MSFIS Controls Replacement Project Plan, Revision 2

MAIN STEAM & FEEDWATER ISOLATION SYSTEM (MSFIS) CONTROLS REPLACEMENT

PROJECT PLAN

REVISION 2

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Revision Control

Rev #	Approval	Approval Date	Description of Change(s)
0	GWC	5/6/2007	Initial Revision
1	GWC	5/31/2007	Updated for submittal to NRC, added several sections of information previously contained in individual documents.
2	GWC	8/22/2007	Changed wording in Section 1.2.2. Added further detail to section 2.1.4 to describe Qualification Contractor use of EPRI TR-106439 in the dedication process.

Table of Content

1 Project Overview

This section provides an overview of the MSFIS Controls Replacement Project. The section discusses the purpose of the project and defines the scope and objectives of the project. The section also discusses why WCNOC chose the Advanced Logic System platform. Finally the section outlines the deliverables of the project.

1.1 Purpose, Scope, and Objectives

Outlined below are the purpose, scope, and objectives of the Main Steam & Feedwater Isolation System (MSFIS) Controls Replacement Project.

1.1.1 Purpose

The purpose of the MSFIS Controls Replacement Project is to replace the existing MSFIS controls system with an Advanced Logic System (ALS). The replacement installation is scheduled for Refueling Outage 16, spring 2008. The MSFIS Controls Replacement Project is one aspect of an overall project to replace the existing Main Steam Isolation Valve (MSIV) bodies and actuators as well as the Main Feedwater Isolation Valve (MFIV) bodies and actuators. The existing MSFIS controls do not support the operation of the replacement MSIV and MFIV actuators. A modified or replacement controls system is required to operate the new valve actuators. In addition to the lack of capability, the existing MSFIS controls are based on obsolete technology and that has become less reliable as the system ages. A recent plant trip (August 2003) was due to a failed circuit card in the existing MSFIS control. Several single points of failure exist in the existing MSFIS controls.

1.1.2 Scope

The scope of work for the MSFIS Controls Replacement Project is to replace the existing Consolidated Controls Corporation system with an Advanced Logic System (ALS), from CS Innovations. The installation of the replacement controls is to occur during WCGS Refueling Outage 16, Spring 2008.

The MSFIS Controls Replacement Project replaces the existing safety related MSFIS with a hardware-based system to perform the control functions of the MSIVs and MFIVs. The replacement MSFIS controls will be installed in conjunction with replacement of the existing electro-pneumatic-hydraulic MSIVs and MFIVs by new MSIVs and MFIVs with system-medium actuators. The MSFIS controls, existing and replacement, has two redundant subsystems located in separate cabinets:

MSFIS Channel I (1) located in MSFIS Cabinet SA075A
MSFIS Channel IV (4) located in MSFIS Cabinet SA075B

The replacement project will retain the existing cabinets, external power supply feeds, and channel separation scheme in the overall plant configuration. The replacement project will include changes to the functions by which the replacement MSFIS controls the replacement MSIVs and MFIVs. These changes account for the differences in the function of the existing and replacement MSIVs and MFIVs, that is, electro-pneumatic-hydraulic actuators replaced by system medium actuators.

The existing and replacement MSFIS are both considered digital in that they deal with ON-OFF inputs and outputs, and there are no analog / magnitude inputs and outputs involved. However, the systems, both the existing and replacement, do not have general digital computer components and characteristics such as a clock-driven central processing unit in continuous operation.

1.1.3 Objectives

The objectives of the MSFIS Controls Replacement Project are as follows: 1) Provide the required logic updates to control the replacement MSIVs and MFIVs. 2) Increase the reliability of the MSFIS controls where no single point of failure shall cause a false actuation or prevent accomplishment of the MSFIS safety function. 3) Provide an improved test and maintenance interface. The existing system is very difficult to troubleshoot and maintain. The replacement MSFIS controls will reduce manual testing by providing automated and interactive automated testing. 4) Provide hot swap functionality for all system modules including the system power supplies. 5) Provide a summary trouble alarm for each cabinet, SA075A and SA075B.

1.2 System Architecture Selection

The system architecture selected for the MSFIS Controls Replacement Project is the ALS from CS Innovations. The discussion below describes the issues WCNOC, as well as the rest of the U.S. Nuclear Power Plant Industry, has faced with the selection of a platform for the MSFIS controls as well as other safety system replacements.

1.2.1 U.S. Nuclear Power Plant Safety System Discussion

United States Nuclear Power Plants (NPPs) are facing difficulties in updating their safety related control systems. The systems which are being proposed are all Commercial-off-the-shelf (COTS) systems and are based on microprocessor architectures. Licensing a software based Reactor Protection System/Engineered Safety Features Actuation System is very difficult and typically requires additional diverse trips systems, which makes the control system design more complex. Below is a discussion associated with the issues of using COTS systems.

There are several issues associated with using COTS systems for safety related applications. The NRC states in NUREG/CR-6842; "Significant issues that may affect any COTS dedication approach are rapid obsolescence and configuration management. For example commercially distributed digital control systems are rapidly changing at the present time. While rapid advancement of technology is one factor, another is that these systems are past the point of mimicking conventional analog control systems and are expanding, in an integrated fashion, into the areas of data management and plant supervision. Thus, the foundation software packages are evolving with new features and functions being added to each revision. Updating non-safety system software to expand its capabilities may be desirable, but safety-related software must be maintained in a dedicated configuration in strict adherence to an imposed quality assurance program."

The NPP industry cannot justify the cost model of continually upgrading their safety related control systems due to the rapid obsolescence issue along with the configuration management issues associated with COTS systems. The cost of changing the control systems to maintain revisions is very high. This is due to that fact that change analysis and regression testing is required with each version. The changes are normally performed during a refueling outage, thus increasing the scope of the refueling outage, which is not the direction the NPP industry is headed. The rapid obsolescence issue is very critical; in the case of non-safety related control systems the advancements in technology can usually result in greater control efficiencies, which can help with the cost model. In safety systems this is not the case, as the safety system is not intended for normal plant control; the purpose of the safety system is to safely shutdown the plant in the event of an unsafe situation. The systems are normally sitting "idle" ready to react in the event of a transient, thus improvement in efficiencies does nothing for the plant.

The NPP industry is in need of an upgrade solution that provides an operational life for 20+ years. Simple configuration changes in the life of the system may be needed which should not require a complete redesign. Examples of small configuration changes are; timing changes for steps of a Load Shedder and Emergency Load Sequencer, input buffer filter changes due to noise on the input, etc. Most importantly the fundamental logic of the system does not change.

The integration of the COTS equipment requires a significant overhead of infrastructure while providing very little benefit in the case of safety related controls. Also, the integration requires that multiple systems be upgraded at the same time, which increases the costs as well as the installation time required during a refueling outage. The NPP industry typically prefers to upgrade their safety system in a systematic approach, which allows them to not increase the time of the refueling outage and spread the overall upgrade costs over multiple operational cycles.

Currently most USNPP's safety related systems are based on multiple vendors and multiple platforms. This requires a large warehousing of spare parts and also requires a large staff of individual system experts to maintain proficiency on all the systems. It is the desire of the NPP to move to a common platform to alleviate these costs. An upgrade approach of system by system redesign is cost prohibitive as well, since a new design effort would be required for each system with little efficiencies gained from each and the issues of many spares and multiple system experts still exists.

The USNRC discusses the use of Application Specific Integrated Circuit (ASIC) and Field Programmable Gate Array (FPGA) technology in another research paper where they write [Ref 1.4.14]; "Research and applications in other industries as well as in evolutionary nuclear plants indicate that functions once done in software are being absorbed into ASICs. For ASIC applications, the functions are more likely to be treated as hardware instead of software, with greater confidence attributed to the completeness of analysis results." The use of ASIC and FPGA technology provides a benefit over using COTS equipment for simply upgrading the systems in the system by system redesign approach.

Discussions of the above issues points to a need for a modular and scalable platform utilizing ASIC or FPGA technology. There is a need for a platform that can mitigate the rapid obsolescence and configuration issues as found with COTS systems. The information in the NRC research papers indicates that the utilization of ASIC and FPGA technology is the preferred approach for the RPS/ESFAS.

1.2.2 Advanced Logic System (ALS)

The ALS provides a complete solution to all the issues outlined above; The ALS is a modular and scalable platform based on FPGA technology. The ALS is a universal platform that can be targeted to all safety related control systems. The ALS is implemented with a hardware architecture which provides multiple levels of diversity within the architecture to ensure concerns of a common mode failure are properly addressed. The ALS hardware architecture is implemented with a robust design flow ensuring the correctness of the design. The platform also solves the issues of obsolescence by simplifying the design of the boards and maintaining the tested logic in an abstracted form in the event the underlying hardware is required to be updated, due to component level obsolescence. This eliminates the issue of essentially starting from scratch with each update. The ALS achieves all these items as well as adds several features that reduce the Operating and Maintenance expenses on the system.

Below is a list of the features and benefits of ALS:

- Advanced Logic System: A hardware-based safety related Digital Control System designed for mission critical, and safety related applications.
  - Advanced hardware based architecture for NPP industry Safety Related Controls
    - Simple design, the right amount of complexity for the application
    - Scalable platform, from single system upgrades up to full safety related system upgrade with a common platform
    - Provides a solution to current obsolescence issues at USNPPs, by allowing the NPP to systematically upgrade their safety-related controls without having to perform a "wholesale" upgrade.

- Provides a solution to future obsolescence issues by keeping the qualified logic and test vectors free from the underlying hardware. Allows the vendor or utility to maintain the system current for many years.
- Advanced test and diagnostic features
  - Black box, "records" transient events to allow the plant engineers a valuable tool in debugging the event, both within the ALS and out to the rest of the system.
  - Live-View, allows the plant engineer a "live" look at the internal logic.
  - Automated testing from "front" of system to "rear" of system
    - Designed such that full credit of the automated testing can be credited for the NPP's existing Technical Specification surveillance requirements, without specific approval from the NRC.
  - On-line testability reduces the amount of testing required during a refueling outage.
- Real-Time Failure detection and mitigation, resulting in a more reliable plant.

1.3 Project Deliverables

The project deliverables consists of both the physical equipment deliverables as well as the documentation deliverables associated with the design, testing, installation, maintenance, and operation of the equipment.

The physical deliverables of the project include:

- Replacement control system racks for the SA075A and SA075B Cabinets
- Replacement assembly panel for each cabinet.
  - Termination and distribution block for Class 1E power train
  - Fuse blocks for solenoids outputs and controls rack(s)
- Cabling required for interconnecting between the existing field wiring terminal blocks within the cabinet(s) and the replacement assembly panel and replacement control system rack(s)
- Two complete spare control racks for purposes of warehouse spares
- One complete control rack for use as a "run-time" rack. Run-time rack is to be used for training and engineering purposes. The run-time rack is not intended for use as a plant spare and is therefore considered test equipment.
- Mounting hardware necessary to mount the replacement components in the existing cabinets
- Required new test equipment.

The documentation deliverables of the project include:

- Schedule of Engineering, Fabrication, Test, and Delivery
- Outline Drawings
- Control Logic Diagram
- Assembly Drawings
- Wiring Diagrams
- Qualification Plan and Test Procedures
- Qualification Test Data Reports
- Factory Acceptance Test Procedure and Report
- Dedication Plan and Final Dedication Report
- Performance Test Procedures

- Requirements Traceability Matrix
- Site Acceptance Test Procedure and Report
- Post Maintenance Test Procedure and Report
- Final V&V Report
- Handling, Shipping, and Storage Procedures
- Repair Parts List
- Instruction and Operating Manual

1.4 References

1.4.1 Wolf Creek Nuclear Operating Company (WCNOC) Specification J-105A(Q)

1.4.2 AP 05-005 "Design, Implementation & Configuration Controls of Modifications"

1.4.3 MSFIS Validation and Verification Plan

1.4.4 MSFIS Configuration Management Plan

1.4.5 MSFIS Quality Assurance Plan

1.4.6 MSFIS Training Plan

1.4.7 MSFIS Installation Plan

1.4.8 MSFIS Operations Plan

1.4.9 MSFIS Maintenance Plan

1.4.10 Purchase Order # 734448 to CS Innovations, LLC

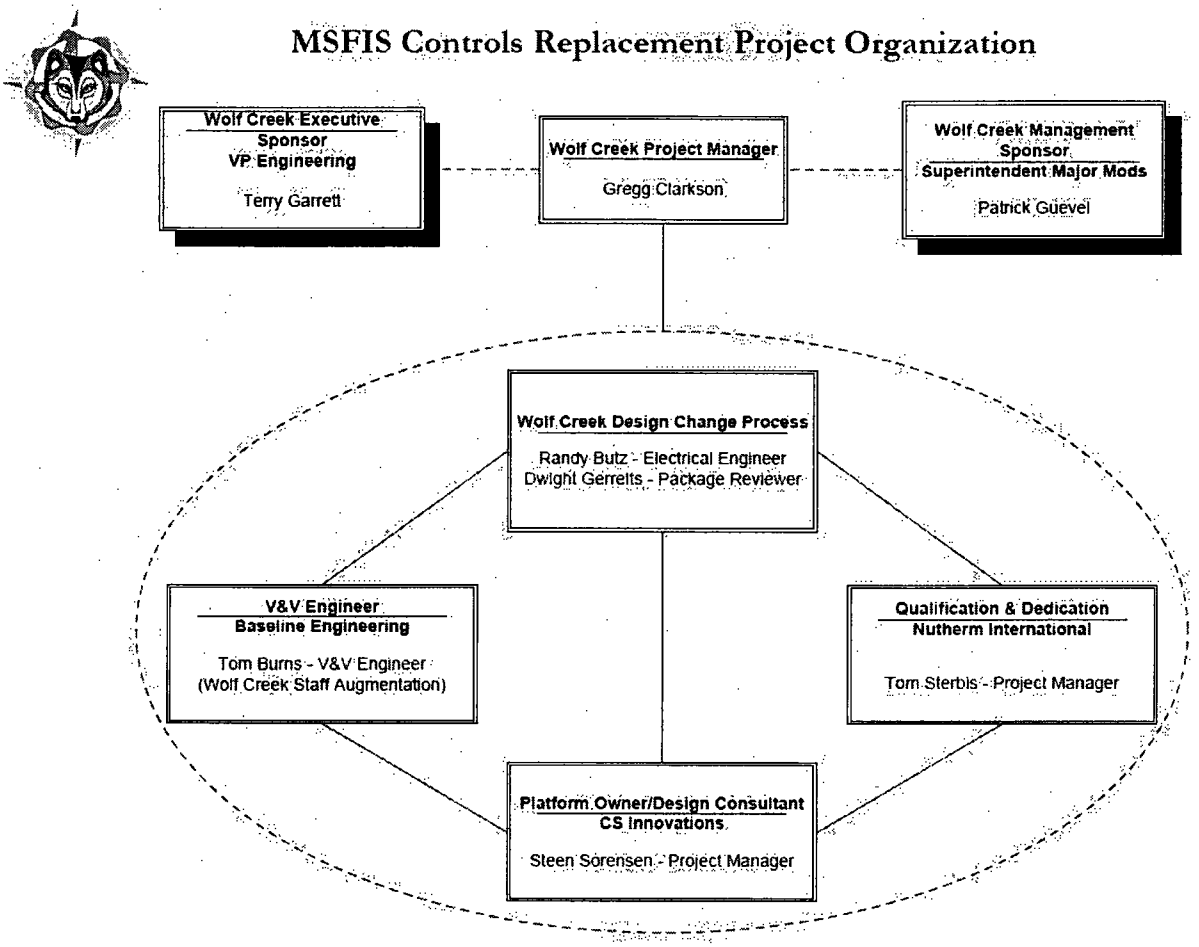
1.4.11 Purchase Order # 734527 to Nutherm International, Inc.

1.4.12 Purchase Order # 734624 to Baseline Engineering

1.4.13 NUREG/CR-6842 "Advanced Reactor Licensing: Experience with Digital I&C Technology in Evolutionary Plants"

2 Project Organization

The design and implementation of the MSFIS Controls Replacement Project is to be accomplished by three entities working under the oversight of WCNOC project management and WCNOC design change and QA Program. The three entities are; 1) Platform Owner and System Design Consultant, CS Innovations 2) Qualification & Dedication Services, Nutherm International 3) V&V Engineer, Baseline Engineering. A diagram of the project organization is provided in the figure below.



2.1 Roles and Responsibilities

The following sections outline the roles and responsibilities of the MSFIS Controls Replacement Project organization.

2.1.1 WCNOC Project Manager

The WCNOC Project Manager is responsible for daily planning and control of the project, coordinates resolution of issues, manages and coordinates the technical effort, provides regular and timely communications, prepares and administers project plans, and tracks and reports progress. The WCNOC Project Manager reports to the Superintendent of Major Modifications.

2.1.2 WCNOC Design Change Process

The WCNOC design change process is the program utilized by WCNOC for the design and implementation of modifications to controlled Structures, Systems, and Components. WCNOC Procedure AP 05-005 "Design Implementation & Configuration Control of Modifications," (Reference 1.4.2), outlines the process of implementing a design change to the WCGS.

2.1.3 Platform Owner and Design Consultant

The Platform Owner and Design Consultant is responsible for the design, development and integration of the ALS MSFIS controls. As the ALS platform owner and control system designer, CS Innovations provides these functions for the MSFIS Controls Replacement Project.

2.1.4 Qualification and Dedication Contractor

The Qualification and Dedication Contractor is responsible for providing both oversight and direct actions to ensure that the requirements on qualification and dedication of the design and implementation of the safety related hardware for a Class 1E system, including its performance, integration, configuration control, design, and documentation, are satisfied. As the 10CFR50, Appendix B supplier, Nutherm International is providing this function. The Qualification and Dedication Contractor is responsible for providing a dedication plan based on the guidelines in EPRI TR-106439, "Guideline on Evaluation and Acceptance of Commercial Grade Digital Equipment for Nuclear Safety Applications," which supplements EPRI NP-5652, "Guideline for the Utilization of Commercial Grade Items in Nuclear Safety Related Applications."

2.1.5 V&V Engineer

The V&V Engineer is responsible for providing independent oversight and direct actions to ensure that the V&V requirements for a Class 1E system are satisfied. Mr. Thomas Burns, of Baseline Engineering, has been contracted to supply staff augmentation for the WCNOC engineering department to fulfill the V&V Engineer role and assumes the responsibilities of the role.

2.2 Vendor Selection

The following sections provide the selection methodology for each vendor associated with the MSFIS Controls Replacement Project.

2.2.1 Platform Owner and Design Consultant: CS Innovations

CS Innovations was chosen as the Design Consultant for three primary reasons; 1) CS Innovations is the owner of the ALS platform. The ALS, as described in Section 1.2, meets the objectives of the replacement MSFIS controls for WCGS. 2) CS Innovations has focused on providing the ALS platform to U.S. Nuclear Power Plants. CS Innovations has made a commitment to the U.S. Nuclear Industry by investing in the programs required to supply products to the U.S Nuclear Power Plant market. 3) CS Innovations possess a team of highly skilled individuals with experience in system level, digital, and analog design. Wolf Creek conducted several interviews as well as required CS Innovations to make several presentations to ensure the appropriate level of skill was possessed by their team.

2.2.2 Qualification and Dedication Contractor

Nutherm International was chosen as the qualification and dedication contractor via the WCNOC process of selecting vendors by a competitive bidding process.

The competitive bidding process begins by defining a Statement of Work (SOW). Next a number of vendors are selected from the WCNOC approved supplier list for Appendix B suppliers. The vendors which are selected from the list are then sent a copy of the SOW along with WCNOC standard contract wording in the Request for Quote (RFQ). The potential vendors are instructed to provide a response to the RFQ with both technical justification and economic justification for awarding the contract to the particular vendor. Based on the response to the RFQ from all the potential vendors an economic and technical evaluation is performed by WCNOC and ultimately a prioritized list of the potential vendors is created. Based on the prioritized list a series of interviews were conducted with the top potential vendors to discuss the individual vendor capabilities, experiences, and interest in this type of project. In parallel to this interview process the top potential vendors 10CFR50 Appendix B NUPIC audits were reviewed to ensure there were no outstanding issues with their respective Appendix B programs.

Based on the results of the RFQ technical and economic evaluation, the interviews, and the review of the vendors 10CFR50 Appendix B program Nutherm International was chosen to provide the qualification and dedication services for the MSFIS Controls Replacement Project.

2.2.3 V&V Engineer

Baseline Engineering was chosen to provide staff augmentation for the WCNOC engineering team based on the specific experience and knowledge of Baseline Engineering's Thomas Burns. Mr. Burns was the lead engineer for the vendor that supplied a MSFIS replacement at the Callaway Plant several years ago. This specific experience was viewed by WCNOC as ideal given the original Callaway Plant MSFIS controls were the same as the existing WCGS MSFIS controls. In addition to this specific experience Mr. Burns has a significant amount of experience in industrial controls design in both Nuclear Power Plants and Navy Nuclear applications. Mr. Burns himself is a design engineer with experience in system level, digital, and analog design.

3 Schedule, Cost, and Reporting

This section outlines the methods for providing schedule management, cost management, project reporting, and communications for the MSFIS Controls Replacement Project.

3.1 Schedule Management Plan

A milestone schedule is maintained for the MSFIS Controls Replacement Project. A detailed schedule is maintained for the design change package (DCP10414) which installs the replacement MSFIS controls.

3.2 Cost Management Plan

The MSFIS Controls Replacement Project is a subset of an overall project which replaces the MSIVs and MFIVs as well as the MSFIS controls. The overall project is an approved "Advanced Approval Project" by the WCNOC owners. The budget for the overall project has been established for the past, current, and future years of the project. All significant budget changes are provided to the Plant Health Review Committee for approval per the WCNOC Project Management Manual.

3.3 Project Reporting Plan

The Project Manager is responsible for reporting technical, schedule, and cost status on the following schedule.

1. Monthly Status Report provided to Executive Sponsor and Management Sponsor
2. Quarterly updates to Plant Health Review Committee
3. Bi-Yearly updates to Major Jobs Review Board

3.4 Communication Plan

The project team meets via teleconference on a weekly basis to provide status of the individual components of the project, discuss action items, and interact as needed.

There is a Monthly Status Report generated which covers all the aspects the overall MSIV/MFIV and MSFIS Controls Replacement Project. The Monthly Status Report provides an executive summary including schedule performance/updates, cost summary, technical performance and updates.

Quarterly updates provide the Plant Health Review Committee with a status update of the project to allow them to properly manage plant health.

4 Supporting Plans

The following process plans support the MSFIS Controls Replacement Project. Each of the following plans is a separate document provided as a reference in Section 1.4.

4.1 Verification and Validation Plan

The MSFIS Controls Replacement System Verification and Validation Plan (SVVP) provides defines the procedures and requirements for a comprehensive evaluation that assures the replacement MSFIS controls meet the requirements for safety related Class 1E qualified nuclear power plant safety systems. The SVVP provides a plan for producing, evaluating, controlling and maintaining the design for the MSFIS Controls through each phase of the project.

The MSFIS Controls Replacement System Verification and Validation Plan (SVVP) is executed by the V&V Engineer, from Baseline Engineering. As discussed in 2.1.5, WCNOC has contracted directly with Baseline Engineering to provide staff augmentation for the WCNOC engineering team.

4.2 Configuration Management Plan

The purpose of the MSFIS Configuration Management Plan (CMP) is to provide the methods and tools to establish the baseline, control changes to the baseline, record and track status, and audit the MSFIS controls. The intended audience for the CMP is technical personnel from WCNOC that specify the system, the design team, the Appendix B supplier, and the V&V engineer, from Baseline Engineering.

4.3 Quality Assurance Plan

The purpose of the MSFIS Quality Assurance Plan (QAP) is to establish the scope of the WCNOC Quality Assurance Program to be applied to the replacement of the MSFIS controls.

4.4 Training Plan

The purpose of the Training Plan is to ensure WCNOC personnel have the appropriate level of training to operate and maintain the replacement MSFIS. The training plan identifies specific training required by the vendor(s) for the details of the system installation, operation, and maintenance.

4.5 Installation Plan

The purpose of the Installation Plan is to provide a general description of the installation process. The installation plan identifies the environment for which the replacement MSFIS will be installed in as well as a high level description of the roles and responsibilities for the installation activities.

4.6 Operations and Maintenance Plan

The purpose of the Operations and Maintenance Plan is to describe the basic operation of the system and the maintenance aspects of the system. The Installation, Operation, and Maintenance Manual will provide the details of the system as a final deliverable to the project.

CS Innovations LLC Letter 9100-00012, "Application for Withholding Proprietary Information from Public Disclosure"

Ref: 9100-00012

CS INNOVATIONS LLC

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U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Our ref: 9100-00012
August 30, 2007

APPLICATION FOR WITHHOLDING PROPRIETARY INFORMATION FROM PUBLIC DISCLOSURE

Subject: **6000-00010, "ALS Design Tools"** dated August 2007
(CS Innovations LLC 2007 Confidential and Proprietary)

The proprietary information for which withholding is being requested in the above referenced report is further identified in Affidavit 9100-00013 signed by the owner of the proprietary information, CS Innovations 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 the Wolf Creek Nuclear Operating Corporation.

Correspondence with respect to the proprietary aspects of the application for withholding or the CSI affidavit should reference this letter, 9100-00012, and should be addressed to Steen D. Sorensen, President & CEO, CS Innovations LLC, 9150 E. Del Camino, Suite 110, Scottsdale, AZ, 85256.

Very truly yours,

Steen D. Sorensen
President & CEO

AFFIDAVIT

State of Arizona
County of Maricopa

Before me, the undersigned authority, personally appeared Steen D. Sorensen, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of CS Innovations LLC (CSI), and that the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information, and belief:

Steen D. Sorensen, President & CEO

Sworn to and subscribed
before me this 30 day
of August, 2007

Notary Public

SUZANNE AMORESE
NOTARY PUBLIC - ARIZONA
MARICOPA COUNTY
My Commission Expires
November 15, 2010

(1) I am President & CEO, CS Innovations LLC (CSI), 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 CSI.

(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 CSI "Application for Withholding" accompanying this Affidavit.

(3) I have personal knowledge of the criteria and procedures utilized by CSI 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 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 been held in confidence by CSI.

(ii) The information is of a type customarily held in confidence by CSI and not customarily disclosure to the public. CSI has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determining when and whether to hold certain types of information in confidence. The application of that system and substance of that system constitutes CSI policy and provides 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 CSI's competitors without license from CSI 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 costs or price information, production capacities, budget levels, or commercial strategies of CSI, its customers or suppliers.

(e) It reveals aspects of past, present, or future CSI or customer funded development plans and programs of potential commercial value to CSI.

(f) It contains patentable ideas, for which patent protection may be desirable.

There are sound policy reasons behind the CSI system which include the following:

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

(b) It is information that is marketable in many ways. The extent to which such information is available to competitors diminishes the CSI ability to sell products and services involving the use of the information.

(c) Use by our competitor would put CSI 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 CSI of a competitive advantage.

(e) The CSI capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.

(iii) 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.

(iv) 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.

(v) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in 6000-00010, "ALS Design Tools" dated August 2007 (CS Innovations LLC 2007 Confidential and Proprietary). The information is provided in support of a submittal to the Commission, being transmitted by the Wolf Creek Nuclear Operating Corporation and Application for Withholding Proprietary Information from Public Disclosure, to the Document Control Desk.

This information is part of that which will enable CSI to:

(a) Provide a replacement MSFIS Controls for Wolf Creek Generating Station.

Further this information has substantial commercial value as follows:

(a) The information requested to be withheld reveals the distinguishing aspects of a methodology which was developed by CSI.

Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of CSI.

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 CSI effort and the expenditure of a considerable sum of money.

In order for competitors of CSI 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.