Invensys
Operations Management

Letter No. NRC-V10-10-001

January 5, 2010

United States Nuclear Regulatory Commission
Document Control Desk
Washington, D.C., 20555-0001

Subject: Nuclear Safety Related Qualification of the Tricon TMR Programmable Logic Controller (PLC) – Update to Qualification Summary Report Submittal and "Application for Withholding Proprietary Information from Public Disclosure"

References:

1. Letter, J. Polcyn (Invensys) to NRC, June 1, 2009, subject: NRC Safety Evaluation Report, "Review of Triconex Corporation Topical Reports 7286-545, Qualification Summary Report, and 7286-546, Amendment 1 to Qualification Summary Report, Revision 1", Letter No. NRC-V10-09-001.
2. Letter, B. Haynes (Invensys) to NRC, October 29, 2009, subject: Nuclear Safety Related Qualification of the Tricon TMR Programmable Logic Controller (PLC) – Update to Qualification Summary Report Submittal and "Application for Withholding Proprietary Information from Public Disclosure", Letter No. NRC-V10-09-004.

Please find enclosed two CDs containing several sets of documents that were previously submitted on NRC Letter No. NRC-V10-09-004. The files are being resubmitted to correct redaction errors. The files in Enclosure 2 supersede in their entirety the documents previously submitted in Reference 2, as shown in the table below:

New File:	***Replaces Old File:***
[004R2_EQSummaryRep_P.pdf]	*[004R1_EQSummaryRep_P.pdf]*
[016R2_EQSummaryRep_NP.pdf]	*[016R1_EQSummaryRep_NP.pdf]*
[008R2_SQR_P.pdf]	*[008R1_SQR_P.pdf]*
[020R2_SQR_NP.pdf]	*[020R1_SQR_NP.pdf]*
[024R1_EnvTestRep_P.pdf]	*[024_EnvTestRep_P.pdf]*
[025R1_EnvTestRep_NP.pdf]	*[025_EnvTestRep_NP.pdf]*
[026R1_SeisTestRep_P.pdf]	*[026_SeisTestRep_P.pdf]*
[027R1_SeisTestRep_NP.pdf]	*[027_SeisTestRep_NP.pdf]*
[028R2_EMIRep_P.pdf]	*[028R1_EMIRep_P.pdf]*
[029R2_EMIRep_NP.pdf]	*[029R1_EMIRep_NP.pdf]*
[030R1_SurgeRep_P.pdf]	*[030_SurgeRep_P.pdf]*
[031R1_SurgeRep_NP.pdf]	*[031_SurgeRep_NP.pdf]*
[032R1_1EISORep_P.pdf]	*[032_1EISORep_P.pdf]*
[033R1_1EISORep_NP.pdf]	*[033_1EISORep_NP.pdf]*
[034R1_EFTRep_P.pdf]	*[034_EFTRep_P.pdf]*
[035R1_EFTRep_NP.pdf]	*[035_EFTRep_NP.pdf]*

D062
NRR

New File:	*Replaces Old File:*
[036R1_ESDRep_P.pdf]	*[036_ESDRep_P.pdf]*
[037R1_ESDRep_NP.pdf]	*[037_ESDRep_NP.pdf]*
[038R1_PPOpsRep_P.pdf]	*[038_PPOpsRep_P.pdf]*
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[050R1_MTP_NP.pdf]	*[050_MTP_NP.pdf]*
[062R1_MCL_P.pdf]	*[062_MCL_P.pdf]*
[063R1_MCL_NP.pdf]	*[063_MCL_NP.pdf]*
[067R1_EFTTestPro_P.pdf]	*[067_EFTTestPro_P.pdf]*

Correspondence with regard to this transmittal should be directed to the following:

Mr. Brian Haynes
Project Manager
Invensys
15345 Barranca Parkway
Irvine, California 92618

If there are any questions regarding this submittal or any of its enclosures, please contact me at (949) 885-0778. Thank you for your cooperation and support in this effort.

Sincerely,

Brian Haynes
Project Manager
Invensys

cc: Ms. Stacey Rosenberg, Branch Chief – NRR – CDs Only
Mr. Jonathon Rowley, Project Manager – NRR – CDs Only
Mr. William Kemper, Branch Chief – NRR – CDs Only
Mr. John Polcyn, V.P. & CNO – Invensys – CDs Only

Attachment/Enclosures

ATTACHMENT 1
Enclosure Listing – CD 8 & 9 Content

Enclosure Description	*CD8**	*CD9*	*[filename] [size MB]*
Enclosure 1: - Affidavit #TCXNRC-09-04	X	X	*[079_Affidavit4.pdf] [3.0]*
Enclosure 2: Previous Document Submittal (Redaction Revisions)			
EQ Summary Report 9600164-545, Rev 3*	X		*[004R2_EQSummaryRep_P.pdf] [1.4]*
EQ Summary Report 9600164-545, Rev 3**	X	X	*[016R2_EQSummaryRep_NP.pdf] [2.0]*
Software Qualification Report (SQR) – 9600164-535, Rev 1*	X		*[008R2_SQR_P.pdf] [1.7]*
Software Qualification Report (SQR) – 9600164-535, Rev 1**	X	X	*[020R2_SQR_NP.pdf] [3.3]*
Environmental Test Report 9600164-525, Rev 0*	X		*[024R1_EnvTestRep_P.pdf] [1.6]*
Environmental Test Report 9600164-525, Rev 0**	X	X	*[025R1_EnvTestRep_NP.pdf] [1.9]*
Seismic Test Report 9600164-526, Rev 0*	X		*[026R1_SeisTestRep_P.pdf] [1.3]*
Seismic Test Report 9600164-526, Rev 0**	X	X	*[027R1_SeisTestRep_NP.pdf] [0.7]*
EMI/RFI Test Report 9600164-527, Rev 2*	X		*[028R2_EMIRep_P.pdf] [3.3]*
EMI/RFI Test Report 9600164-527, Rev 2**	X	X	*[029R2_EMIRep_NP.pdf] [4.7]*
Surge Withstand Test Report9600164-528, Rev 1*	X		*[030R1_SurgeRep_P.pdf] [1.5]*
Surge Withstand Test Report9600164-528, Rev 1**	X	X	*[031R1_SurgeRep_NP.pdf] [2.5]*
1E Isolation Test Report 9600164-529, Rev 1*	X		*[032R1_1EISORep_P.pdf] [1.4]*
1E Isolation Test Report 9600164-529, Rev 1**	X	X	*[033R1_1EISORep_NP.pdf] [2.5]*
EFT Test Report 9600164-521, Rev 1*	X		*[034R1_EFTRep_P.pdf] [1.5]*
EFT Test Report 9600164-521, Rev 1**	X	X	*[035R1_EFTRep_NP.pdf] [2.5]*
ESD Test Report 9600164-522, Rev 1*	X		*[036R1_ESDRep_P.pdf] [1.7]*
ESD Test Report 9600164-522, Rev 1**	X	X	*[037R1_ESDRep_NP.pdf] [1.5]*
Performance Proof Test – Operation 9600164-566, Rev 0*	X		*[038R1_PPOpsRep_P.pdf] [2.3]*
Performance Proof Test – Operation 9600164-566, Rev 0**	X	X	*[039R1_PPOpsRep_NP.pdf] [7.9]*
Performance Proof Test – Prudency 9600164-573, Rev 0*	X		*[040R1_PPPruRep_P.pdf] [2.2]*
Performance Proof Test – Prudency 9600164-573, Rev 0**	X	X	*[041R1_PPPruRep_NP.pdf] [6.2]*
Radiation Test Report 9600164-533, Rev 2*	X		*[042R1_RadRep_P.pdf] [1.1]*
Radiation Test Report 9600164-533, Rev 2**	X	X	*[043R1_RadRep_NP.pdf] [1.3]*
Master Test Plan 9600164-500, Rev 5*	X		*[049R1_MTP_P.pdf] [4.7]*
Master Test Plan 9600164-500, Rev 5**	X	X	*[050R1_MTP_NP.pdf] [6.7]*
Master Configuration List 9600164-540 Rev 21*	X		*[062R1_MCL_P.pdf] [1.0]*
Master Configuration List 9600164-540 Rev 21**	X	X	*[063R1_MCL_NP.pdf] [2.3]*
EFT Test Procedure 9600164-514, Rev 0*	X		*[067R1_EFTTestPro_P.pdf] [1.7]*

*) Document Contains Invensys Proprietary material

**) Non-proprietary version of Proprietary document (redacted)

Notes:
(a) CD#8 contains Proprietary Documents (among all files). CD#9 contains only Non-Proprietary Documents (Publicly Available).

(b) A Non-Proprietary Version of the EFT Test Procedure is not provided due to its predominantly proprietary content.

AFFIDAVIT No. TCXNRC-09-04
Re: Request for Withholding from Public Disclosure per 10CFR2.390

STATE OF CALIFORNIA)
) ss
COUNTY OF ORANGE)

I, Naresh Desai, being duly sworn, hereby say and depose:

1. I am Manager of Project Planning and Architecture at Invensys, and as such I have been specifically delegated the function of reviewing company proprietary information sought to be withheld from public disclosure in connection with the nuclear safety related qualification of the TRICON Programmable Logic Controller (PLC) system and am authorized to apply for its withholding on behalf of Invensys.

2. The information sought to be withheld is contained in the document(s) described below:

   (1) EQ Summary Report 9600164-545, Rev 3
   (2) Software Qualification Report (SQR) 9600164-535, Rev 1
   (3) Environmental Test Report 9600164-525, Rev 0
   (4) Seismic Test Report 9600164-526, Rev 0
   (5) EMI/RFI Test Report 9600164-527, Rev 2
   (6) Surge Withstand Test Report 9600164-528, Rev 1
   (7) 1E Isolation Test Report 9600164-529, Rev 1
   (8) EFT Test Report 9600164-521, Rev 1
   (9) ESD Test Report 9600164-522, Rev 1
   (10) Performance Proof Test – Operation 9600164-566, Rev 0
   (11) Performance Proof Test – Prudency 9600164-573, Rev 0
   (12) Radiation Test Report 9600164-533, Rev 2
   (13) Master Test Plan 9600164-500, Rev 5
   (14) Master Configuration List 9600164-540 Rev 21
   (15) EFT Test Procedure 9600164-514, Rev 0

   Each of the indicated documents contains information considered to be proprietary. Proprietary material in the enclosed documents is indicated by brackets [ ] or other similar markings as required by 10CFR2.390(b)(1)(i)(B). Non-proprietary versions of selected documents (with specific proprietary parts removed) are also being provided, as indicated in the Transmittal letter.

   This information is a collection of key documents associated with ongoing upgrade and maintenance of qualification of the Tricon PLC. This will allow the NRC to verify compliance with current regulatory requirements in support an update to the SER for the Tricon PLC System and associated Triconex Topical Report 7286-545-1-A.

3. I am making this affidavit in conformance with the provisions of 10CFR Part 2.390 of the Commission's regulations and in conjunction with the Invensys Triconex application for withholding accompanying this Affidavit.

4. I have personal knowledge of the criteria and procedures utilized by Invensys in designating information as a trade secret, privileged, or as confidential commercial or financial information. Some examples of categories of information which fit into the definition of proprietary information are:

    a) Information which discloses process, method, or apparatus, including supporting data and analyses, where prevention of its use by Invensys Triconex's competitors without license or contract from Invensys constitutes a competitive economic advantage over other companies in the industry.
    b) Information, which if used 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 of a similar product.
    c) Information which reveals cost or price information, production capacities, budget levels, or commercial strategies of Invensys, its customers, its partners, or its suppliers.
    d) Information which reveals aspects of past, present, or future Invensys Triconex customer-funded development plans or programs, of potential commercial value to Invensys.
    e) Information which discloses patentable subject matter for which it may be desirable to obtain patent protection.
    f) Information obtained through Invensys Triconex actions which could reveal additional insights into Nuclear safety related PLC equipment qualification processes and regulatory proceedings, and which are not otherwise readily obtainable by a competitor.

    Information to be withheld is considered to be proprietary based on the reasons set forth in paragraphs 4 (a), (b), and (f) above.

5. These documents describe the details of a program to qualify Triconex equipment which has undergone nuclear qualification testing. Product design and development details are also represented. Invensys Triconex is the first manufacturer of a PLC to fully implement the requirements set forth in the EPRI TR-107330, which has been endorsed by the Commission in an SER. Invensys Triconex has expended a significant amount of money and effort involving numerous contractors over a 12 year time period to develop and implement an ongoing successful approach to its qualification and test program. Information developed relating to test plans, approaches, equipment, specific problems encountered, licensing perspectives, and lessons learned has significant value because of the resources expended to successfully accomplish this process and the usefulness of this knowledge to potential competitors.

    Specific test data showing compliance with requirements and demonstrating technical capability of the equipment has substantial commercial value because it provides the basis for qualifying Triconex equipment to be sold for safety-related digital upgrades to nuclear plants. Existing options for digital upgrades in the nuclear industry are limited. We believe that ongoing successful nuclear qualification upgrades of the Invensys Triconex products, already well known in non-nuclear applications, will continue to give Invensys a competitive advantage in this field.

    Disclosure of information in these documents would cause substantial harm to the competitive position of the Invensys, as there are other competing companies who wish to develop, qualify, and sell digital control systems for safety related application in nuclear power plants. Competing firms could use our experience,

successful approaches, and technical information to facilitate their own equipment qualification efforts and/or product design without compensating Invensys.

6. 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 Invensys.
   (ii) The information is of a type customarily held in confidence by Invensys and not customarily disclosed to the public. Invensys 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 Invensys policy and provide the rational basis required.
   (iii) The information is being transmitted to the Commission in confidence and, under the provisions of 10CFR Part 2.390, it is to be received in confidence by the Commission.
   (iv) This information is not readily available in public sources.
   (v) Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of Invensys, because it would enhance the ability of competitors to provide similar design of PLC or qualify similar equipment using similar project methods, equipment, testing approach, contractors, or licensing approaches. As described in section 5, this information is the result of considerable expense to Invensys and has great value in that it will assist Invensys in providing Triconex digital upgrade equipment and services to a new, expanding markets not currently served by the company.

7. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

Naresh Desai
Manager of Project Planning and Architecture
Invensys

Sworn to and subscribed before me

this 1st day of January, 2010

Notary Public

State of California
County of Orange
Subscribed and sworn to (or affirmed) before me
on this 1st day of Jan., 2010
by Naresh Desai,
proved to me on the basis of satisfactory evidence
to be the person(s) who appeared before me.
Signature (Seal)