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September 30th, 2011

United States Nuclear Regulatory Commission
11555 Rockville Pike,
Rockville, Maryland 20852

Attention: Document Control Desk

Subject: Amendment for the Enhanced Equipment of HFC-6000 Safety Evaluation Report (TAC No. MD8462)

Reference: HFC-6000 Safety Control System

Ladies and Gentlemen:

The Topical Report of Doosan HF Controls (HFC) HFC-6000 Safety System, ML080780170, was reviewed by Nuclear Regulatory Commission (NRC). In April 2011, NRC issued a Safety Evaluation (SE) of the system, ML110831014, approving the system to be used in safety-related applications in US nuclear power plants in accordance with the SE guidance. A set of HFC-6000 standard safety equipment is listed in the SE.

In addition the equipment listed in the SE, a set of enhanced equipment had been developed at HFC in accordance with the nuclear safety standards to be used in nuclear power plants. HFC writes this letter requesting NRC to include this set of enhanced equipment to be included in the SE. Enclosed with this letter are supporting documents for this set of enhanced equipment. Two versions of the documents: proprietary and non-proprietary are submitted. HFC is requesting the Commission to withhold the information in the proprietary version. The non-proprietary version of the documents is made available for the public. The justification for the withholding is described in the document, "Justification for Proprietary Information Affidavit" in accordance with 10 CFR 2.390. In addition, the marking of the proprietary information and the non-proprietary information within the documents is listed in the document, "Proprietary Information Notice". The following table lists the documents in this submittal.

Document Number	Description	Rev.
RR901-002-01	Amendment for Enhanced Equipments of HFC-6000 Safety Platform	A
RR901-002-02	HFC-6000 Enhanced Equipment Performance Envelope	A
RR901-002-03	FMEA for the Enhanced Equipments of HFC-6000 Safety Platform	A
RR901-002-04	Reliability and Availability Analysis Report for the Enhanced Equipment of HFC-6000 Safety Platform	A
RR901-002-05	EPRI TR 107330 RTM Enhanced Equipments	A
DS901-000-23	PCC-06 Detailed Design Specification	B
DS901-000-28	HFC-AI4K2 Design Specification	A
DS901-000-33	HFC-AI16FD_HFC-AI16RD Design Specification	D

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Document Number	Description	Rev.
DS901-000-40	HFC-TBAC36 Design Specification	B
DS901-000-41	HFC-TBAI8L Design Specification	A
DS901-000-42	HFC_TBAI8M Design Specification	B
DS901-000-43	HFC_TBAI16 Design Specification	B
DS901-000-44	HFC_TBDC33 Design Specification	A
DS901-000-47	HFC_TBDO16C Design Specification	A
DS901-000-48	HFC_TBDO16J Design Specification	A
DS901-000-49	HFC_TBPCC Design Specification	A
DS901-000-52	HFC-SCG06, Module Detailed Design Spec	B
DS901-000-53	HFC-AC36FD Design Specification	C
DS901-000-56	HFC-AI8LD-E-TYPE, Design Specification	D
DS901-000-61	HFC-FOT06 Hardware Design Spec	A
DS901-000-63	HFC-AO8FD_Design_Specification	B
DS901-000-68	HFC-SBC04A Design Specification	D
DS901-000-73	HFC-SBC06 FPGA Design Specification	F
TP0402	Operability Test Procedure	L
TP0403	Prudency Test Procedure	G
TP901-200-00	EPRI TR 107330 Pre-Qualification Test Procedures	B
TP901-200-01	EPRI TR 107330 Burn-in Test Procedures	B
TP901-200-02	Environmental Stress Test Procedure	D
TP901-200-03	ESD Test Procedures	C
TP901-200-05	EMI-RFI Test Procedure	C
TP901-200-06	Surge Withstand Test Procedures	D
TP901-200-07	Isolation Test Procedures	D

Yours truly,

Allen Hsu
President and CEO
Doosan HF Controls Corp.

Ha Bang Kim
Executive Vice President
Nuclear Power Plant Business Group
Doosan Heavy Industries & Construction Co. Ltd

Enclosures:
1- The hard copies of documents in two versions:
   Proprietary and Non-Proprietary
2- Justification for Proprietary Information Affidavit
3- Proprietary Information Notice
4- A CD of the submitted documents in PDF format for references.

CC: Jonathan Rowley, NRC
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Division of Policy and Rulemaking, Special Projects Branch
MS: O-12D1

Justification for Proprietary Information Affidavit

(1) My name is Ivan Chow. I am the V&V Team Manager of Doosan HF Controls (HFC) Corporation 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 rulemaking proceedings, and am authorized to apply for its withholding on behalf of Doosan-HFC Corporation.

(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 Doosan HFC application for withholding accompanying this affidavit.

(3) I have personal knowledge of the criteria and procedures utilized by Doosan HFC in designating information as 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.

(a) The information sought to be withheld from public disclosure is owned and has been held in confidence by Doosan HFC Corporation.

(b) The information is of a type customarily held in confidence by Doosan HFC and not customarily disclosed to the public. Doosan HFC has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, uses a uniform method to determine when and whether to hold certain types of information in confidence. The application of our method and the substance of constitute Doosan HFC's policy and provide the rational basis required.

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

- Its use by a competitor would reduce his expenditure of resources and improve his competitive position in the design, manufacture, installation, assurance of quality, or licensing a digital based I&C system.

- It reveals cost or price information, production capacities, budget levels, or commercial strategies of Doosan HFC, its customers or suppliers.

- ❖ It reveals aspects of past, present or future Doosan HFC or customer funded development plans and programs of potential commercial value to Doosan HFC.

- ❖ It contains patentable ideas, for which patent protection may be desirable.

For this affidavit, all of the information marked proprietary is because its use by a competitor would reduce his expenditure of resources and improve his competitive position in the design, manufacture, installation, assurance of quality, or licensing a digital based I&C system (type one above). This leads to a Doosan HFC need to restrict certain commercial information from the public to prevent its use by competitors and creating a commercial advantage for them to the detriment of Doosan HFC.

The development of the HFC-6000 system design is the result of many years of development by uniquely experienced personnel in an intensive effort along with the expenditure of a considerable sum of money. In order for competitors to duplicate the Doosan HFC design and applicable 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 for the development of a digital design to equal the HFC-6000 system design.

There are sound Doosan HFC policy reasons behind the Doosan HFC proprietary designation system which include the following:

a) The Use of such information by Doosan HFC gives Doosan HFC a competitive advantage over its competitors. It is therefore, withheld from disclosure to protect the Doosan HFC competitive position.

b) It is information which is marketable in many ways. The extent to which such information is available to competitors diminishes the Doosan HFC ability to sell products involving the use of the information.

c) Use by our competitors would put Doosan HFC at a competitive disadvantage by reducing their expenditure or resources at Doosan HFC 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 Doosan HFC of a competitive advantage.

e) Unrestricted disclosure would jeopardize the position of Doosan HFC in the world market such as South Korea, and thereby give a market advantage to the competition in those countries.

(5) The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR 2.390, it is to be received in confidence by the Commission.

(6) Available information has not been previously employed in the same original. The information sought to be protected is not available in public sources or manner or method to the best of our knowledge and belief.

(7) The proprietary information sought to be withheld in the submittal is that which is appropriately marked by deletion or blocked-out, with brackets of letter 'X' in some documents, in the following HFC non-proprietary documents:

Document Number	Description	Revision
RR901-002-01-NP	Amendment for Enhanced Equipments of HFC-6000 Safety Platform	A
RR901-002-02-NP	RR901-002-02 HFC-6000 Enhanced Equipment Performance Envelope, Rev. A	A
RR901-002-03-NP	FMEA for the Enhanced Equipments of HFC-6000 Safety Platform	A
RR901-002-04-NP	Reliability and Availability Analysis Report for the Enhanced Equipment of HFC-6000 Safety Platform	A
DS901-000-23-NP	PCC-06 Detailed Design Specification	B
DS901-000-28-NP	HFC-AI4K2 Design Specification	A
DS901-000-33-NP	HFC-AI16FD_HFC-AI16RD Design Specification	D
DS901-000-40-NP	HFC-TBAC36 Design Specification	B
DS901-000-41-NP	HFC-TBAI8L Design Specification	A
DS901-000-42-NP	HFC_TBAI8M Design Specification	B
DS901-000-43-NP	HFC_TBAI16 Design Specification	B
DS901-000-44-NP	HFC_TBDC33 Design Specification	A
DS901-000-47-NP	HFC_TBDO16C Design Specification	A
DS901-000-48-NP	HFC_TBDO16J Design Specification	A
DS901-000-49-NP	HFC_TBPCC Design Specification	A
DS901-000-52-NP	HFC-SCG06, Module Detailed Design Specification	B
DS901-000-53-NP	HFC-AC36FD Design Specification	C
DS901-000-56-NP	HFC-AI8LD-E-TYPE, Design Specification	D
DS901-000-61-NP	HFC-FOT06 Hardware Design Specification	A
DS901-000-63-NP	HFC-AO8FD_Design_Specification	B
DS901-000-68-NP	HFC-SBC04A Design Specification	D
DS901-000-73-NP	HFC-SBC06 FPGA Design Specification	F
TP0402-NP	Operability Test Procedure	L
TP0403-NP	Prudency Test Procedure	G
TP901-200-00-NP	EPRI TR 107330 Pre-Qualification Test Procedures	B
TP901-200-01-NP	EPRI TR 107330 Burn-in Test Procedures	B
TP901-200-02-NP	Environmental Stress Test Procedure	D
TP901-200-03-NP	ESD Test Procedures	C
TP901-200-05-NP	EMI-RFI Test Procedure	C
TP901-200-06-NP	Surge Withstand Test Procedures	D
TP901-200-07-NP	Isolation Test Procedures	D

AFFIDAVIT, STATE OF TEXAS, COUNTY OF DALLAS

Before me, the undersigned authority, personally appeared Ivan Chow, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Doosan HF Controls Corporation (HFC) and the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information and belief:

Ivan Chow

Ivan Chow

Sworn to and subscribed

Before me this 30TH day

of SEPTEMBER, 2011

Notary Public

Richard Kimball

Proprietary Information Notice

On September 30th 2011, Doosan HF Controls transmitted the following documents in non-proprietary format:

Document Number	Description	Revision
RR901-002-01-NP	Amendment for Enhanced Equipment of HFC-6000 Safety Platform	A
RR901-002-02-NP	HFC-6000 Enhanced Equipment Performance Envelope	A
RR901-002-03-NP	FMEA for the Enhanced Equipment of HFC-6000 Safety Platform	A
RR901-002-04-NP	Reliability and Availability Analysis Report for the Enhanced Equipment of HFC-6000 Safety Platform	A
RR901-002-05	EPRI TR 107330 RTM Enhanced Equipment	A
DS901-000-23-NP	PCC-06 Detailed Design Specification	B
DS901-000-28-NP	HFC-AI4K2 Design Specification	A
DS901-000-33-NP	HFC-AI16FD_HFC-AI16RD Design Specification	D
DS901-000-40-NP	HFC-TBAC36 Design Specification	B
DS901-000-41-NP	HFC-TBAI8L Design Specification	A
DS901-000-42-NP	HFC_TBAI8M Design Specification	B
DS901-000-43-NP	HFC_TBAI16 Design Specification	B
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TP901-200-05-NP	EMI-RFI Test Procedure	C
TP901-200-06-NP	Surge Withstand Test Procedures	D
TP901-200-07-NP	Isolation Test Procedures	D

In order to conform to the requirements of 10 CFR 2.390 concerning the protection of proprietary information submitted to the NRC, the proprietary version of the document listed above is marked "HFC Proprietary" on the title page and on each subsequent page containing proprietary information. For the corresponding non-proprietary versions, all

proprietary information has been deleted or blocked-out, with brackets of letter 'X' in some documents, such that only non-proprietary information remains. In addition, the deletion was done in the manner such that the formatting of the documents was preserved so that page numbers, headings and section numbers remain unchanged. Since the basis for deleting the information in all instances is to protect Doosan HFC corporation confidential commercial information; there is no adjacent marking for each deletion as specified in 2.390(b)(1)(a)(i)(B). Instead, in order to facilitate the review process, the locations of the proprietary information in each file are listed in the table below:

Document Number	Locations of the proprietary information as deleted in the non-proprietary version
RR901-002-01-PI	Pages 6-7, 17-20, 25-26, 37-39, 43
RR901-002-02-PI	Page 1, Pages 8-10, 12-14, 18-20
RR901-002-03-PI	Pages 8-58
RR901-002-04-PI	Pages 10-11, 20-77, 79-91
DS901-000-23-PI	Pages 4-19
DS901-000-28-PI	Page 4, Pages 7-17
DS901-000-33-PI	Page 1, Pages 3-4, Pages 6-19
DS901-000-40-PI	Page 1,Pages 3-6
DS901-000-41-PI	Page 1, Pages 3-7
DS901-000-42-PI	Page 1, Pages 3-6
DS901-000-43-PI	Page 1, Pages 3-4, Pages 6-8
DS901-000-44-PI	Page 1, Pages 3-4, Pages 6-7
DS901-000-47-PI	Page 1, Pages 3-4, Pages 6-7
DS901-000-48-PI	Page 1, Pages 3-4, Pages 6-7
DS901-000-49-PI	Page 1, Pages 3-4, Pages 6-8
DS901-000-52-PI	Page 1, Pages 6-21
DS901-000-53-PI	Page1, Pages 3-20
DS901-000-56-PI	Page 1, Pages 4-5, Pages 8-32
DS901-000-61-PI	Page 1, Pages 3-8
DS901-000-63-PI	Page 1,Pages 4-5, Pages 8-16
DS901-000-68-PI	Page 1, Pages 4-15
DS901-000-73-PI	Page 1,Pages 4-39
TP0402-PI	Page 1, Pages 5-50, Pages 53-71
TP0403-PI	Page 1, Page 4-28
TP901-200-00-PI	Page 1, Pages 3-7, Page 9
TP901-200-01-PI	Page 1, Pages 3-10
TP901-200-02-PI	Page 1, Page 4, Pages 6-28
TP901-200-03-PI	Page 1, Pages 3-9, Pages 11-17
TP901-200-05-PI	Pages 3-13, Pages 15-30
TP901-200-06-PI	Page 1, Pages 4-6, Pages 8-47
TP901-200-07-PI	Page 1, Pages 4-5, Pages 9-12, Pages 15-22