.
2.0	No changes
3.0	No changes
4.0	Add 05BE vent to 4.1.3 (table) and 4.2.1.

**NON-CONFIDENTIAL
ENTIRE DOCUMENT**

Project Overview

Per the Process Description found in Attachment G of permit application R13-2110H:

The Cytec Willow Island (Cytec) plant’s Surfactants Unit manufactures industrial and food grade surfactants.

Cytec is submitting this Class II Administrative Update application to revise R13-2120H due to proposed changes to the Building 92 (B92) Manufacturing Unit equipment/emission units as listed in Section 1.0. No changes to emission limits are proposed by this permitting action.

New Sodium Metabisulfite (MBS) and Sodium Sulfite (SS) supersack unloading systems (WH4BB1 & WH-4BB2) will be installed with integrated dust collection systems (WH-4DC1 & WH4DC2) that will vent to new vent point 05BE. MBS and SS are raw materials that are used in Surfactants manufacturing. All MBS and SS collected in the dust collection system (when a bag is attached or detached from the unload system) will be returned to the process via a self-cleaning air pulse jet assembly on the dust collection system.

Cytec will install the two bulk bag unloaders in the B92 warehouse area. The existing pneumatic transfer system will be modified to transfer the material from the unloaders to the existing plant storage silos (3-3BS1, 3-4BS1 & 3-4BS2). The system will be automated and include a process controller located in the area.

Emission Point ID	Emission Unit ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
05BE	WH-4BB1	Bulk Bag (Supersack) Unloader 1	2015	30,000 lb/hr	Dust Collector WH-4DC1
	WH-4BB2	Bulk Bag (Supersack) Unloader 2			Dust Collector WH-4DC2

Per R13-2120H Section 4.4.4, compliance with the emission limits set forth in Section 4.1.1 are demonstrated by calculating emissions for every product in the Building 92 Manufacturing Unit using Emission Master® emission modeling software, or other appropriate emission/discharge estimation models or calculation methodologies (e.g. ChemCAD®, PlantWare®, USEPA’s TANKS 4.0, etc.). The emission models and other calculation methods are maintained current for all processes, process modifications and new product variants. The emission/discharge estimation models and calculation methodologies developed in Section 4.4.4, as well as production records for each calendar month are maintained on site for a period of five (5) years.

Table 2: New Supersack Unloading Systems (WH-4BB1 and WH-4BB2) from EUD Sheet, Attachment L, Permit Application (R13-2120I).	
Description	Supersack unloading systems (WH-4BB1 and WH-4BB2) venting to 05BE.
Name & Maximum amount of proposed process material charged per hour	Total amount per two/both bulk baggers: Sodium Metabisulfite (MBS) 30,000 lb/hr or Sodium Sulfite (SS) 30,000 lb/hr
Projected Operating Schedule	24 hours/day; 7 days/week; 52 weeks/yr
Projected amount of pollutants that would be emitted from this affected source if no control devices were used.	Maximum Emissions from Emission Point ID No. 05BE: PM (Uncontrolled) 0.00021 lb/hr PM ₁₀ (Uncontrolled) 0.0001 lb/hr
Proposed Monitoring, Recordkeeping, Reporting, and Testing (MRRT)	Cytec does not believe that any additional MRRT is needed beyond the already existing permit terms in R13-2120H.

Table 3: New Dust Collectors (WH-4DC1 and WH-4DC2) Air Pollution Control Device Sheet, Attachment M, Permit Application (R13-2120I).	
Manufacturer	Spiroflow Systems, Inc.
Model No.	DC18-1-500-83-6
Total Number of Compartments	1
Number of compartment online for normal operation	1
Baghouse Configuration	Negative pressure during operation, and positive pressure during self-cleaning via pulse jet.
Filter Fabric Bag Material	Polyester
Bag Dimensions	12.75 inches - Diameter 26 inches - Length
Total Cloth Area	83 ft ²
Number of bags	3 cartridges per unit
Baghouse Operation	Automatic
Method used to clean bags	Pulse Jet
Cleaning initiated by	Closure of access door.
Operating Hours	24 hr/day; 365 day/yr
Collection Efficiency	99%
Gas Flow Rate into Collector	500 ACFM @ 75 degrees F
Fan Requirement	1 hp
Stabilized static pressure loss across baghouse	9 inches of H ₂ O - Pressure Drop
Type of Pollutant to be	Dust/PM from unloading the following raw materials: Sodium

Collected	Metabisulfite (MBS) and Sodium Sulfite (SS)
Emission Rate of Pollutant into and out of Both Collector at Maximum Design Operating Conditions	PM (MBS & SS) IN (uncontrolled): 0.00021 lb/hr; OUT (controlled): 0.0000021 lb/hr; OUT (controlled): 0.0000092 ton/yr PM ₁₀ (MBS & SS) IN (uncontrolled): 0.0001 lb/hr; OUT (controlled): 0.000001 lb/hr; OUT (controlled): 0.0000044 ton/yr
How is filter monitored for indications of deterioration	Visual opacity readings, frequency: monthly/quarterly (per R13-2120H, section 4.2.1.)
Describe any air pollution control device inlet and outlet gas conditioning processes	Existing air conditioning system on pneumatic system to dehumidify gas stream.
Describe the collection material disposal system:	MBS and SS collected in the dust collection system will be cleared back to the unloading chute by air pulse jet cleaning system.
MRRT	Cytec does not believe that any additional MRRT is needed beyond the already existing permit terms in R13-2120H.
Manufacturer's Guaranteed Capture Efficiency for each air pollutant	99%
Manufacturer's Guaranteed Control Efficiency	99%
Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.	Operate the dust collectors in accordance with manufacturer's operating instructions.

PM Emissions from 05BE Vent

Given below are the estimated PM and PM₁₀ hourly emission rates for Emission Point ID 05BE that are requested to be added to the 45CSR7 requirement in section 4.1.3. Also provided are the process weight rates and the 45CSR7-4.1 allowable hourly PM emission rates for the applicable process steps.

Emission Point ID	Emission Unit ID	Process Step Description	Controlled Emission Rate (lb/hr)	Process Weight Rate (lb/hr)	Rule 7 Type 'a' Allowable PM Limit (lb/hr)
05BE	WH-4BB1 & WH-4BB2	Unloading raw materials from supersacks to air conveying system	PM - 0.0000021 PM ₁₀ - 0.000001	30,000	22.0

PM Emission Calculations

The most similar unit operation to unloading raw materials was determined to be AP-42 Chapter 11.12 Concrete Batching (rev 10/01).

Specifically, Table 11.12-2 EMISSION FACTORS FOR CONCRETE BATCHING (English Units), operations for sand transfer and cement unloading to elevated storage silo (pneumatic) were chosen for adaption to the materials handling activities at Cytec.

It was determined from an Internet search that nearly all Portland cement passes through a standard No. 200 mesh (75 micron) sieve screen.

Footnote "a" to Table 11.12-2 provides a breakout of materials included in "concrete", with approximately 15% of the materials in concrete being fine powders (cement and cement supplement).

Thus, for purposes of simplification it was decided to classify dry raw materials and dry products into one of two categories for emission factor purposes:

- Coarse particle material – a material in which less than 15% of a representative sample passes through a standard No. 200 mesh sieve would be considered as a coarse material; Cytec considers sand to be representative of a coarse material.
- Fine particle material – a material in which 15% or greater of a representative sample passes through a standard No. 200 mesh sieve would be considered as a fine material; Cytec considers cement to be representative of fine material.

Therefore the emission factors from AP-42, Table 11.12-2 (rev. 10/01) are as follows:

Material	Uncontrolled PM Emissions (lb/ton)	Uncontrolled PM₁₀ Emissions (lb/ton)
Coarse particle material (Sand transfer)	0.0021	0.00099
Fine particle material (Cement unloading to elevated storage silo (pneumatic))	0.72	0.46

Where converted to percent by weight the factors became:

Material	Uncontrolled PM Emissions (% by wt)	Uncontrolled PM₁₀ Emissions (% by wt)
Coarse particle material (Sand transfer)	0.000105	0.0000495
Fine particle material (Cement unloading to elevated storage silo (pneumatic))	0.036	0.023

In order to be conservative with these PM emission factors, it was decided that the factors would be **doubled** to account for the assumptions used in this emission estimation methodology:

Material	Uncontrolled PM Emissions (% by wt)	Uncontrolled PM ₁₀ Emissions (% by wt)
Coarse particle material (Sand transfer)	0.00021	0.0001
Fine particle material (Cement unloading to elevated storage silo (pneumatic))	0.072	0.046

The assumptions used to estimate the amount of material which will be captured by the dust collection system are as follows:

1. For two/both bulk bag unloaders: Up to 10 supersacks can be unloaded per hour, with each supersack having a weight of 3,000 pounds. Total unloading capacity for two/both bulk bag unloaders equals 30,000 lb/hr.
2. Dust collection system will only run when the operator access door is open while disconnecting an “empty” supersack.
3. An estimated quantity of 10 pounds of material remains in an “empty” supersack.
4. 10 pounds of material per supersack X 10 supersacks per hour =100 pounds of material per hour which is assumed to drop out of the supersacks while the dust collection system is operating as the supersacks are disconnected.
5. Dust collection control efficiency is 99% (per manufacturer).

Below are the worst-case PM and PM₁₀ emission calculation for Emission Point ID 05BE for the unloading process steps:

Supersack Unloading – Uncontrolled emissions

$$100 \text{ lb/hr material} \times 0.00021\% \text{ by wt (coarse particle PM)} = 0.00021 \text{ lb/hr PM emitted}$$

$$0.00021 \text{ lb/hr PM} \times 8,760 \text{ hr/yr} \times 1 \text{ ton}/2,000 \text{ lb} = 0.00092 \text{ ton/yr PM emitted}$$

$$100 \text{ lb/hr material} \times 0.0001\% \text{ by wt (coarse particle PM}_{10}) = 0.0001 \text{ lb/hr PM}_{10} \text{ emitted}$$

$$0.0001 \text{ lb/hr PM}_{10} \times 8,760 \text{ hr/yr} \times 1 \text{ ton}/2,000 \text{ lb} = 0.00044 \text{ ton/yr PM}_{10} \text{ emitted}$$

Supersack Unloading – Controlled emissions

$$0.00021 \text{ lb/hr PM} \times 99\% \text{ control efficiency} = 0.0000021 \text{ lb/hr PM to atmosphere}$$

$$0.0000021 \text{ lb/hr PM} \times 8,760 \text{ hr/yr} \times 1 \text{ ton}/2,000 \text{ lb} = 0.0000092 \text{ ton/yr PM emitted}$$

$$0.0001 \text{ lb/hr PM}_{10} \times 99\% \text{ control efficiency} = 0.000001 \text{ lb/hr PM}_{10} \text{ to atmosphere}$$

$$0.000001 \text{ lb/hr PM}_{10} \times 8,760 \text{ hr/yr} \times 1 \text{ ton}/2,000 \text{ lb} = 0.0000044 \text{ ton/yr PM}_{10} \text{ emitted}$$

West Virginia Department of Environmental Protection
Earl Ray Tomblin
Governor

Division of Air Quality

Randy C. Huffman
Cabinet Secretary

Permit to Update



R13- ~~2120H~~2120I

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:

CYTEC Industries Inc.
Willow Island Plant
073-00003

John A. Benedict
William F. Durham
Director

Issued: ~~June 27, 2012~~ April 07, 2015 • Effective: ~~June 27, 2012~~ April 07, 2015

This permit supersedes and replaces R13-~~2120G~~2120H issued on ~~November 30, 2010~~June 27, 2012.

Facility Location: Willow Island, Pleasants County, West Virginia
Mailing Address: #1 Heilman Avenue, Willow Island, WV 26134
Facility Description: Surfactants Manufacturing
SIC Codes: 2869 – Industrial Organic Chemicals, Not Elsewhere Classified
UTM Coordinates: 473.42 km Easting • 4,356.22 km Northing • Zone 17
Permit Type: Class II Administrative Update
Description of Change: ~~This update allows CYTEC to update Section 1.0's equipment list by replacing the existing Double Drum Dryer (2-3DD1) with a similar new dryer. The replacement dryer bulk bag unloaders (WH-4BB1 & WH-4BB2), and their associated dust collectors (WH-4DC1 & WH-4DC2) which will continue to be vented to the existing scrubber (3-3SC1) control device. Also, typographical errors and other minor corrections will be made to Section 1.0. In Section 4.0, omitted vent through new emission point 05BE. Section 1.0's Emission Units table was updated to show this. Also, Emission Point 07BE from scrubber (3-3SC1) control device vent will be 05BE was added to the Section 4.1.3's table in 4.1.3, and the words "or Method 22 trained" will be added before the word "observer" in Section 4.4.7 to Section 4.2.1's monitoring requirements.~~

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.

The source is subject to 45CSR30. The permittee has the duty to update the facility's Title V (45CSR30) permit application to reflect the changes permitted herein.

1.0 Emission Units

Emission Point ID	Control Device	Emission Unit ID	Emission Unit Description	Design Capacity	Year Installed
04AE	Dust Collector 3-4DC1	3-4BS1	Sodium Sulfite Silo	100,000 lbs	2004
05AE	Dust Collector 3-4DC2	3-4BS2	MBS Silo	100,000 lbs	1998
<u>05BE</u>	<u>Dust Collectors WH-4DC1, WH-4DC2</u>	<u>WH-4BB1, WH-4BB2</u>	<u>Bulk Bag Unloaders</u>	<u>30,000 lb/hr</u>	<u>2015</u>
08BE	----	1-4SF1	Pressure Filter Manway Hood	700 gallons	1998
07BE	Scrubber 3-3SC1	2-3DD1	Double Drum Dryer	750 lb/hr	2012
TS-1E	----	TS-1	Truck Loading Station	300 gpm	1976
TS-2E	----	TS-2	Truck Loading Station	300 gpm	1976
TS-3E	----	TS-3	Truck Loading Station	300 gpm	1976
TS-4E	----	TS-4	Truck Loading Station	300 gpm	1998
TS-5E	----	TS-5	Truck Loading Station	300 gpm	1998
RS-1E	----	RS-1	Railcar Loading Station	300 gpm	1975
RS-2E	----	RS-2	Railcar Loading Station	300 gpm	1998
RS-3E	----	RS-3	Railcar Loading Station	300 gpm	1998
021E	----	S-1T1	OT-75 Storage Tank	26,662 gallons	1977
019E	----	S-2T1	MA-80I Storage Tank	25,000 gallons	1976
015E	----	S-3T1	OT-35 Unwashed Storage Tank	27,555 gallons	1992
013E	----	S-4T1	2-EH Storage Tank	32,314 gallons	1976
011E	----	S-5T1	MIBC Storage Tank	25,000 gallons	1994
009E	----	S-T-5	23A Storage Tank	25,000 gallons	1992
0A7E	----	S-T-3 Compartment A	IBOH Storage Tank	6,000 gallons	1988
0B7E	----	S-T-3 Compartment B	DEM Storage Tank	7,750 gallons	1988

2.3. Authority

This permit is issued in accordance with West Virginia air pollution control law W.Va. Code §§ 22-5-1, et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

2.4. Term and Renewal

- 2.4.1. This permit supersedes and replaces previously issued Permit R13-~~2120FG2120H~~. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

2.5. Duty to Comply

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2120, and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;
[45CSR§§13-5.11 and -10.3.]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

4.0. Source-Specific Requirements

4.1. Limitations and Standards

4.1.1. Emissions generated from the Surfactants Manufacturing Unit¹ shall be limited as follow:

Pollutant	Hourly Emissions ² (lb/hr)	Annual Emissions (TPY)
Particulate Matter	15.7	0.9
Sulfur Dioxide	0.7	0.24
Volatile Organic Compounds	92.09	26.9

¹ Emissions from Surfactants Manufacturing Unit shall be limited to the equipment and associated emission points listed in Section 1.0.

² Includes short duration peak emissions for “worst-case” batch activities and does not represent a continuous emission rate. Therefore, annual emissions are not based on the hourly rate taken 8,760 hours per year.

[45CSR§13-5.11.]

4.1.2. No person shall cause, suffer, allow, or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity.

[45CSR§7-3.1.]

4.1.3. No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess the quantity specified under the appropriate source operation type in Table 45-7A.

[45CSR§7-4.1.]

Emission Point ID No.	45CSR7 Maximum Allowable Particulate Emission Limit lb/hr
04CE	5
05BE	22
07BE	0.90

4.1.4. Emissions vented through Emission Point ID 04DE shall be routed to and controlled by devices 3-4T2, 3-4SC1, 3-4SC2 prior to emission to the atmosphere.

[45DCSR§13-5.11.]

4.1.5. The Seal Pot, designated as Control Device 3-4T2, shall be designed and operated to achieve a minimum control efficiency of 50 % for volatile organic compounds.

[45CSR§13-5.11.]

4.1.6. The Caustic Scrubber, designated as Control Device 3-4SC1, shall be designed and operated to achieve a minimum control efficiency of 97.5% for sulfur dioxide.

[45CSR§13-5.11.]

[45CSR§13-5.11.]

4.1.15. The Scrubber, designated as Control Device 3-3SC1, shall be designed and operated to achieve a minimum control efficiency of 95% for volatile organic compounds and particulate matter.
[45CSR§13-5.11.]

4.1.16. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-5.11.]

4.2. Monitoring Requirements

4.2.1. For the purpose of determining compliance with the opacity limits for emission points 04CE, 05BE and 07BE, the permittee shall conduct visible emission checks or opacity monitoring and recordkeeping for the emission points and equipment subject to an opacity limit. Monitoring shall be conducted initially at least once per month with a maximum of forty-five (45) days between consecutive readings. After three consecutive monthly readings in which no visible emissions are observed from any of the subject emission points, those emission points will be allowed to conduct visible emission checks or opacity monitoring once per calendar quarter. If visible emissions or opacity are observed during a quarterly monitoring from an emission point(s), then that emission point(s) with observed emissions or opacity shall be required to revert to monthly monitoring. Any emission point that has reverted to monthly monitoring shall be allowed to again conduct quarterly visible emission checks or opacity monitoring only after three consecutive monthly readings in which no visible emissions are observed from the subject emission point. These checks shall be conducted by personnel trained in the practices and limitations of 40CFR60 Appendix A, Method 9 or Method 22, or 45CSR7A, during periods of normal operation of emission sources that vent from the referenced emission point(s) for a sufficient time interval to determine if there is a visible emission. For observations of visible emissions from any emission point(s) which follows a water scrubber, when condensed water vapor is present in the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible; the observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made. If visible emissions are identified during the visible emission check, or at any other time regardless of operations, the permittee shall conduct an opacity reading using the procedures and requirements of 40CFR Part 60, Appendix A, Method 9 within seventy-two (72) hours of the first signs of visible emissions. A 40CFR Part 60, Appendix A, Method 9 evaluation shall not be required if the visible emission condition is corrected within seventy-two (72) hours after the visible emission and the sources are operating at normal conditions.

[45CSR§7.3.1 & 3.2]

4.2.2. For the following control devices: Caustic Scrubber (3-4SC1), Water Scrubber (3-4SC2), Seal Pot (3-4T2) and Scrubber (3-3SC1), the permittee shall maintain and operate water/scrubbing liquor flow rate sensors with control panel alarms to ensure adequate water/scrubbing liquor flow rates.

[45CSR§13-5.11.]

4.2.3. The parameters as set forth in 4.1.12. for the Caustic Scrubber (3-4SC1), Water Scrubber (3-4SC2), and Seal Pot (3-4T2) shall be verified prior to the start of each sulfonation production batch. Production shall not commence until all parameters are greater than or equal to their acceptable values. Conditions causing any parameter to be less than the compliance value will be corrected prior to the start of production.