Steven L. Beshear
Governor

Leonard K. Peters
Secretary
Energy and Environment Cabinet

Commonwealth of Kentucky
Public Service Commission
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David L. Armstrong
Chairman

James W. Gardner
Vice Chairman

February 17, 2012

PARTIES OF RECORD

Re: Case No. 2011-00401

Attached is a copy of a memorandum which is being filed in the record of the above-referenced case. If you have any comments you would like to make regarding the contents of the informal conference memorandum, please do so within five days of receipt of this letter. If you have any questions, please contact Faith Burns of the Commission staff at 502/564-3940, Extension 235.

Sincerely,

Jeff Derouen
Executive Director

Attachments

cc: Parties of record

INTRA-AGENCY MEMORANDUM

KENTUCKY PUBLIC SERVICE COMMISSION

TO: Case File – Case No. 2011-00401

FROM: Faith B. Burns, Staff Attorney F.B.B. 2-17-12

DATE: February 17, 2012

RE: Informal Conference of January 5, 2012

Pursuant to a Notice of Informal Conference issued December 28, 2011, an Informal Conference in this matter was conducted at the Commission's offices in Frankfort, Kentucky on January 5, 2012. A list of attendees is attached.

Kentucky Power Company ("Kentucky Power") presented an overview of various environmental technologies that had been evaluated for installation at Big Sandy Unit 2. A copy of Kentucky Power's presentation is attached.

Kentucky Power explained that Dry Flue Gas Desulfurization is its technology of choice. That process injects hydrated lime into the flue gas and collects reacted material using an integral fabric filter baghouse. Such a system is designed for 98% SO_2 removal.

There being no additional matters to discuss, the conference was adjourned.

Attachments

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY POWER COMPANY FOR APPROVAL OF ITS 2011 ENVIRONMENTAL COMPLIANCE PLAN, FOR APPROVAL OF ITS AMENDED ENVIRONMENTAL COST RECOVERY SURCHARGE TARIFF, AND FOR THE GRANT OF A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE CONSTRUCTION AND ACQUISITION OF RELATED FACILITIES	)	CASE NO. 2011-00401

January 5, 2012

Please sign in:

NAME	REPRESENTING
JEFF JOHNSON	PSC
JEFF SHAW	PSC
Quang D Nguyen	PSC
Daryl Newby	PSC
Bob Russell	PSC
Ranie Wohnhas	KPCo
LILA MUNSEY	KPC
Laura Crittenden	Stites & Harbison
Kurt Boehm	KIUC
Kimberly McCann	VMEM
Andrew Melnykovych	PSC

Case No. 2011-00401
January 5, 2012

Eric Bowman	PSC Staff
JOHN SHUPP	PSC STAFF - ENGR.
R. L. WALTON	AEP
David B. Burk	PSC - Legal
RICHARD RAFF	PSC - Legal
Larry Cook	OAG
Dennis G. Howard, II	OAG
Mike Kurtz	KIUC
MARK R. OVERSTREET	STITES & HARBISON FOR KPCo.
Telephonically by BB. 2-17-12	
Walt Drabinski	Vantage Consulting - PSC consultant
Mike Boismenu	Vantage Consulting - PSC consultant
Chuck Buechel	Vantage Consulting - PSC consultant
Edward Lociano	AEP
Iwana Smith	AEP

SDA Systems

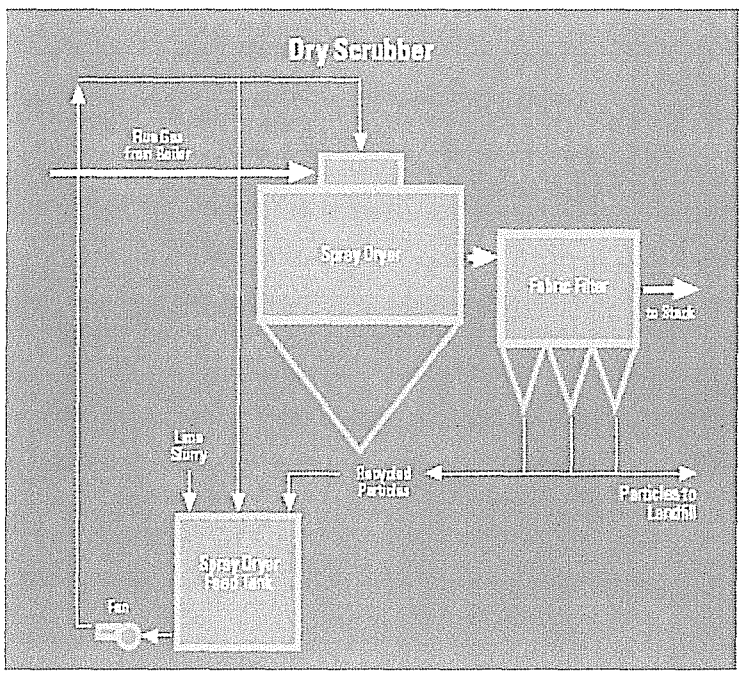
In a spray dryer absorber (SDA) dry FGD system, exhaust gas from the unit's steam generator is routed through spray dryer absorber vessels. Chemical reactions occur to remove the SO2.

Flue gas passes through a spray of lime slurry (calcium hydroxide) that is mechanically produced by high speed rotary atomizers.

The spray's fine droplets absorb the SO2. The flue gas's heat causes the water to evaporate quickly, leaving calcium sulfite and calcium sulfate.

Dry particulates of calcium sulfite, calcium sulfate, fly ash and unreacted lime collect on a fabric filter. The unreacted lime continues to neutralize and to remove additional SO2 in the fabric filter. The cleaned flue gas exits through the stack.

Some of the collected particles are recycled back to the spray dryer to maximize use of the lime reagent and the remainder is managed in a landfill.



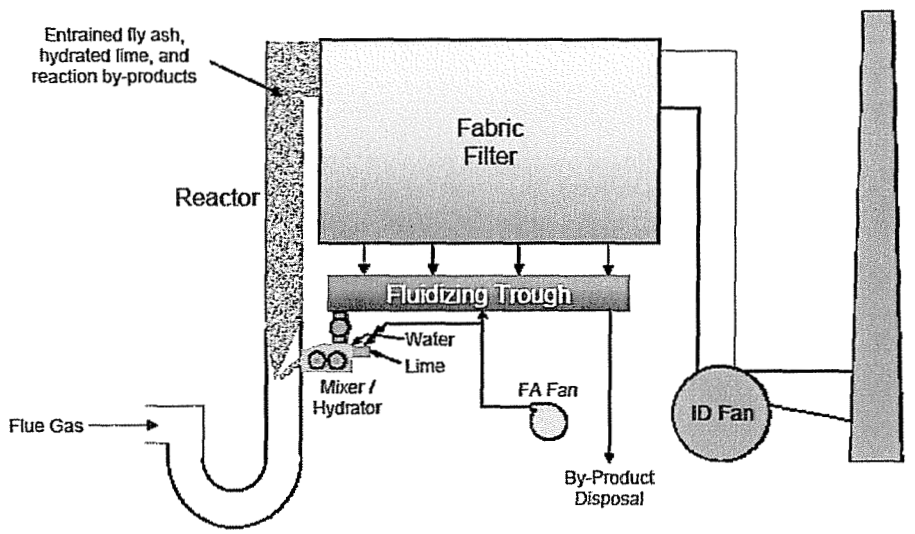
Alstom's NID™ technology

Exhaust gas from a coal-fired unit's steam generator is routed through NID™ reactors. Chemical reactions occur to remove SO2.

The NID™ mixer/hydrator adds water to a dense load of particles composed of both fresh and recycled lime, reaction byproducts and fly ash. The lightly wetted mixture of solids is discharged into the J-duct reactors. Once in the J-duct reactors, SO2 quickly is absorbed into the moistened dust mixture and reacts with the lime. The heat of the flue gas causes the water to evaporate. A mixture of calcium sulfite and calcium sulfate results.

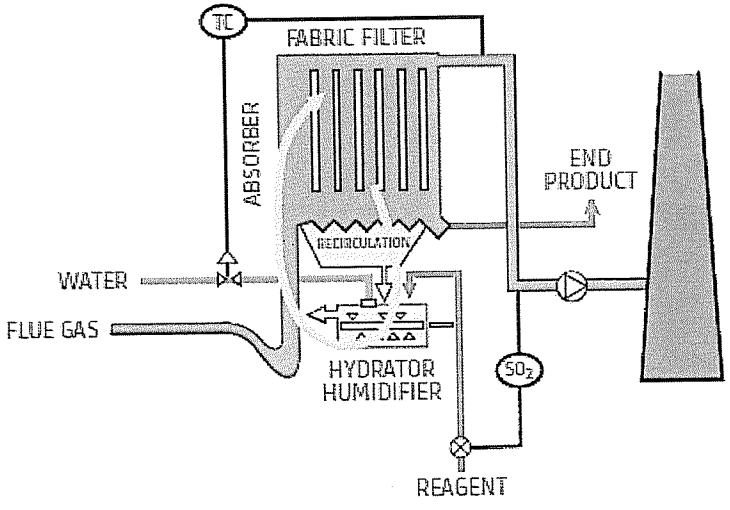
The flue gas in the J-duct reactors carries the combination of fly ash, unreacted hydrated lime and reaction products into a fabric filter that collects the dry particles. The unreacted lime continues to react with and remove additional SO2 in the fabric filter. The cleaned flue gas is discharged to the stack.

Much of the collected particles are recycled back to the NID™ J-duct reactors to maximize use of the lime reagent. A portion of the particles is continuously removed and managed in a landfill.

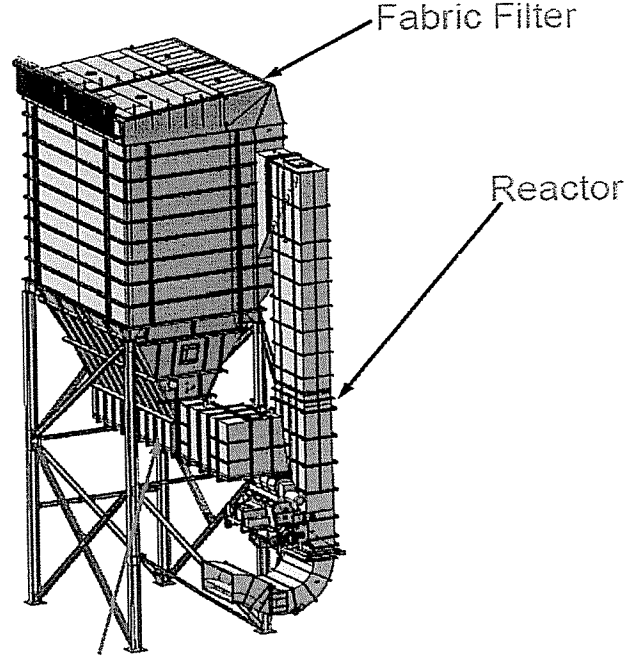


Big Sandy Unit 2
SO_2 Technology Selection

- Alstom-developed Dry Flue Gas Desulfurization is the technology of choice
- Injects hydrated lime into the flue gas and collects reacted material using integral fabric filter baghouse
- Designed for 98% SO_2 removal
- Expands fuel envelope over SDA alternative



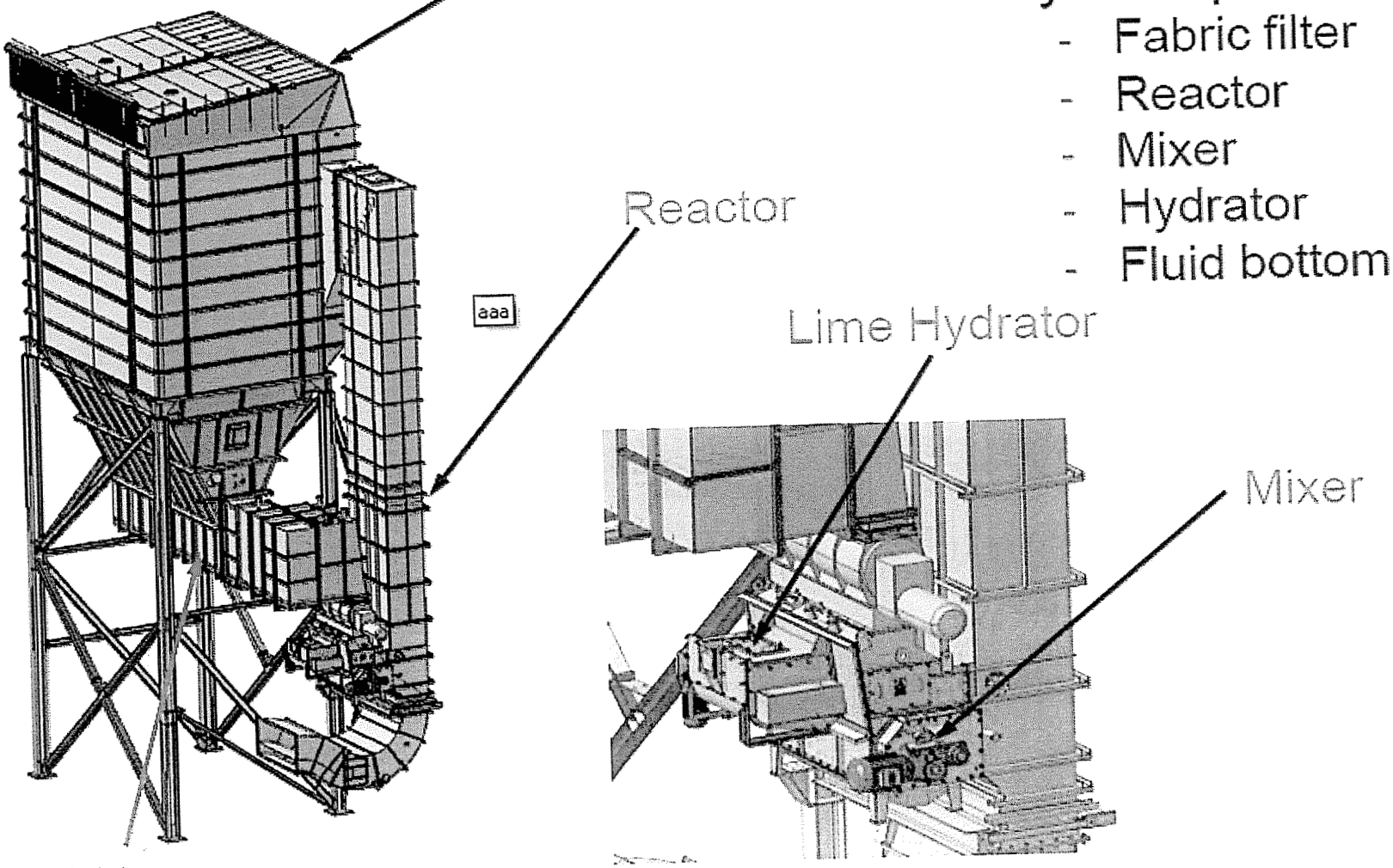
RECIRCULATION CONCEPT



Fluid bottom

Dry Flue Gas Desulfurization - NID

ALSTOM



Key Components

- Fabric filter
- Reactor
- Mixer
- Hydrator
- Fluid bottom

NID Reactor

ALSTOM

- Each mixer acts independently
- Turndown of 50% per module
- Excellent interface between flue gas & humidified recycle for SO_2 collection
- Approximately 1.2 seconds gas residence time
- No high pressure or high speed atomizers
- No slurry handling
- Continuous recirculation with air slides and fluidized troughs
- Controlled water to recycle ratio
- Dry waste product calcium sulfite/sulfate