Brian Lusher

From:	Landreth, Peter [Peter.Landreth@mirant.com]
Sent:	Friday, May 14, 2010 11:40 AM
То:	Brian Lusher
Cc:	'John_Lague@URSCorp.com'; David R. Farabee (david.farabee@pillsburylaw.com); Brian Bateman
Subject:	Additional MLGS Startup NOx Documentation

Brian,

Following up on our discussion last week, attached are letters from our vendors providing additional documentation and explanation of projected NOx emissions during the 30-minute start-up period for the MLGS turbines. Please let us know if you have further questions.

Best, Peter

Peter Landreth

Director, California Environmental Policy & Associate General Counsel Mirant Corporation Tel: (925) 427-3567 Cell: (925) 324-3510 Fax: (925) 427-3535 peter.landreth@mirant.com

JM 🐼 Johnson Matthey Inc.

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May 11, 2010

jon.sacks@mirant.com

Jon Sacks Director, Development and Transactions Mirant Corporation 1155 Perimeter Center West Atlanta, Georgia 30338-5416

Ref: Start-Up Sequence for Marsh Landing Project

Dear Mr. Sacks,

Enclosed please find a brief explanation of the SCR System's functional equipment evolutions and the associated durations necessary to ensure that the system operates safely and within the manufacturer's recommended guidelines. Due to the complexity and size of the various components involved, including tempering air fan isolation dampers, inlet vane dampers, vaporizer heater, etc., it is important that sufficient stroke, cycle, and heating times be incorporated to ensure safe and reliable equipment operation.

JMI projects the following start-up sequence for the Marsh Landing project:

- □ Initiate turbine purge, exhaust duct purge (TAS fan @ max flow) 0 minute plus 5 minutes duration.
- **TCS** drives tempering fan inlet damper to close position 5 minutes plus 1 minute duration.
- □ TCS initiate light off and tempering fan set to temperature control 6 minutes plus one minute duration.
- TCS initiate turbine start-up of vaporizer (vaporizer heater/dilution fan) 0 minute plus 20 minutes duration heat-up time (vaporizer heater).
- \Box When flue gas temperature at SCR catalyst rises to minimum permissible, set temperature permissive for NH₃ injection, approximately 0 minute plus 20 minutes duration.
- □ When vaporizer inlet air temperature rises to design temperature, set vaporizer temperature permissive for NH₃ injection 0 minute plus 15 minutes duration.
- □ As long as all other NH₃ permissives remain set, the control system will open the NH₃ isolation valve and begin positioning the NH₃ control valve - 16 minutes plus 1 minute duration.
- □ Catalyst saturated with ammonia 20 minutes plus 3 minutes duration.
- □ CEMS begins seeing NOx reduction reaction sampling rate plus 2 minutes duration.

□ CEMS begin trim control for feedback loop for stabilizing approximately – 23-25 minutes duration.

Mr. Jon Sacks May 11, 2010 Page 2 of 2

Total cycle time duration from start-up initiate through compliance – approximately 28 minutes duration.



The timing of the above sequence follows the schedule presented below:

JMI supports the conclusion that compliance can be achieved within 30 minutes of start-up.

Please feel free to call us if you have further questions.

Best regards

Robert McGinty

Robert McGinty Sales Manager





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May 12, 2010

Jon Sacks Director, Development and Transactions Mirant Corporation 1155 Perimeter Center West Atlanta, GA 30338-5416

Dear Jon,

Per our discussions with Kiewit on start-up emissions - I offer the following:

The start-up sequence for the CO/SCR systems involves several steps:

- 1) CT start-up
- 2) CT purge and Peerless duct purge per NFPA
- 3) Catalyst ramp heat-up
- 4) Catalyst reagent vaporization
- 5) Reagent injection
- 6) Catalyst adsorption
- 7) CEMs calibration loops
- 8) SCR feed-back trim control loop.

These overlapping steps will result in an estimated 30 minute start-up in order to reach steadystate.

Best Regards,

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Tim/Shippy Environmental Systems



