



**Doosan Heavy Industries
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No. : QA 08-331
To : U.S. Nuclear Regulatory Commission
Reference : Document Control Desk
Washington, DC 20555-0001
Subject : 2nd Response to US NRC Inspection Report

Reference

1. US NRC Letter dated July 18, 2008 and emailed July 21, 2008, US NRC Inspection Report No. 99901373/2008-201
2. Doosan Letter dated August 14, 2008, Doosan Response to NRC Inspection Report No. 99901373/2008-201
3. US NRC Letter dated September 5, 2008, Doosan Heavy Industries Responses To NRC Inspection Report 99901373/2008-201, Notice Of Violation And Notice of Nonconformance

Dear Sir/Madam ;

In response to US NRC letter dated July 18, 2008 (Reference 1), we had submitted corrective action status with results and plan for each Violation and Nonconformance. In addition to the Response Letter (reference 2), Doosan submit corrective action status with specific action completed for four(4) Nonconformance as follows :

A. Reply to Notice of Violation

Identification No.	Doosan CAR No.	Schedule for Completion
Violation# 99901373/2008-201-01	CAR_080092	Completed

- See Reference 2

B. Reply to Notice of Nonconformance

Identification No.	Doosan CAR No.	Schedule for Completion
Nonconformance#99901373/2008-201-01 (CGI Survey)	CAR-080094	Completed

- (1) Doosan had issued Corrective Action Report to analyze root cause, corrective action to prevent recurrence as required by QA Program and US NRC Inspection Report. The Nonconformance had been occurred due to the lack of understanding the requirements of US NRC's Position specified in NRC Inspection Report. Up to US NRC Inspection,

Doosan Quality Procedures for Dedication of CGI had been established in accordance with 10 CFR 21 as well as EPRI Guide NP-5652 so that the dedication is assured by identifying the critical characteristics of the item and verifying their acceptability by inspections and tests after delivery, supplemented as necessary by one or more of 1) commercial grade surveys, 2) product witness at the manufacturer's facility and 3) analysis of historical records for acceptable performance. However, Doosan was not aware of that CGI Survey be performed for verifying identification and traceability of the heat and lot of the products when sampling inspection and test are employed. Doosan shall perform CGI Survey for the vendors who supply commercial grade items as per revised Vendor Evaluation Procedure when the Inspections and Tests are based on sampling method.

- (2) In order to prevent recurrence, the vendor evaluation procedure had been revised to reflect the Doosan Quality Level 'CGI' to take place the CGI vendor on the Approved Vendor's List. All related personnel with regard to this matter had been trained to understand the revision contents.

Identification No.	Doosan CAR No.	Schedule for Completion
Nonconformance#99901373/2008-201-01 (CGI Dedication Procedure)	CAR-080098	Completed

- (1) Doosan had issued Corrective Action Report to analyze root cause, corrective action to prevent recurrence as required by QA Program and US NRC Inspection Report. The Nonconformance had been occurred due to the lack of understanding the definition specified in the latest 10 CFR Part 21.
- (2) In order to prevent recurrence, the procedure had been revised to incorporate the latest definitions of 10 CFR 21 such as "Commercial Grade Item", "Dedication", "Basic Component", "Dedicating Entity, etc. as required by NRC Inspection Report. All related personnel with regard to this matter had been trained to understand the revision contents.

Identification No.	Doosan CAR No.	Schedule for Completion
Nonconformance#99901373/2008-201-02	CAR-080096	Completed

- (1) Doosan had issued Corrective Action Report to analyze root cause, corrective action to prevent recurrence as required by QA Program and US NRC Inspection Report. The Nonconformance had been occurred due to the lack of understanding the requirements of US NRC's Position specified in NRC Inspection Report. Doosan shall perform the evaluation of the vendor who holds ASME Certificates prior to award of contract per revised Vendor Evaluation Procedure. However, since last US NRC Inspection, there was no new vendor to be evaluated prior to award of contract.
- (2) In order to prevent recurrence, Doosan vendor evaluation procedure had been revised to reflect the evaluation methods such as review of the performance history and quality audit and survey which are specified in ASME NQA-1-1994, 7S-1, 3.1. All related personnel with regard to this matter had been trained to understand the revision contents.

Identification No.	Doosan CAR No.	Schedule for Completion
Nonconformance#99901373/2008-201-03	CAR-080095	Completed

- (1) Doosan had issued Corrective Action Report to analyze root cause, corrective action to prevent recurrence as required by QA Program and US NRC Inspection Report. The Nonconformance had been occurred due to the lack of understanding the requirements of Regulatory Guide 1.28. Up to US NRC Inspection, Doosan QA Programs has been established in accordance with ASME Section III as required by the contract for United States project. In addition to ASME III, Doosan also have to apply Regulatory Guide 1.28 which requires annual evaluation of the vendor. Doosan had performed annual evaluation

of eleven (11) vendors who hold ASME Certificates except when no order awarded during evaluation period and order for simple and standard items such as tubular products, bars, bolts, nozzles, fittings which had been defined in the vendor evaluation procedure.

- (2) In order to prevent recurrence, the Doosan vendor evaluation procedure had been revised to reflect the annual evaluation for the vendors who hold ASME Certificates. The evaluation shall be documented and shall take into account, where applicable, 1) review of supplier furnished documents and records such as certificates of conformance, nonconformances, and corrective actions, 2) results of previous source verifications, audits, and receiving inspections and 3) results of audit from other sources such as customer, ASME, NRC audits. All related personnel with regard to this matter had been trained to understand the revision contents.

Identification No.	Doosan CAR No.	Schedule for Completion
Nonconformance#99901373/2008-201-04	CAR-080097	Completed

- (1) Doosan had issued Corrective Action Report to analyze root cause, corrective action to prevent recurrence as required by QA Program and US NRC Inspection Report. The Nonconformance had been occurred due to the lack of sufficient procedural requirements. Up to US NRC Inspection, there were errors in the approved vendor information such as evaluation date, expiration date etc. But, as it was reviewed and explained to the NRC inspectors during the inspection, Doosan reviewed all the information of the vendors and corrected all the errors, and there was no vendor that the errors could affect to their approval status.
- (2) In order to prevent recurrence, Doosan vendor evaluation procedure had been revised to reflect the definition of 1) approval date, 2) annual evaluation date, and 3) expiration date. The approval date defines the date printed by authorized personnel shown on the vendor evaluation report and/or vendor audit report, annual evaluation date defines the date printed by authorized personnel shown on the annual evaluation report, and expiration date defines 3 years after the approval date. All the related personnel with regard to this matter had been trained to understand the revised requirements.


Identification No.	Doosan CAR No.	Schedule for Completion
Nonconformance#99901373/2008-201-05	CAR-080052	Completed

- See Reference 2

Identification No.	Doosan CAR No.	Schedule for Completion
Nonconformance#99901373/2008-201-06	CAR-080053	Completed

- See Reference 2

Very Truly Yours,


 S. K. Kim
 QA General Manager
 Doosan Heavy Industries &
 Construction Co., Ltd.

CC : The Chief, Quality and Vendor Branch 1, U.S. Nuclear Regulatory Commission