

**UPDATE TO TITLE V PERMIT APPLICATION  
CERTAINTEED GYPSUM WV, INC. ■ MOUNDSVILLE, WEST VIRGINIA**

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**Prepared by:**

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Project 092101.0067

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WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

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www.wvdep.org/daq

TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

Form with 10 sections: 1. Name of Applicant, 2. Facility Name or Location, 3. DAQ Plant ID No., 4. Federal Employer ID No. (FEIN), 5. Permit Application Type, 6. Type of Business Entity, 7. Is the Applicant the..., 8. Number of onsite employees, 9. Governmental Code, 10. Business Confidentiality Claims.

<b>11. Mailing Address</b>		
<b>Street or P.O. Box:</b> 7200 Energy Road		
<b>City:</b> Proctor	<b>State:</b> WV	<b>Zip:</b> 26055
<b>Telephone Number:</b> (304) 843 - 3000		<b>Fax Number:</b> (304) 843- 3001

<b>12. Facility Location</b>		
<b>Street:</b> 10 Energy Road	<b>City:</b> Moundsville	<b>County:</b> Marshall
<b>UTM Easting:</b> 516 km	<b>UTM Northing:</b> 4,408 km	<b>Zone:</b> <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
<b>Directions:</b>  The plant is located approximately 5 miles south of Moundsville on State Highway 2.		
<b>Portable Source?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>Is facility located within a nonattainment area?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>If yes, for what air pollutants?</b>  PM <sub>2.5</sub>	
<b>Is facility located within 50 miles of another state?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>If yes, name the affected state(s).</b>  PA	
<b>Is facility located within 100 km of a Class I Area<sup>1</sup>?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <b>If no, do emissions impact a Class I Area<sup>1</sup>?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>If yes, name the area(s).</b>	
<sup>1</sup> Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.		

<b>13. Contact Information</b>		
<b>Responsible Official:</b> Rob Bruno		<b>Title:</b> Plant Manager
<b>Street or P.O. Box:</b> 7200 Energy Road		
<b>City:</b> Proctor	<b>State:</b> WV	<b>Zip:</b> 26055
<b>Telephone Number:</b> (304) 843-3010	<b>Fax Number:</b> (304) 843 - 3001	
<b>E-mail address:</b> Rob.Bruno@saint-gobain.com		
<b>Environmental Contact:</b> Joe Sabbatis		<b>Title:</b> Great Lakes Regional Manager – Health, Safety, & Environmental Affairs
<b>Street or P.O. Box:</b> 168 Creekside Drive		
<b>City:</b> Amherst	<b>State:</b> NY	<b>Zip:</b> 14228
<b>Telephone Number:</b> (716) 691-2067	<b>Fax Number:</b> (716) 691-2079	
<b>E-mail address:</b> Joseph.Sabbatis@saint-gobain.com		
<b>Application Preparer:</b> Inaas Darrat		<b>Title:</b> Senior Consultant
<b>Company:</b> Trinity Consultants		
<b>Street or P.O. Box:</b> 8425 Pulsar Place, Suite 280		
<b>City:</b> Columbus	<b>State:</b> OH	<b>Zip:</b> 43240
<b>Telephone Number:</b> (614) 433-0733	<b>Fax Number:</b> (614) 433-0734	
<b>E-mail address:</b> idarrat@trinityconsultants.com		

<b>14. Facility Description</b>			
List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.			
Process	Products	NAICS	SIC
Gypsum Product Manufacturing	Gypsum Wallboard Products	327420	3275
<b>Provide a general description of operations.</b>			
Operations of the gypsum wallboard forming facility consist of receiving raw materials (primarily synthetic gypsum with some natural gypsum and additives), drying, grinding, and calcining the gypsum, followed by mixing with wet and dry additives to form a slurry. The slurry is placed between two layers of paper to form the wallboard. The wallboard is dried, cut, and stacked for delivery.			
15. Provide an <b>Area Map</b> showing plant location as <b>ATTACHMENT A</b> . N/A			
16. Provide a <b>Plot Plan(s)</b> , e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as <b>ATTACHMENT B</b> . For instructions, refer to "Plot Plan - Guidelines." N/A			
17. Provide a detailed <b>Process Flow Diagram(s)</b> showing each process or emissions unit as <b>ATTACHMENT C</b> . Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships. N/A			



**20. Facility-Wide Applicable Requirements**

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

Please refer to Section 2 of the original Title V application.

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

CertainTeed will follow requirements in R13-2656, NSPS OOO and NSPS UUU to demonstrate compliance.

Are you in compliance with all facility-wide applicable requirements?  Yes<sup>1</sup>  No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

<sup>1</sup> CertainTeed received a NOV from the WV DEP on December 19, 2008 alleging noncompliance with the PM emissions limitations for the Board Dryer, EU36. CertainTeed's response to the NOV provided information supporting a demonstration of compliance with the Board Dryer PM emissions limitation. In addition, CertainTeed committed to revise permit R13-2656 through a Class II Administrative Update to more accurately reflect emissions from sources at the facility. The Class II Administrative update application was submitted to the WV DEP on January 30, 2009.





**Section 3: Facility-Wide Emissions**

<b>23. Facility-Wide Emissions Summary [Tons per Year]</b>	
Criteria Pollutants	Potential Emissions Stack / Fugitive
Carbon Monoxide (CO)	171.2 / N/A
Nitrogen Oxides (NO <sub>x</sub> )	103.9 / N/A
Lead (Pb)	N/A / N/A
Particulate Matter (PM <sub>2.5</sub> ) <sup>1</sup>	83.2 / 4.3
Particulate Matter (PM <sub>10</sub> ) <sup>1</sup>	95.8 / 27.3
Total Particulate Matter (TSP)	95.8 / 68.3
Sulfur Dioxide (SO <sub>2</sub> )	0.7 / N/A
Volatile Organic Compounds (VOC)	66.0 / 13.0
Hazardous Air Pollutants <sup>2</sup>	Potential Emissions
Total HAP	3.1 / N/A
Hexane	2.0 / N/A
Formaldehyde	0.08 / N/A
Regulated Pollutants other than Criteria and HAP	Potential Emissions
N/A	N/A
<sup>1</sup> PM <sub>2.5</sub> and PM <sub>10</sub> are components of TSP. <sup>2</sup> For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.	

**Section 4: Insignificant Activities**

<b>24. Insignificant Activities (Check all that apply)</b>	
<input checked="" type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input checked="" type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input checked="" type="checkbox"/>	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
<input checked="" type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input checked="" type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input checked="" type="checkbox"/>	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
<input type="checkbox"/>	7. Blacksmith forges.
<input type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input checked="" type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input type="checkbox"/>	10. CO <sub>2</sub> lasers, used only on metals and other materials which do not emit HAP in the process.
<input checked="" type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input checked="" type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input checked="" type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input checked="" type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input type="checkbox"/>	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input type="checkbox"/>	18. Emergency road flares.
<input type="checkbox"/>	19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units.  Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:  _____ _____ _____ _____ _____ _____ _____ _____ _____

<b>24. Insignificant Activities (Check all that apply)</b>	
<input type="checkbox"/>	<p>20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
<input checked="" type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
<input checked="" type="checkbox"/>	26. Fire suppression systems.
<input checked="" type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input type="checkbox"/>	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input checked="" type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input checked="" type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input type="checkbox"/>	40. Ozone generators.
<input type="checkbox"/>	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant

<b>24. Insignificant Activities (Check all that apply)</b>	
	owners/operators must still get a permit if otherwise requested.)
<input checked="" type="checkbox"/>	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
<input checked="" type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input checked="" type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input type="checkbox"/>	51. Steam cleaning operations.
<input type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input type="checkbox"/>	54. Steam vents and safety relief valves.
<input type="checkbox"/>	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
<input type="checkbox"/>	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
<input type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

**Section 5: Emission Units, Control Devices, and Emission Points**

<b>25. Equipment Table</b>
Fill out the <b>Title V Equipment Table</b> and provide it as <b>ATTACHMENT D</b> .
<b>26. Emission Units</b>
For each emission unit listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Emission Unit Form</b> as <b>ATTACHMENT E</b> .
For each emission unit not in compliance with an applicable requirement, fill out a <b>Schedule of Compliance Form</b> as <b>ATTACHMENT F</b> . <b>N/A</b>
<b>27. Control Devices</b>
For each control device listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Air Pollution Control Device Form</b> as <b>ATTACHMENT G</b> . <b>N/A</b>
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the <b>Compliance Assurance Monitoring (CAM) Form(s)</b> for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as <b>ATTACHMENT H</b> . <b>N/A</b>

**Section 6: Certification of Information**

**28. Certification of Truth, Accuracy and Completeness and Certification of Compliance**

*Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.*

**a. Certification of Truth, Accuracy and Completeness**

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

**b. Compliance Certification**

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

**Responsible official (type or print)**

Name: Rob Bruno	Title: Plant Manager
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**Responsible official's signature:**

Signature: \_\_\_\_\_ Signature Date: \_\_\_\_\_  
 (Must be signed and dated in blue ink)

<b>Note: Please check all applicable attachments included with this permit application:</b>	
<input type="checkbox"/>	ATTACHMENT A: Area Map
<input type="checkbox"/>	ATTACHMENT B: Plot Plan(s)
<input type="checkbox"/>	ATTACHMENT C: Process Flow Diagram(s)
<input checked="" type="checkbox"/>	ATTACHMENT D: Equipment Table
<input checked="" type="checkbox"/>	ATTACHMENT E: Emission Unit Form(s)
<input type="checkbox"/>	ATTACHMENT F: Schedule of Compliance Form(s)
<input type="checkbox"/>	ATTACHMENT G: Air Pollution Control Device Form(s)
<input type="checkbox"/>	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

**All of the required forms and additional information can be found and downloaded from, the DEP website at [www.wvdep.org/dag](http://www.wvdep.org/dag), requested by phone (304) 926-0475, and/or obtained through the mail.**

**ATTACHMENT A**

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**MAP**

There is no change request to the facility location with this updated to the Title V permit application.

## **ATTACHMENT B**

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### **PLOT PLAN**

There is no change request to the facility's plot plan with this updated to the Title V permit application.

**PROCESS FLOW DIAGRAM**

There is no change request to the process flow diagram with this updated to the Title V permit application.

**EQUIPMENT TABLE**

The attached equipment table includes every emission source. Information was updated for the units listed below.

- EU27 – Semi-Bulk Transfer Station Bin
- EU39 – Storage Piles
- EU40 – Material Handling
- EU41 – Haul Roads
- EU42 – Foaming Agent Tank 1
- EU43 – Foaming Agent Tank 2
- EU49 – Inking Operations

Please note EU27, EU42, and EU43 are not affected by the 10 percent throughput increase. Revisions were made for these units in order to maintain consistency with Condition 1.0 of the R13-2656B.

**ATTACHMENT D - Emission Units Table**  
**(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)**

Emission Unit ID <sup>1</sup>	Emission Point ID <sup>1</sup>	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device <sup>1</sup>
EU02	EP02	Waste Recycle System - End Saw	2008	2 tph	FF02
EU03	EP03	Waste Recycle System - Dunnage Machine	2008	2 tph	FF03
EU05	EP05	Cage Mill DSG Dryer	2007	120 tph 50 mmBtu/hr	FF05
EU06	EP06	Cage Mill Feed Silo (Wet DSG Silo)	2007	200 tons	FF06
EU07	EP07	DSG Conveying Equipment	2008	120 tph	FF07
EU08	EP08	Dry DSG Storage Silo (Intermediate DSG Silo)	2007	186 tons	FF08
EU12	EP12	K10 Kettle	2008	44 tph 31.7 mmBtu/hr	FF12
EU13	EP13	K20 Kettle	2008	44 tph 31.7 mmBtu/hr	FF13
EU14	EP14	Stucco Cooler	2008	88 tph	FF14
EU16	EP16	HRA DSG Silo	2007	2.61 tph	FF16
EU17	EP17	HRA Dextrose Silo	2007	0.1375 tph	FF17
EU18	EP18	HRA Ball Mill System	2007	1.65 tph	FF18
EU20	EP20	Stucco Silo	2007	600 tph	FF20
EU21	EP21	Mixer and Additives	2007	96 tph	FF21
EU22	EP22	Stucco Metering Equipment	2008	96 tph	FF22
EU23	EP23	Intermediate Stucco Silo	2007	100 tph	FF23
EU24	EP24	Stucco Ball Mill	2008	67.2 tph	FF24
EU25	EP25	Starch Bulk Silo	2008	24.8 tph	FF25
EU27	EP27	Semi-Bulk Transfer Station Bin	2007	24.8 tph	FF27
EU29	EP29	Boric Acid Feeder Bin	2007	3 tph	FF29
EU30	EP30	Potash Feeder Bin	2007	6 tph	FF30
EU31	EP31	Dextrose Feeder Bin	2007	2.5 tph	FF31
EU33	EP33	Starch Feeder Bin	2007	2 tph	FF33
EU34	EP34	HRA Feeder Bin	2007	4 tph	FF34

EU36	EP36	Board Dryer	2007	Total of 147 mmBtu/hr	N/A
EU37	EP37	Two Paper Heaters	2007	Total of 1.9 mmBtu/hr	N/A
EU39	Fugitive	Storage Piles	2007	6.83 acres	N/A
EU40	Fugitive	Material Handling	2007	330 to 1,100 tph	N/A
EU41	Fugitive	Haul Roads	2007	67,085 mi/yr	N/A
EU42	EP42	Foaming Agent Tank 1	2007	9,500 gal	N/A
EU43	EP43	Foaming Agent Tank 2	2007	100 gal	N/A
EU44	EP44	K10 Kettle Supply Screw	2007	120 tph	FF44
EU45	EP45	K20 Kettle Bad Batch Return Screw	2007	22 tph	FF45
EU46	EP46	Stucco Cooler ByPass Screw #2	2007	88 tph	FF46
EU47	EP47	Cage Mill Cyclone Transfer Screw	2007	120 tph	FF47
EU48	EP48	K20 Kettle Transfer Screw	2007	120 tph	FF48
EU49	Fugitive	Inking Operations	2007	3.3 lb/hr	N/A

<sup>1</sup>For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

**EMISSION UNIT FORMS**

For the emissions units included in this update to the Title V permit application, the following Emissions Unit Forms have been updated relative to those provided in the original permit application. The affected emission unit IDs are provided in parentheses.

- Dryer Section (EU36)
- Haul Roads (EU41)
- DSG Handling, Drying/Calcining, Cooling, and Stucco Handling Process (EU39, EU40)
- Storage/Transfer of Additives and Ink Usage (EU42)

Forms are not submitted for those emissions units that are not affected by the potential throughput increases.

**ATTACHMENT E - Emission Unit Form**

***Emission Unit Description – Dryer Section***

<b>Emission unit ID number:</b> See Table 1 Below	<b>Emission unit name:</b> See Table 1 Below	<b>List any control devices associated with this emission unit:</b> N/A	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b>  Board dryer and two paper heaters			
<b>Manufacturer:</b> See Table 1 Below	<b>Model Number:</b> N/A	<b>Serial Number:</b> N/A	
<b>Construction date:</b> See Table 1 Below	<b>Installation date:</b> See Table 1 Below	<b>Modification date:</b> N/A	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b>  N/A			
<b>Maximum Hourly Throughput:</b> See Table 1 Below	<b>Maximum Annual Throughput:</b> See Table 1 Below	<b>Maximum Operating Schedule:</b> 8,760 hours/year	
<b><i>Fuel Usage Data (fill out all applicable fields)</i></b>			
<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>If yes, is it?</b>  <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> EU36 (board dryer): 147 mmBtu/hr total  EU37 (paper heaters): 1.9 mmBtu/hr total		<b>Type and Btu/hr rating of burners:</b> EU36 (board dryer): Grenzebach  EU37 (paper heaters): Marsden, Inc.	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>  Pipeline quality natural gas as the only fuel.  EU36 (board dryer): 0.14 mmscf/hr total  EU37 (paper heaters): 0.00184 mmscf/hr total  Natural gas usage for the facility is limited by R13-2656 to 289.4 mscf per hour and 2,535.25 mmscf per year.			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural gas	0.5 grains or less of total sulfur per 100 standard cubic feet		1025 Btu per standard cubic foot

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See Table 2 Below	See Table 2 Below
Nitrogen Oxides (NO <sub>x</sub> )	See Table 2 Below	See Table 2 Below
Lead (Pb)	See Table 2 Below	See Table 2 Below
Particulate Matter (PM <sub>2.5</sub> )	See Table 2 Below	See Table 2 Below
Particulate Matter (PM <sub>10</sub> )	See Table 2 Below	See Table 2 Below
Total Particulate Matter (TSP)	See Table 2 Below	See Table 2 Below
Sulfur Dioxide (SO <sub>2</sub> )	See Table 2 Below	See Table 2 Below
Volatile Organic Compounds (VOC)	See Table 2 Below	See Table 2 Below
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	See Table 2 Below	See Table 2 Below
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>Board Dryer emissions were based on:                      PM/PM<sub>10</sub>/PM<sub>2.5</sub> – stack test data                      NO<sub>x</sub>/CO - stack test data                      SO<sub>2</sub> - AP-42 factors                      VOC - AP-42 factors/engineering estimates</p> <p>Paper heater emissions were based on AP-42 for all pollutants.</p>		

<p><b><i>Applicable Requirements</i></b></p> <p><b>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</b></p> <p><u>45 CSR 13 Permit No R13-2656 Specific Requirement 4.1.1: point source emissions limitation</u>  <u>45 CSR 13 Permit No R13-2656 Specific Requirements 4.1.3 and 4.1.4: natural gas limitations</u>  <u>45 CSR 7-3.1: 20% opacity limitation</u>  <u>45 CSR 7-4.1: particulate limitation as specified in Table 45-7A</u></p>
<p><input checked="" type="checkbox"/> Permit Shield</p>
<p><b>For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)</b></p> <p><u>45 CSR 13 Permit No R13-2656 Specific Requirement 4.1.1: point source emissions limitation</u>  <u>45 CSR 13 Permit No R13-2656 Specific Requirements 4.1.3 and 4.1.4: natural gas limitations</u>  <u>45 CSR 7-3.1: 20% opacity limitation</u>              4.2.5 For the purpose of determining compliance with the opacity limits of 4.1.5, 4.1.11, and 4.1.12 the permittee shall conduct visible emissions checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.</p> <p><u>45 CSR 7-4.1: particulate limitation as specified in Table 45-7A</u>  <u>Permit No R13-2656: 4.1.3 Use of pipeline quality natural gas only.</u></p>
<p><b>Are you in compliance with all applicable requirements for this emission unit?</b> <input checked="" type="checkbox"/> Yes<sup>1</sup>    <input type="checkbox"/> No</p> <p>If no, complete the <b>Schedule of Compliance Form</b> as ATTACHMENT F.</p>

<sup>1</sup> CertainTeed received a NOV from the WV DEP on December 19, 2008 alleging noncompliance with the PM emissions limitations for the Board Dryer, EU36. CertainTeed's response to the NOV provided information supporting a demonstration of compliance with the Board Dryer PM emissions limitation. In addition, CertainTeed committed to revise permit R13-2656 through a Class II Administrative Update to more accurately reflect emissions from sources at the facility. The Class II Administrative update application was submitted to the WV DEP on January 30, 2009.

**Table 1. Emissions Unit Description**

<b>Emissions Unit ID</b>	<b>Emission Unit Name</b>	<b>Control Device ID</b>	<b>Emissions Unit Manufacturer</b>	<b>Construction Date</b>	<b>Installation Date</b>	<b>Design Capacity (mmBtu/hr)</b>	<b>Maximum Hourly Throughput (scf/hr)</b>	<b>Maximum Annual Throughput (scf/yr)</b>
EU36	Board Dryer	N/A	Grenzebach Corporation	9/1/07	3/17/08	Total: 147 mmBtu/hr  Zone 1: 62 mmBtu/hr  Zone 2: 59 mmBtu/hr  Zone 3: 26 mmBtu/hr	0.14 mmscf/hr total	1226.4 mmscf/yr total
EU37	Two Paper Heaters	N/A	Marsden, Inc	9/1/07	3/17/08	1.9 mmBtu/hr total	0.00184 mmscf/hr total	16.12 mmscf/yr total

**Table 2. Emissions Data**

Emissions Unit ID	PM <sub>2.5</sub>		PM <sub>10</sub>		PM		NO <sub>x</sub>		CO		SO <sub>2</sub>		VOC		HAP	
	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
EU36 Zones 1 & 2	2.15	9.4	2.15	9.4	2.15	9.4	4.65	20.4	13.87	60.8	0.07	0.3	14.26	62.47	0.22	1.0
EU36 Zone 3	1.49	6.5	1.49	6.5	1.49	6.5	3.01	13.2	10.36	45.4	0.02	0.1	0.18	0.8	0.05	0.2
EU37	0.014	0.1	0.014	0.1	0.014	0.1	0.173	0.8	0.074	0.3	0.001	0.005	0.01	0.04	0.003	0.01

**ATTACHMENT E - Emission Unit Form**

***Emission Unit Description – Haul Roads***

<b>Emission unit ID number:</b> EU41	<b>Emission unit name:</b> Haul Roads	<b>List any control devices associated with this emission unit:</b> N/A	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Facility Haul Roads			
<b>Manufacturer:</b> N/A	<b>Model number:</b> N/A	<b>Serial number:</b> N/A	
<b>Construction date:</b> 2007	<b>Installation date:</b> N/A	<b>Modification date(s):</b> N/A	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> Gypsum Supply and Finished Wallboard round trip truck trips limited in R13-2656 to a maximum of 41,000 trips per rolling 12-months.			
<b>Maximum Hourly Throughput:</b> N/A	<b>Maximum Annual Throughput:</b> N/A	<b>Maximum Operating Schedule:</b> 8,760 hours/year	
<b><i>Fuel Usage Data (fill out all applicable fields)</i></b>			
<b>Does this emission unit combust fuel?</b> ___ Yes <input checked="" type="checkbox"/> No		<b>If yes, is it?</b> ___ Indirect Fired ___ Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> N/A		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> N/A			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxides (NO <sub>x</sub> )	N/A	N/A
Lead (Pb)	N/A	N/A
Particulate Matter (PM <sub>2.5</sub> )	N/A	0.6
Particulate Matter (PM <sub>10</sub> )	N/A	4.0
Total Particulate Matter (TSP)	N/A	20.7
Sulfur Dioxide (SO <sub>2</sub> )	N/A	N/A
Volatile Organic Compounds (VOC)	N/A	N/A
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>Potential emissions were calculated using AP-42 Section 13.2.1</p>		

***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

- 45 CSR 7-5.1: minimize emissions of fugitive particulate matter
- 45 CSR 7-5.2: control of roadway particulate emissions
- 45 CSR 13 Permit No R13-2656 Specific Requirement 4.1.19: Truck Trips limitation

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

45 CSR 7-5.1: minimize emissions of fugitive particulate matter  
 Permit No R13-2656: 4.2.4 The permittee shall monitor and record the number of gypsum supply and finished wall board truck trips on a monthly basis.

45 CSR 7-5.2: control of roadway particulate emissions  
 Permit No R13-2656: 4.2.4 The permittee shall monitor and record the number of gypsum supply and finished wall board truck trips on a monthly basis.

45 CSR 13 Permit No R13-2656 Specific Requirement 4.1.19: Truck Trips limitation  
 Permit No R13-2656: 4.2.4 The permittee shall monitor and record the number of gypsum supply and finished wall board truck trips on a monthly basis.

**Are you in compliance with all applicable requirements for this emission unit?**  Yes  No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

**ATTACHMENT E - Emission Unit Form**

***Emission Unit Description - DSG Handling, Drying/Calcining, Cooling and Stucco Handling Process***

<b>Emission unit ID number:</b> See Table 1 Below	<b>Emission unit name:</b> See Table 1 Below	<b>List any control devices associated with this emission unit:</b> See Table 1 Below
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**

DSG Handling, Drying/Calcining, Cooling and Stucco Handling Process

<b>Manufacturer:</b> See Table 1 Below	<b>Model Number:</b> N/A	<b>Serial Number:</b> N/A
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<b>Construction date:</b> See Table 1 Below	<b>Installation date:</b> See Table 1 Below	<b>Modification date:</b> N/A
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**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**

See Table 1 Below

<b>Maximum Hourly Throughput:</b> See Table 1 Below	<b>Maximum Annual Throughput:</b> See Table 1 Below	<b>Maximum Operating Schedule:</b> 8,760 hours/year
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***Fuel Usage Data (fill out all applicable fields)***

<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>If yes, is it?</b> <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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<b>Maximum design heat input and/or maximum horsepower rating:</b> EU05 (cage mill dryer): 50 mmBtu/hr EU12 (kettle #1): 31.7 mmBtu/hr EU13 (kettle #2): 31.7 mmBtu/hr	<b>Type and Btu/hr rating of burners:</b> EU05 (cage mill dryer): North American Mfg. EU12 & EU13 (kettle #1 & #2): Hamworthy-Peabody Combustion Inc.
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**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**

Pipeline quality natural gas as the only fuel.

EU05 (cage mill dryer): 0.05 mmscf/hr

EU12 (kettle #1): 0.03 mmscf/hr

EU13 (kettle #2): 0.03 mmscf/hr

Natural gas usage for the facility is limited by R13-2656 to 289.4 mscf per hour and 2,535.25 mmscf per year.

**Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural gas	0.5 grains or less of total sulfur per 100 standard cubic feet		1025 Btu per standard cubic foot

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See Table 2 Below	See Table 2 Below
Nitrogen Oxides (NO <sub>x</sub> )	See Table 2 Below	See Table 2 Below
Lead (Pb)	See Table 2 Below	See Table 2 Below
Particulate Matter (PM <sub>2.5</sub> )	See Table 2 Below	See Table 2 Below
Particulate Matter (PM <sub>10</sub> )	See Table 2 Below	See Table 2 Below
Total Particulate Matter (TSP)	See Table 2 Below	See Table 2 Below
Sulfur Dioxide (SO <sub>2</sub> )	See Table 2 Below	See Table 2 Below
Volatile Organic Compounds (VOC)	See Table 2 Below	See Table 2 Below
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	See Table 2 Below	See Table 2 Below
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>Fabric filter emissions were based on:                      0.01 grains of PM/PM<sub>10</sub> per dscf of exhaust gases for all fabric filters serving non-combustion sources (except the Dry DSG Silo Bin Vent).                      0.02 grains of PM/PM<sub>10</sub> per dscf for the Dry DSG Silo Bin Vent.                      PM<sub>2.5</sub> assumed to be 50% of PM for all fabric filters serving non-combustion sources - based on stack test data for similar sources</p> <p>Combustion source emissions were based on:                      PM/PM<sub>10</sub> for the Cage Mill – 0.01 grains of PM/PM<sub>10</sub> per dscf of exhaust gases from the fabric filter                      PM/PM<sub>10</sub> for the Kettles – stack test data                      NO<sub>x</sub>/CO - stack test data                      SO<sub>2</sub>/VOC - AP-42 factors                      PM<sub>2.5</sub> assumed to be 100% of PM for Kettles and Cage Mill</p>		

***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

- 45 CSR 13 Permit No R13-2656 Specific Requirement 4.1.1: point source emissions limitation
- 45 CSR 7-5.1: minimize emissions of fugitive particulate matter
- 45 CSR 13 Permit No R13-2656 Specific Requirement 4.1.2: fugitive source emissions limitations
- 45 CSR 13 Permit No R13-2656 Specific Requirements 4.1.3 and 4.1.4: natural gas limitations
- 45 CSR 7-3.1: 20% opacity limitation
- 45 CSR 7-4.1: particulate limitation as specified in Table 45-7A
- 40 CFR Part 60 Subpart OOO: stack emissions limitation
- 40 CFR Part 60 Subpart OOO: Stack 7% opacity limitation
- 40 CFR Part 60 Subpart OOO: Fugitive 10% opacity limitation
- 40 CFR Part 60 Subpart OOO: Material handling operations enclosed in a building limitation
- 40 CFR Part 60 Subpart UUU: kettle particulate limitation
- 40 CFR Part 60 Subpart UUU: Kettle 10% opacity limitation
- 45 CSR 13 Permit No R13-2656 Specific Requirements 4.1.20 and 21: additive VOC and HAP limitations
- 45 CSR 13-5.11: operation and maintenance of control equipment

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

- 45 CSR 13 Permit No R13-2656 Specific Requirement 4.1.1: point source emissions limitation  
Permit No R13-2656: 4.2.1 The Permittee shall monitor and record the pressure drop across the fabric filters on a weekly basis.
- 45 CSR 7-5.1: minimize emissions of fugitive particulate matter
- 45 CSR 13 Permit No R13-2656 Specific Requirement 4.1.2: fugitive source emissions limitations  
Permit No R13-2656: 4.1.7 No person shall cause, suffer, allow, or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.
- 45 CSR 13 Permit No R13-2656 Specific Requirements 4.1.3 and 4.1.4: natural gas limitations
- 45 CSR 7-3.1: 20% opacity limitation  
Permit No R13-2656: 4.2.5 For the purpose of determining compliance with the opacity limits of 4.1.5, 4.1.11, and 4.1.12 the permittee shall conduct visible emissions checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.
- 45 CSR 7-4.1: particulate limitation as specified in Table 45-7A  
Permit No R13-2656: 4.2.1 The Permittee shall monitor and record the pressure drop across the fabric filters on a weekly basis.
- 40 CFR Part 60 Subpart OOO: stack emissions limitation  
Permit No R13-2656: 4.2.1 The Permittee shall monitor and record the pressure drop across the fabric filters on a weekly basis.

40 CFR Part 60 Subpart OOO: Stack 7% opacity limitation

Permit No R13-2656: 4.2.5 For the purpose of determining compliance with the opacity limits of 4.1.5, 4.1.11, and 4.1.12 the permittee shall conduct visible emissions checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

40 CFR Part 60 Subpart OOO: Fugitive 10% opacity limitation

Permit No R13-2656: 4.2.5 For the purpose of determining compliance with the opacity limits of 4.1.5, 4.1.11, and 4.1.12 the permittee shall conduct visible emissions checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

40 CFR Part 60 Subpart OOO: Material handling operations enclosed in a building limitation

40 CFR Part 60 Subpart UUU: kettle particulate limitation

40 CFR Part 60 Subpart UUU: Kettle 10% opacity limitation

45 CSR 13 Permit No R13-2656 Specific Requirements 4.1.20 and 21: additive VOC and HAP limitations

Permit No R13-2656: 4.2.3 The permittee shall monitor and record the quantity of all inks, wet additives and foaming agents used along with their VOC and HAP content.

45 CSR 13-5.11: operation and maintenance of control equipment

Permit No R13-2656: 4.2.7 For all air pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

Permit No R13-2656: 4.2.8 For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. the equipment involved
- b. steps taken to minimize emissions during the event
- c. the duration of the event
- d. the estimated increase in emissions during the event

For each such case associated with an equipment malfunction, the additional information shall be also be recorded:

- e. the cause of the malfunction
- f. steps taken to correct the malfunction
- g. any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

**Are you in compliance with all applicable requirements for this emission unit?**  Yes  No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

**Table 1. Emissions Unit Description**

<b>Emissions Unit ID</b>	<b>Emission Unit Name</b>	<b>Control Device ID</b>	<b>Emissions Unit Manufacturer</b>	<b>Construction Date</b>	<b>Installation Date</b>	<b>Design Capacity (tons/hr)</b>	<b>Maximum Hourly Throughput (tons/hr)</b>	<b>Maximum Annual Throughput (tons/yr)</b>
EU05	Cage Mill DSG Dryer	FF05	Alstom	2/28/2007	9/20/2007	120	120	1022400
EU06	Cage Mill Feed Silo - Wet DSG Silo	FF06	Donaldson Torit	2/28/2007	9/21/2007	200 tons	200	1704000
EU07	DSG Conveying Equipment	FF07	WTW Americas	9/19/2007	1/11/2008	120	120	1022400
EU47	Cage Mill Cyclone Transfer Screw	FF47	Donaldson Torit	3/26/2007	11/15/2007	120	120	1022400
EU08	Dry DSG Storage Silo (Intermediate DSG Silo)	FF08	Donaldson Torit	8/6/2007	11/9/2007	186 tons	123	1047960
EU12	K-10 Kettle	FF12	Manthrope(SGGE)	4/3/2007	1/11/2008	44	44	374880
EU13	K-20 Kettle	FF13	Manthrope(SGGE)	4/3/2007	1/11/2008	44	44	374880
EU48	K-20 Kettle Transfer Screw	FF48	Strongco	6/27/2007	11/16/2007	120	120	1022400
EU44	K-10 Kettle Supply Screw	FF44	Strongco	9/19/2007	11/16/2007	120	120	1022400
EU45	K-20 Kettle Bad Batch Return Screw	FF45	Strongco	1/23/2007	11/17/2007	22	22	187440
EU46	Stucco Cooler Bypass Screw #2	FF46	Strongco	3/26/2007	1/4/2008	88	88	749760
EU14	Stucco Cooler	FF14	AVT	9/19/2007	1/4/2008	88	88	749760
EU16	HRA DSG Silo	FF16	Van den Berg	1/19/2007	10/18/2007	2.61	0.15	1278
EU17	HRA Dextrose Silo	FF17	Van den Berg	1/19/2007	10/3/2007	0.1375	0.09	766.8
EU18	HRA Ball Mill System	FF18	Patterson	9/5/2006	8/10/2007	1.65	0.3	2556
EU39	Storage Piles	N/A	N/A	2007	2007	N/A	N/A	N/A
EU40	Outside Material Handling Equipment	N/A	N/A	2007	2007	N/A	N/A	N/A

**Table 2. Emissions Data**

Emissions Unit ID	PM <sub>2.5</sub>		PM <sub>10</sub>		PM		NO <sub>x</sub>		CO		SO <sub>2</sub>		VOC		HAP	
	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
EU05	6.00	26.28	6.00	26.28	6.00	26.28	2.29	10.05	2.65	11.61	0.03	0.1	0.27	1.2	0.09	0.4
EU06	0.12	0.51	0.23	1.01	0.23	1.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EU07	0.39	1.72	0.79	3.44	0.79	3.44	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EU47	0.01	0.04	0.02	0.08	0.02	0.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EU08	0.07	0.28	0.13	0.57	0.13	0.57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EU12	3.23	14.13	3.23	14.13	3.23	14.13	6.80	29.79	6.06	26.55	0.02	0.1	0.17	0.7	0.06	0.3
EU13	3.23	14.13	3.23	14.13	3.23	14.13	6.80	29.79	6.06	26.56	0.02	0.1	0.17	0.7	0.06	0.3
EU48	0.01	0.04	0.02	0.08	0.02	0.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EU44	0.01	0.04	0.02	0.08	0.02	0.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EU45	0.01	0.04	0.02	0.08	0.02	0.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EU46	0.01	0.04	0.02	0.08	0.02	0.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EU14	0.09	0.38	0.17	0.75	0.17	0.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EU16	0.03	0.11	0.05	0.22	0.05	0.22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EU17	0.03	0.11	0.05	0.22	0.05	0.22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EU18	0.26	1.15	0.52	2.30	0.52	2.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EU39	N/A	1.25	N/A	8.33	N/A	16.67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EU40	N/A	2.40	N/A	14.92	N/A	30.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**ATTACHMENT E - Emission Unit Form**

***Emission Unit Description – Storage/Transfer of Additives and Ink Usage***

<b>Emission unit ID number:</b> See Table 1 Below	<b>Emission unit name:</b> See Table 1 Below	<b>List any control devices associated with this emission unit:</b> See Table 1 Below	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b>  Additive storage tanks and associated fill operations  Ink application			
<b>Manufacturer:</b> See Table 1 Below	<b>Model Number:</b> N/A	<b>Serial Number:</b> N/A	
<b>Construction date:</b> See Table 1 Below	<b>Installation date:</b> See Table 1 Below	<b>Modification date:</b> N/A	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b>  See Table 1 Below			
<b>Maximum Hourly Throughput:</b> See Table 1 Below	<b>Maximum Annual Throughput:</b> See Table 1 Below	<b>Maximum Operating Schedule:</b> 8,760 hours/year	
<b><i>Fuel Usage Data (fill out all applicable fields)</i></b>			
<b>Does this emission unit combust fuel?</b> ___ Yes <input checked="" type="checkbox"/> No		<b>If yes, is it?</b>  ___ Indirect Fired ___ Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> N/A		<b>Type and Btu/hr rating of burners:</b> N/A	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>  N/A			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>
N/A	N/A	N/A	N/A

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxides (NO <sub>x</sub> )	N/A	N/A
Lead (Pb)	N/A	N/A
Particulate Matter (PM <sub>2.5</sub> )	N/A	N/A
Particulate Matter (PM <sub>10</sub> )	N/A	N/A
Total Particulate Matter (TSP)	N/A	N/A
Sulfur Dioxide (SO <sub>2</sub> )	N/A	N/A
Volatile Organic Compounds (VOC)	See Table 2 Below	See Table 2 Below
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	N/A	N/A
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>Fugitive VOC emissions from ink usage are estimated based on maximum material applied.                      Fugitive VOC emissions from additive storage and bulk loading are considered negligible.                      Note: VOC emissions from additives are assumed to be emitted from the Board Dryer stack serving zones 1 &amp; 2.</p>		

<p><b><i>Applicable Requirements</i></b></p> <p><b>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</b></p> <p><u>45 CSR 13 Permit No R13-2656 Specific Requirements 4.1.20 and 21: additive VOC and HAP limitations</u></p> <p><u>45 CSR 13 Permit No R13-2656 Specific Requirements 4.1.1: Inking Operations VOC limitations</u></p>
<p><u>  X  </u> Permit Shield</p>
<p><b>For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)</b></p> <p><u>45 CSR 13 Permit No R13-2656 Specific Requirements 4.1.20 and 21: additive VOC and HAP limitations</u></p> <p>    4.2.3    The permittee shall monitor and record the quantity of all inks, wet additives and foaming agents used along with their VOC and HAP content.</p>
<p><b>Are you in compliance with all applicable requirements for this emission unit?</b> <u>  X  </u>Yes   <u>  </u>No</p> <p>If no, complete the <b>Schedule of Compliance Form</b> as <b>ATTACHMENT F</b>.</p>

**Table 1. Emissions Unit Description**

<b>Emissions Unit ID</b>	<b>Emission Unit Name</b>	<b>Control Device ID</b>	<b>Emissions Unit Manufacturer</b>	<b>Construction Date</b>	<b>Installation Date</b>	<b>Design Capacity (tons/hr)</b>	<b>Maximum Hourly Throughput (tons/hr)</b>	<b>Maximum Annual Throughput (tons/yr)</b>
EU49	Fugitive VOC emissions due to Ink Usage	N/A	N/A	2007	2007	N/A	3.3 lbs/hr	14.5 tons/yr
EU42 EU43	Fugitive VOC emissions due to additive storage and loading	N/A	N/A	2007	2007	Varies	81.4 lbs/hr	357 tons/yr

**Table 2. Emissions Data**

Emissions Unit ID	PM <sub>2.5</sub>		PM <sub>10</sub>		PM		NO <sub>x</sub>		CO		SO <sub>2</sub>		VOC		HAP	
	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
Fugitive VOC emissions due to Ink Usage	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.0	13.0	N/A	N/A
Fugitive VOC emissions due to additive storage and loading <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

<sup>1</sup> Fugitive VOC emissions from additive storage and bulk loading are considered negligible. VOC emissions from additives are assumed to be emitted from the Board Dryer stack serving zones 1 & 2.

**AIR POLLUTION CONTROL DEVICE FORMS**

The sources involved in this update to the Title V permit application are uncontrolled. Therefore, Air Pollution Control Device Forms are not required.