#### September 28, 2006

Mr. Gary Van Middlesworth Vice President Duane Arnold Energy Center 3277 DAEC Road Palo, Iowa 52324-9785

### SUBJECT: DUANE ARNOLD ENERGY CENTER - REQUEST FOR ADDITIONAL INFORMATION RELATED TO THE REQUEST FOR RELIEF CONCERNING FLOW MEASUREMENT FOR THE STANDBY LIQUID CONTROL PUMPS (TAC NO. MD1844)

Dear Mr. Van Middlesworth:

Your letter of May 8, 2006, submitted a request for relief concerning flow measurement for the standby liquid control pumps. We are reviewing this information, and find that additional information is needed as shown in the enclosed request for additional information (RAI). A telephone conference call was held on July 25, 2006, to discuss this RAI. Deirdre Spaulding, former Project Manager, spoke with Tony Browning of your organization on August 10, 2006, and he agreed to respond within 30 days of receipt of this RAI. If you have any questions, please contact Karl Feintuch at (301) 415-3079.

Sincerely,

# /**RA**/

Richard B. Ennis, Senior Project Manager Plant Licensing Branch III-1 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Docket No. 50-331

Enclosure: As stated

cc w/encl: See next page

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DATE	09/21/06	09/21/06	09/21/06	09/28/06

# REQUEST FOR ADDITIONAL INFORMATION

# RELATED TO THE

# FLOW MEASUREMENT FOR THE STANDBY LIQUID CONTROL PUMPS

# DUANE ARNOLD ENERGY CENTER

# DOCKET NO. 50-331

- 1. Please provide isometric diagram of the standby liquid control (SBLC) System including details such as the length of piping and system components.
- 2. The licensee stated that portable ultra-sonic flow meters were installed on the common SBLC pump discharge piping to determine the practicality of using later technology ultra-sonic flow meters to measure flow. The flow meter transducers were installed at three different locations on the discharge piping. However, each location resulted in significantly different measured flow rates compared to the other locations and the test tank level method. Please provide the data on the measured flow rates at different locations using the ultra-sonic flow meters and compare them to those using the test tank level method.
- 3. Paragraph ISTB-3510(a) of the American Society of Mechanical Engineers Operation and Maintenance Code specifies that the flow rate determination shall be accurate to within ±2 percent actual. Please provide the flow rate determination methodology that meets this Code requirement. Also, include the correlation curve conversion from test tank level to water volume.

#### Duane Arnold Energy Center

CC:

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