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Project # / Permit # 07-602 /

11/19/08

Initial Performance Testing

**IPL Proposed Permit Condition for
Startup for Initial Performance Testing
Requirements**



Interstate Power and Light Co.
An Alliant Energy Company

200 First Street SE
P.O. Box 351
Cedar Rapids, IA 52406-0351

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www.alliantenergy.com

November 19, 2008

Christopher A. Roling, P.E.
Environmental Engineer Senior
Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite 1
Urbandale, IA 50322

Subject: Proposed Permit conditions: Startup for Initial Performance Testing Requirements

Dear Mr. Roling:

Interstate Power and Light (IPL) appreciates the effort that the Iowa Department of Natural Resources (IDNR) has applied to the Sutherland 4 project.

As we prepare to move to the public comment, final permit issuance, and construction phase of this project, IPL is providing proposed language for defining *shakedown and startup* for initial performance testing requirements as noted in Attachment A to this letter.

IPL requests that for shakedown purposes the initial operating period be defined as the first synchronization of the generator to the electric grid. The time period for initial performance testing of the primary boiler would then be keyed to the commencement of the "initial operating period."

In general, initial performance testing requirements include, at least in part, the following language:

"...within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility".

After construction of a steam generation unit, certain activities must be performed to protect parts against corrosion, overheating, and thermal stresses; to check for leaks; and insure the online availability of the unit. These activities could include, among others:

- Filling the boiler and boilout to test components with respect to temperature, mechanical stresses, corrosion resistance, structural soundness, warping, gasketing, and expansion joints;
- Curing of refractory material in the boiler and stack and any coatings present on the heat exchanger surfaces.
- By-passing of the superheater and turbine until desired steam temperature is reached followed by checking of steam turbine interfacing, controls, sensors, monitors, load switching, and safety interlocks.

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The purpose of these activities is to detect any defects in installation, materials, fittings, and welds in the boiler and steam piping system which can then be corrected without a loss of on-line availability. These procedures are considered pre-startup, or shakedown operations.

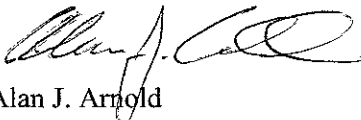
An overview of these pre-startup activities is provided in the "Instruction Manual for Clarification of Startup in Source Categories Affected by New Source Performance Standards" (EPA-68-01-4143). Additionally, this reference states that, for fossil fuel-fired steam generators, startup is best defined as the first time steam is produced by the boiler and is used to drive turbines that produce electricity.

In order to clearly define (i) when the initial operating period commences (and shakedown ends) for purposes of meeting the emission requirements and (ii) when the time clock starts for conducting the initial stack test, IPL recommends that both of these events be defined as the first synchronization of the generator to the electric grid.

A copy of proposed permit language to incorporate this definition is included in Attachment A.

IPL appreciates the opportunity to present these items to the department. IPL looks forward to working with the IDNR to resolve any concerns and formalize an approach to manage these issues.

Sincerely,



Alan J. Arnold
Senior Environmental Specialist

Attachment: A

cc: Jeff Beer, IPL Base Load Project Director
Tim Hillman, Black & Veatch Air Permitting Manager

Attachment A

Proposed Permit Language for Startup and Initial Performance Testing Requirements

12. Initial Performance Testing Requirements

If specified above, the owner shall verify compliance with the emission limitations contained in Permit Condition 10 within sixty (60) days after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date of the proposed equipment. For the primary boiler initial startup is defined as the first synchronization of the generator to the electric grid. The unit(s) being sampled should be operated [...]

16. Continuous Emission Monitoring

In accordance with 40 C.F.R. § 60.47a(e), upon initial operation, the CEMS required for SO₂, NO_x and either O₂ or CO₂ shall be operated and data recorded during all periods of operation, including periods of startup, shutdown, malfunction or emergency conditions, except for CEMS breakdowns, repairs, calibration checks and zero and span adjustments. Initial operation is defined as beginning with the first synchronization of the generator to the electric grid

Roling, Chris [DNR]

From: Arnold, Alan [AlanArnold@alliantenergy.com]
Sent: Wednesday, November 19, 2008 4:04 PM
To: Roling, Chris [DNR]
Cc: Hillman, Timothy M.; Beer, Jeffery
Subject: Letter Addressing Startup Definition
Attachments: SGS4 Letter to IDNR regarding startup-111908.pdf

Chris- please find attached an electronic version of a letter that was place in the mail to your attention today. We look forward to receiving your reaction to this proposed language.

Alan J. Arnold
Environmental Lead- IPL Baseload Project
Alliant Energy Corporate Services
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200 First Street S.E., GO-13th Floor
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