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Serial: NPD-NRC-2015-028
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10 CFR 52.79

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U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

**LEVY NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NOS. 52-029 AND 52-030
TRANSMITTAL OF SUPPLEMENTAL INFORMATION FOR REQUEST FOR ADDITIONAL
INFORMATION LETTER NO. 122 RELATED TO SRP SECTIONS 6.4, CONTROL ROOM
HABITABILITY SYSTEMS, FOR THE LEVY NUCLEAR PLANT, UNITS 1 AND 2, COMBINED
LICENSE APPLICATION**

Reference: 1) Letter from Christopher M. Fallon (DEF) to Donald Habib (NRC), dated March 26, 2015, "Response to Request for Additional Information Letter No. 122 Related to SRP Section 6.4, Control Room Habitability, for The Levy Nuclear Plant Units 1 and 2 Combined License Application", Serial: NPD-NRC-2015-003 (ML15089A193)

Ladies and Gentlemen:

During the Levy Units 1 & 2 Call on Thursday, June 11, 2015, DEF was requested to provide more details regarding the Main Control Room (MCR) Two Stage Automatic Load Shed described in Reference 1. Specifically, the list of loads that that will be de-energized by each load shed stage was requested. In response, the following information is provided:

Select, non-safety loads are de-energized by the Stage 1 load shed, which occurs coincident with MCR Emergency Habitability System (VES) actuation. Consisting primarily of office equipment and non-battery backed lighting, specific loads include:

- Large Screen Displays used for weather or plan of the day information
- Water heater
- Coffee Machine
- Refrigerator
- Microwave
- Dishwasher
- Drinking fountain/Icemaker
- Site Supplied Desktop Computer, Monitors, copy machine, printers
- Normal ELS Lighting (i.e., not battery backed)
- Convection Heater (2)
- Non-safety MCR Area Radiation Monitor

Additional non-safety loads de-energized by the Stage 2 load shed include the RO Console Assemblies and Wall Panel Information System (WPIS) Displays. This occurs three hours after the Stage 1 load shed.

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NRO

In addition, Enclosure 1 to this letter provides an explanation of the load shed strategy as a reviewer's aid (non - proprietary format). Enclosure 2 to this letter provides the information in proprietary format.

Also enclosed are the Westinghouse Application for Withholding Proprietary Information from Public Disclosure CAW-15-4185, accompanying Affidavit, Proprietary Information Notice, and Copyright Notice (Enclosures 3 and 4).

As Enclosure 2 contains information proprietary to Westinghouse Electric Company LLC, it is supported by an Affidavit signed by Westinghouse, the owner of the information. The Affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.390 of the Commission's regulations.

Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR Section 2.390 of the Commission's regulations.

Correspondence with respect to the copyright or proprietary aspects of the items listed above or the supporting Westinghouse Affidavit should reference CAW-15-4185 and should be addressed to James A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company, 1000 Westinghouse Drive, Building 3 Suite 310, Cranberry Township, Pennsylvania 16066.

If you have any further questions, or need additional information, please contact Bob Kitchen at (704) 382-4046, or me at (704) 382-9248.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 1, 2015.

Sincerely,



Christopher M. Fallon
Vice President
Nuclear Development

Enclosures:

1. Levy Nuclear Plant Units 1 and 2 (LNP) Supplemental Information
MCR Load Shed - Non - Proprietary
2. Levy Nuclear Plant Units 1 and 2 (LNP) Supplemental Information
MCR Load Shed - Proprietary
3. Westinghouse Application Letter CAW-15-4185 and Affidavit
4. Proprietary Information Notice and Copyright Notice

cc (w/o enclosures): U.S. NRC Region II, Regional Administrator
cc (w/ enclosures): Mr. Donald Habib, U.S. NRC Project Manager

**Levy Nuclear Plant Units 1 and 2 (LNP)
Supplemental Information
MCR Load Shed - Non - Proprietary**

MCR Load Shed

The Two Stage Automatic Load Shed described in DEF Letter NPD-NRC-2015-003 is necessary to maintain the required Main Control Room environmental conditions in a limiting event where the MCR Emergency Habitability System (VES) has been actuated, isolating the MCR and initiating air supply, but AC power is assumed to be available for non-safety equipment in the MCR. Note that this scenario is postulated deterministically, and if AC power is available, the Nuclear Island Nonradioactive Ventilation System (VBS) is expected to perform its normal cooling and filtration duties, thus preventing the need to actuate VES.

Only non-safety loads in the MCR are automatically de-energized and all plant information, including non-safety signals, remains available on the Senior Reactor Operator (SRO) or Reactor Operator (RO) Consoles, provided their non-safety power supplies are available. Additionally, the minimum inventory of displays (determined in a detailed analysis performed during the design of the AP1000[®]) is provided by the Primary Dedicated Safety Panel which, like all safety-related equipment, is not affected by the load shed. As such, no indication capability is compromised by the load shedding, but simply one non-safety means of display. The operators maintain access to the full array of available indications, both safety and non-safety. The Two Stage Automatic Load Shed is the optimal approach because it satisfies environmental requirements without the need for operator action, while maximizing the availability of non-safety equipment used by the operators within the Control Area.

Select, non-safety loads are de-energized by the Stage 1 load shed, which occurs coincident with VES actuation. Consisting primarily of office equipment and non-battery backed lighting, specific loads include:

- Large Screen Displays used for weather or plan of the day information
- Water heater
- Coffee Machine
- Refrigerator
- Microwave
- Dishwasher
- Drinking fountain/Icemaker
- Site Supplied Desktop Computer, Monitors, copy machine, printers
- Normal ELS Lighting (i.e. not battery backed)
- Convection Heater (2)
- Non-safety MCR Area Monitor

Additional non-safety loads de-energized by the Stage 2 load shed include the RO Console Assemblies and Wall Panel Information System (WPIS) Displays. This occurs three hours after the Stage 1 load shed.

It is important to note that the Two Stage Automatic Load Shed does not de-energize all non-safety equipment, nor does it remove any communication capabilities. Furthermore, although the WPIS displays are de-energized, the information shown on these panels can be readily retrieved and displayed on any available console which is NOT de-energized. This includes all system mimics, plant controls, and the alarm presentation system.

The following non-safety items will remain energized, provided their non-safety power supplies are available:

- Shift Manager Office Console
- Senior Reactor Operator Console
- Reactor Operator Consoles (excluding business LAN)
- DAS panel
- One Main Control Area printer
- Main Control Area conference table

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Following the Stage 2 Load Shed, all information normally shown on the WPIS displays can be retrieved from the non-safety SRO or RO Consoles (if available) which are NOT de-energized.

The load shed can be blocked (via PMS controls) or automatically de-energized equipment can be manually re-energized if normal VBS cooling and filtration functions are returned. A limited number of manual actions within the Non-Radioactive portion of the Auxiliary Building are required to return power to the de-energized equipment. Conditions/requirements for the re-energization of loads are provided by applicable procedures.

The Plant Lighting System (ELS) in the control area will continue to be available throughout the event using Class 1E battery-backed power. This battery backed lighting provides the necessary illumination for safety operation. Lighting in the non-control area of the MCR will be supplied by battery-backed emergency lighting.

[]^{a,c}

A detailed analysis was performed during the design of AP1000 to determine a minimum inventory of displays and controls "...that are used to monitor the status of critical safety functions and to manually actuate the safety-related systems that achieve these critical safety functions," per Section 18.12.2 of the FSAR.

In this analysis a systematic process was implemented to identify the minimum inventory of AP1000 fixed-position controls, displays, and alarms. The process used established selection criteria directly related to the specific AP1000 accident mitigation operator actions and the critical safety functions identified in the emergency response guidelines. The minimum inventory of displays is provided by the Primary Dedicated Safety Panel (PDSP). All information available on the PDSP is also available on the control area consoles which are NOT de-energized by the load shed scheme. In design basis analyses only these controls and displays provided by safety-related consoles can be credited. In addition, the Diverse Actuation System (DAS) cabinets (non-safety), which provide an independent set of the minimum inventory of displays and controls, are not de-energized by the automatic controls described in more detail in DEF Letter NPD-NRC-2015-003.

A comparison of the potentially available displays after the Stage 2 Load shed is shown below in comparison to the displays provided by the PDSP and Secondary Dedicated Safety Panel (SDSP), also a safety-related component.

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[]^{a,c}

Conclusions:

The AP1000 safety analysis assumptions and human factors engineering plan are not affected by the licensing and design changes in provided in DEF Letter NPD-NRC-2015-003 as the minimum inventory of controls is available to the operators after the removal of non-safety loads because these controls and indications are provided by the PDSP which is NOT de-energized. No safety-related (1E) loads are de-energized by the proposed automatic controls and many non-safety controls and indications will remain energized if their non-1E power supplies are available as a result of the assumed plant-level event. Finally, the load shed can be blocked or component re-energized in non-limiting events where conditions permit the operation of non-safety heat loads.

The selection of a Two Stage Automatic Load Shed Scheme is the optimal solution for minimizing the impacts to the plant design and maintaining available operator controls and displays while satisfying MCR habitability and environmental qualification requirements.

**Westinghouse Application Letter CAW-15-4185 and Affidavit
(7 pages including cover page)**



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Proj letter: APC_APG_000271

CAW-15-4185

30 June 2015

**APPLICATION FOR WITHHOLDING PROPRIETARY
INFORMATION FROM PUBLIC DISCLOSURE**

**Subject: APC_APG_000271 Attachment 2,"MCR Load Shed Additional Information –
Proprietary"**

The proprietary information for which withholding is being requested in the above-referenced report is further identified in Affidavit CAW-15-4185 signed by the owner of the proprietary information, Westinghouse Electric Company LLC. The Affidavit, which accompanies this letter, sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR Section 2.390 of the Commission's regulations.

Accordingly, this letter authorizes the utilization of the accompanying Affidavit by APOG.

Correspondence with respect to the proprietary aspects of the Application for Withholding or the Westinghouse Affidavit should reference CAW-15-4185, and should be addressed to James A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company, 1000 Westinghouse Drive, Building 3 Suite 310, Cranberry Township, Pennsylvania 16066.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Richard A. DeLong', written over a horizontal line.

Richard A. DeLong, Director

International Licensing & Regulatory Support

CAW-15-4185

30 June 2015

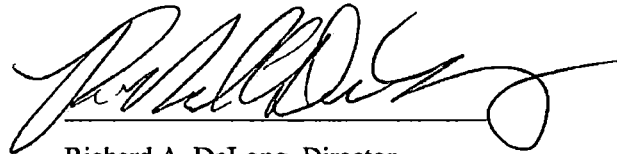
AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

SS

COUNTY OF BUTLER:

I, Richard A. DeLong, am authorized to execute this Affidavit on behalf of Westinghouse Electric Company LLC (Westinghouse), and that the averments of fact set forth in this Affidavit are true and correct to the best of my knowledge, information, and belief.

A handwritten signature in black ink, appearing to read 'Richard A. DeLong', written over a horizontal line.

Richard A. DeLong, Director

International Licensing & Regulatory Support

- (1) I am Director, International Licensing and Regulatory Support, Westinghouse Electric Company LLC (Westinghouse), and as such, I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing and rule making proceedings, and am authorized to apply for its withholding on behalf of Westinghouse.
- (2) I am making this Affidavit in conformance with the provisions of 10 CFR Section 2.390 of the Commission's regulations and in conjunction with the Westinghouse Application for Withholding Proprietary Information from Public Disclosure accompanying this Affidavit.
- (3) I have personal knowledge of the criteria and procedures utilized by Westinghouse in designating information as a trade secret, privileged or as confidential commercial or financial information.
- (4) Pursuant to the provisions of paragraph (b)(4) of Section 2.390 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
 - (i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.
 - (ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitute Westinghouse policy and provide the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

 - (a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of

Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.

- (b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.
 - (c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.
 - (d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.
 - (e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.
 - (f) It contains patentable ideas, for which patent protection may be desirable.
- (iii) There are sound policy reasons behind the Westinghouse system which include the following:
- (a) The use of such information by Westinghouse gives Westinghouse a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the Westinghouse competitive position.
 - (b) It is information that is marketable in many ways. The extent to which such information is available to competitors diminishes the Westinghouse ability to sell products and services involving the use of the information.
 - (c) Use by our competitor would put Westinghouse at a competitive disadvantage by reducing his expenditure of resources at our expense.

- (d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving Westinghouse of a competitive advantage.
 - (e) Unrestricted disclosure would jeopardize the position of prominence of Westinghouse in the world market, and thereby give a market advantage to the competition of those countries.
 - (f) The Westinghouse capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.
- (iv) The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.390, it is to be received in confidence by the Commission.
 - (v) The information sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method to the best of our knowledge and belief.
 - (vi) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in APC_APG_000271 Attachment 2, "MCR Load Shed Additional Information – Proprietary" for submittal to the Commission, being transmitted by APOG letter and Application for Withholding Proprietary Information from Public Disclosure, to the Document Control Desk. The proprietary information as submitted by Westinghouse is that associated with the topic of Condensate Return and may be used only for that purpose.
- (a) This information is part of that which will enable Westinghouse to:
 - (i) Provide the NRC and customers with technical information on the additional information on the MCR two phase load shed.

- (b) Further this information has substantial commercial value as follows:
- (i) Westinghouse plans to sell the use of similar information to its customers for the purpose of providing more products and services.
 - (ii) Westinghouse can sell support and defense of industry guidelines and acceptance criteria for plant-specific applications.
 - (iii) The information requested to be withheld reveals the distinguishing aspects of a methodology which was developed by Westinghouse.

Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of Westinghouse because it would enhance the ability of competitors to provide similar systems in commercial power reactors and licensing defense services for commercial power reactors without commensurate expenses. Also, public disclosure of the information would enable others to use the information to meet NRC requirements for licensing documentation without purchasing the right to use the information.

The development of the technology described in part by the information is the result of applying the results of many years of experience in an intensive Westinghouse effort and the expenditure of a considerable sum of money.

In order for competitors of Westinghouse to duplicate this information, similar technical programs would have to be performed and a significant manpower effort, having the requisite talent and experience, would have to be expended.

Further the deponent sayeth not.

Proprietary Information Notice and Copyright Notice
(2 pages including cover page)

PROPRIETARY INFORMATION NOTICE

Transmitted herewith are proprietary and/or non-proprietary versions of documents furnished to the NRC in connection with requests for generic and/or plant-specific review and approval.

In order to conform to the requirements of 10 CFR 2.390 of the Commission's regulations concerning the protection of proprietary information so submitted to the NRC, the information which is proprietary in the proprietary versions is contained within brackets, and where the proprietary information has been deleted in the non-proprietary versions, only the brackets remain (the information that was contained within the brackets in the proprietary versions having been deleted). The justification for claiming the information so designated as proprietary is indicated in both versions by means of lower case letters (a) through (f) located as a superscript immediately following the brackets enclosing each item of information being identified as proprietary or in the margin opposite such information. These lower case letters refer to the types of information Westinghouse customarily holds in confidence identified in Sections (4)(ii)(a) through (4)(ii)(f) of the Affidavit accompanying this transmittal pursuant to 10 CFR 2.390(b)(1).

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The reports transmitted herewith each bear a Westinghouse copyright notice. The NRC is permitted to make the number of copies of the information contained in these reports which are necessary for its internal use in connection with generic and plant-specific reviews and approvals as well as the issuance, denial, amendment, transfer, renewal, modification, suspension, revocation, or violation of a license, permit, order, or regulation subject to the requirements of 10 CFR 2.390 regarding restrictions on public disclosure to the extent such information has been identified as proprietary by Westinghouse, copyright protection notwithstanding. With respect to the non-proprietary versions of these reports, the NRC is permitted to make the number of copies beyond those necessary for its internal use which are necessary in order to have one copy available for public viewing in the appropriate docket files in the public document room in Washington, DC and in local public document rooms as may be required by NRC regulations if the number of copies submitted is insufficient for this purpose. Copies made by the NRC must include the copyright notice in all instances and the proprietary notice if the original was identified as proprietary.