~~INCLUDES CONFIDENTIAL INFORMATION – WITHHOLD UNDER 10 CFR 2.390~~
Unrestricted Upon Removal of Enclosure 4P

Nuclear Development, LLC

3 Bethesda Metro Center
Suite 515
Bethesda, MD 20814

November 13, 2018

10 CFR 50.80
10 CFR 50.90

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

Subject: Application for Order Approving Construction Permit Transfers and Conforming Administrative Construction Permit Amendments

Bellefonte Nuclear Plant, Units 1 and 2
Construction Permits Nos. CPPR-122 and CPPR-123
NRC Docket Nos. 50-438 and 50-439

In accordance with Section 184 of the Atomic Energy Act, 10 CFR 50.80, and the Commission Policy Statement on Deferred Plants, 52 *Federal Register* 38077, Oct. 14, 1987 ("Deferred Plants Policy"), Nuclear Development LLC ("Nuclear Development") hereby submits the enclosed application ("Application") requesting that the U.S. Nuclear Regulatory Commission ("NRC") consent to the transfer of Construction Permit Nos. CPPR-122 and CPPR-123 (the "Permits") for the Bellefonte Nuclear Plant, Units 1 and 2 ("Bellefonte Units") now held by the Tennessee Valley Authority ("TVA") to Nuclear Development. Nuclear Development also requests that the NRC issue the conforming administrative amendments described in the Application and amend the Permits to reflect the revised construction completion dates discussed therein. To the extent the NRC does not have sufficient time to decide substantively on the matters requested in the Application prior to closing of the asset transfer, Nuclear Development requests that the NRC hold the Permits in terminated plant (but unexpired and not withdrawn) status, consistent with the Section III.B of the Deferred Plants Policy, until such time as the Commission has reached its determination on these requests.

Nuclear Development is a special purpose entity owned by Mr. and Mrs. Franklin L. Haney and trusts for members of their family. In 1967, Mr. Haney founded the Franklin L. Haney Company, LLC, a highly-successful, privately-held real estate and property development company with headquarters in Chattanooga, TN and Washington, DC. The Franklin L. Haney Company has more than 40 years of experience in project development and a development portfolio of more than $10 billion. Its model for success has included engaging partners with project-related expertise, as with the Dulles Greenway Toll Road project. Additional information about Nuclear Development is contained in the Application.

As noted by TVA in its March 31, 2017 letter, Nuclear Development was the successful bidder in an auction for the plant conducted by TVA in November of 2016. Under the terms of the Purchase and Sale Agreement as amended, (enclosed with the Application as Attachment 1), Nuclear Development plans to purchase from TVA the Bellefonte Purchased Assets, including certain real property, material equipment, machinery, tools, other tangible property, books and records (including permitting, quality assurance, maintenance and other records related to design, construction or operation of the Units), certain agreements and obligations, and subject to all applicable law, all permits, and authorizations, including the Permits that are the subject of this Application. As amended, the current agreement with TVA would require closing of the asset transfer by November 30, 2018. However, the parties may agree to a further extension.

Nuclear Development's business objectives are to obtain the appropriate authority to safely complete high quality construction of Units 1 and 2, reactivate the docketed Operating License Application, begin commercial operation, and sell clean, safe, reliable power from the plants in the regional wholesale market. Toward those objectives, Nuclear Development has begun a methodical, stepwise approach to this project, including identifying leaders in the nuclear industry to augment its core team to better develop a regulatory roadmap, ensure appropriate oversight of quality and safety, plan construction methods and reliably estimate costs, solicit interest of potential power customers, and pursue available financial incentives that make private sector pursuit of a project of this magnitude achievable and economical. It has made substantial progress on all of these fronts and expects to proceed with the purchase as planned. Nuclear Development approaches this project with an appreciation for the safety significance of the approvals it is requesting and an appreciation for its responsibilities to provide the NRC the requisite bases for the supporting findings the agency must make before granting each requested approval in sequence.

Both Bellefonte Units are currently in Deferred Plant Status. In 2011, NRC extended the construction date for Unit 1 to October 1, 2020. In 2014, TVA requested an extension of the completion date for Unit 2. On March 31, 2017, TVA provided an update on that extension request noting the continuing timely renewal status of that application under 10 CFR § 2.109 and informing NRC of the planned sale of the Bellefonte Units to Nuclear Development. This update also deferred action regarding a revised construction completion date to interaction between NRC and Nuclear Development. Thus, Unit 2 remains in timely renewal status. The enclosed Application provides the basis for and requests updated construction completion dates for both units, *i.e.*, October 1, 2029 for Unit 1, and October 1, 2030 for Unit 2.

Nuclear Development recognizes that Section 185 of the Atomic Energy Act and NRC regulations at 10 CFR 50.10(c) require that a company hold a Construction Permit before performing licensed construction, subject to any other regulatory restrictions. Nuclear Development plans to close on the acquisition of the Bellefonte Units (and related Purchased Assets), but undertake no licensed construction activities unless and until the NRC grants the authority requested in this Application. Nuclear Development is guided in this approach by the considerations explained in Section III.B.2 of the Deferred Plant Policy related to transfers of plants in deferred or terminated construction status, and whose Construction Permits have not been withdrawn by the NRC. Once the Permits have been transferred, Nuclear Development plans to continue only the status quo physical preservation, security and safety activities now being conducted by TVA. The Application describes Nuclear Development's plans for oversight of these site preservation, security and safety activities in the interim period and following Permit transfer and before restarting licensed construction, during which they will no longer be subject to

TVA's oversight. Specifically, and as noted above, to the extent the Permits are not transferred to Nuclear Development prior to closing, and the plant is placed in terminated plant status, Nuclear Development has no intent to, and will not, perform licensed or construction activities on the site prior to Permit transfer.

Nuclear Development will staff its Owner's oversight organization and build its internal technical capabilities. It will contract with qualified providers for security and training, and it expects to offer employment to members of the existing Bellefonte site personnel upon completing the transaction. The Nuclear Development organization, leadership and quality assurance program description are discussed in the Application. Consistent with Section III.A.3 of the Deferred Plant Policy Statement, and upon transfer of the Permits, Nuclear Development will ensure effective quality assurance and implement oversight activities commensurate with regulatory and Permit requirements. Nuclear Development expects to receive the Permits in the same Deferred Plant status in which they currently exist, and as described in TVA's letter to the NRC in August 2009.

Nuclear Development has engaged an experienced, recognized and respected Engineering, Procurement and Construction Management ("EPCM") contractor, SNC-Lavalin Nuclear (USA) ("SLN") to lead the next engineering and construction phases of the Bellefonte project. SLN and its affiliates have substantial nuclear design and construction experience in North America and around the world and are well suited to this construction completion project. As such, Nuclear Development is technically qualified to maintain the Bellefonte Units in Deferred Plant status.

Prior to moving beyond Deferred Plant status and beginning licensed construction activities, Nuclear Development plans to enhance its Owner's oversight organization by engaging experienced professionals and/or an experienced nuclear plant operating company with a track record for successfully managing important safety-related projects of comparable scale. Prior to reactivating construction, Nuclear Development will submit the information required by Section III.A.6 of the Deferred Plants Policy, including a "description of the management and organization responsible for construction of the plant."

Nuclear Development plans to implement an approach by which it harnesses the technical expertise of multiple partners. For example, Nuclear Development anticipates engaging Framatome Inc. ("Framatome"), the successor of the owner of the Babcock & Wilcox model 205 design, to assist with the nuclear steam supply system design in the design phase. During the design and construction phases of the project, Nuclear Development plans to bid scopes of work to select experienced and qualified candidates. The successful bidders will perform their scopes under SLN's EPCM authority and Nuclear Development's oversight.

Nuclear Development has been established solely for the purpose of completing the construction of the Bellefonte Units. Under the Purchase and Sale Agreement, Nuclear Development has been reimbursing TVA for the ongoing costs of maintaining the Bellefonte Units in Deferred Plant status since November 2016. Until commercial financing of the project has been completed, Nuclear Development plans to continue to pay those costs with funds provided by its owners.

Nuclear Development is pursuing a project finance model for completion of construction of Bellefonte Units 1 and 2, similar to the approach applied in recent merchant plant combined license applications before the NRC. Nuclear Development has obtained production tax credits from the Internal Revenue Service for the output of the Bellefonte Units. It is negotiating with the Department of Energy Loan

Program Office for a loan guarantee under the Energy Policy Act of 2005 and expects to receive a conditional commitment. In that process Nuclear Development has developed high quality cost and schedule estimates for completion of construction. As explained in the Application, and consistent with NRC precedents, Nuclear Development is requesting an exemption pursuant to 10 CFR § 50.12 from certain regulatory requirements related to financial qualifications for construction permits and has proposed the use of alternative financial qualification standards.

The Application requests a financial qualification license condition required to be satisfied before licensed construction. This condition would require Nuclear Development to provide an updated cost estimate, documentation of differences from previous estimates, and documentation of closing on financing for the project. Nuclear Development has adopted the approach explained in SECY-15-0123. The Application demonstrates satisfaction of the alternative standards by showing that Nuclear Development possesses or has reasonable assurance of obtaining the funds necessary to cover the estimated costs of possessing and maintaining the facility in a deferred status prior to resuming construction, and that it appears to be financially qualified to complete construction of the facility upon satisfying the condition.

Additional information pertaining to the proposed transfer of the Permits, including the information required under 10 CFR 50.80, is included in the Application. As that information demonstrates: (1) the proposed transfer of the Permits to Nuclear Development will allow Nuclear Development to complete the construction of the Bellefonte Units; (2) Nuclear Development has the requisite managerial, technical, and financial qualifications to be the holder of the Permits; (3) the material terms of the Permits will not be affected; and (4) the transfer of the Permits to Nuclear Development will not result in any impermissible foreign ownership, control or domination.

Pursuant to 10 CFR 50.90, Nuclear Development also requests NRC approval of certain administrative amendments to conform the Permits to reflect the proposed transfer. The changes are shown in Attachments 2 and 4 to this letter. Administrative changes to documents other than the Permits may be necessary upon Nuclear Development's assumption of control over the Bellefonte site. Changes to documents such as the QA and QV programs will be achieved as required by NRC regulations, such as 10 CFR 50.34, 10 CFR 50.55, and 10 CFR 50.55a.

In accordance with 10 CFR 50.91(b)(1), a copy of this submittal has been sent to the State of Alabama.

Nuclear Development respectfully request that the NRC review and complete action expeditiously on the enclosed Application. Nuclear Development requests NRC issue an order granting its consent and issuing the amended Permits as soon as practicable. Nuclear Development is prepared to work closely with the NRC Staff to facilitate the Application's review. Nuclear Development requests that NRC issue the Order approving the amendments to the Permits and authorizing the transfer.

In summary, the proposed transfer of the Permits will not be inimical to the common defense and security or result in any undue risk to public health and safety, and the transfer will be consistent with the requirements of the Atomic Energy Act and the NRC regulations.

Service upon the Nuclear Development of any notices, comments, hearing requests, intervention petitions, or other pleadings should be made to Timothy P. Matthews, Morgan, Lewis & Bockius LLP,

1111 Pennsylvania Ave., NW, Washington, D.C. 20004 (Tel: 202.739.5527; email: timothy.matthews@morganlewis.com).

In the event that the NRC has any questions about the proposed transaction described in this letter and in the Application or wishes to obtain any additional information about the transfer of the Permits, please contact me at work: 828.686.1621, mobile: 828.333.2609, or email: bill@wrmccollum.com.

Sincerely,

William R. McCollum, Jr.
Chief Executive Officer & Chief Nuclear Officer
Nuclear Development LLC

Enclosures: Attachment 1 – Application for Order Approving Construction Permit Transfers and Conforming Administrative Construction Permit Amendments (Construction Permit Nos. CPPR-122 and CPPR-123)
Attachment 2 – Bellefonte Unit 1 Construction Permit (Changes)
Attachment 3 – Bellefonte Unit 1 Construction Permit (Clean Pages)
Attachment 4 – Bellefonte Unit 2 Construction Permit (Changes)
Attachment 5 – Bellefonte Unit 2 Construction Permit (Clean Pages)

cc w/Enclosures: William Gleaves, Project Manager
U.S. Nuclear Regulatory Commission

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission

State Health Officer
Alabama Dept. of Public Health
P.O. Box 303017
Montgomery, AL 36130-3017

Mr. Mike Balduzzi
Chief Nuclear Officer and
Executive Vice President
Tennessee Valley Authority
1101 Market Street
Lookout Place 3R
Chattanooga, TN 37402-2801

CITY OF WASHINGTON)
) SS.
DISTRICT OF COLUMBIA)

AFFIRMATION

William R. McCollum, Jr., being duly sworn according to law deposes and says:

I am Chief Nuclear Officer, Nuclear Development LLC and, as such, I am familiar with the contents of this correspondence and the attachments thereto concerning the Bellefonte Nuclear Plant, and the matters set forth therein regarding Nuclear Development LLC are true and correct to the best of my knowledge, information and belief.

William R. McCollum, Jr.

Subscribed and Sworn to before me
this 13 th day of November, 2018

RHONDA D. [illegible]
NOTARY PUBLIC
MY COMMISSION EXPIRES 02/14/2020
DISTRICT OF COLUMBIA

ATTACHMENT 1

APPLICATION FOR ORDER APPROVING CONSTRUCTION PERMIT TRANSFERS AND CONFORMING ADMINISTRATIVE CONSTRUCTION PERMIT AMENDMENTS

BELLEFONTE NUCLEAR PLANT, UNITS 1 AND 2

NRC CONSTRUCTION PERMITS NOS. CPPR-122 AND CPPR-123 NRC DOCKET NOS. 50-438 AND 50-439

ATTACHMENT 1

Attachment 1 – Application for Order Approving Construction Permit Transfers and Conforming Administrative Construction Permit Amendments (Construction Permit Nos. CPPR-122 and CPPR-123)

Table of Contents

1. Introduction

In accordance with Section 184 of the Atomic Energy Act, 10 CFR 50.80, and the Commission Policy Statement on Deferred Plants, 52 *Federal Register* 38077, Oct. 14, 1987 ("Deferred Plants Policy"), Nuclear Development LLC ("Nuclear Development") hereby submits this application ("Application") requesting that the U.S. Nuclear Regulatory Commission ("NRC") consent to the transfer of Construction Permit Nos. CPPR-122 and CPPR-123 (the "Permits") for the Bellefonte Nuclear Plant, Units 1 and 2 ("Bellefonte Units") now held by the Tennessee Valley Authority ("TVA") to Nuclear Development. Nuclear Development also requests that the NRC issue conforming administrative amendments to reflect the transfer and amend the Permits to reflect revised construction completion dates discussed herein. To the extent the NRC does not have sufficient time to decide substantively on the matters requested in the Application prior to closing of the asset transfer, Nuclear Development requests that the NRC hold the Permits in terminated plant (but unexpired and not withdrawn) status, consistent with the Section III.B of the Deferred Plants Policy, until such time as the Commission has reached its determination on these requests.

Nuclear Development is a special purpose entity owned by Mr. and Mrs. Franklin L. Haney and trusts for members of their family. In 1967, Mr. Haney founded the Franklin L. Haney Company, LLC, a highly-successful, privately-held real estate and property development business with headquarters in Chattanooga, TN and Washington, DC. The Franklin L. Haney Company has more than 30 years of experience in project development and a development portfolio of more than $10 billion. Its model for success has included engaging partners with project-related expertise, as with the Dulles Greenway Toll Road project. Additional information about Nuclear Development is provided herein.

The site of the Bellefonte Units is located in Hollywood, Alabama. The site is comprised of two partially complete pressurized water reactors, each with a Babcock & Wilcox ("B&W") model 205 nuclear steam supply system. TVA obtained the construction permits for the Bellefonte Units in December 1974 and began construction on both units in 1975. TVA continued construction through 1988 before electing to cease construction, with Unit 1 approximately 90% complete and Unit 2 approximately 60% complete. From 1988 to 2016, TVA considered re-starting and completing one or both of the Bellefonte Units from time to time. During the time when construction was not proceeding, TVA performed some alterations to the Bellefonte Units to support layup and preservation of systems and components. In addition, in the mid-2000s, TVA removed a number of components for use elsewhere in the TVA system or for salvage. At the current time, Unit 1 is estimated to be approximately 55% physically complete and Unit 2 is estimated to be approximately 35% physically complete.

As noted by TVA in its March 31, 2017 letter, Nuclear Development was the successful bidder in an auction for the plant conducted by TVA in November of 2016. Under the terms of the Purchase and Sale Agreement, as amended (enclosed with the Application as Enclosure 1), Nuclear Development plans to purchase from TVA the Bellefonte Purchased Assets, including certain real property, material equipment, machinery, tools, other tangible property, books and records (including permitting, quality assurance, maintenance and other records related to design, construction or operation of the Units), certain agreements and obligations, and subject to all applicable law, all permits, and authorizations, including the Permits that are the subject of this

Application. As amended, the current agreement with TVA would require closing of the asset transfer by November 30, 2018. However, the parties may agree to a further extension.

Additional information pertaining to the proposed transfer of the Permits, including the information required under 10 CFR 50.80, is included in this Application. As that information demonstrates: (1) the proposed transfer of the Permits to Nuclear Development will allow Nuclear Development to complete the construction of the Bellefonte Units; (2) Nuclear Development has the requisite managerial, technical, and financial qualifications to be the holder of the Permits; (3) the material terms of the Permits will not be affected; and (4) the transfer of the Permits to Nuclear Development will not result in any impermissible foreign ownership, control or domination.

Pursuant to 10 CFR 50.90, Nuclear Development also requests NRC issue administrative amendments to conform the Permits to reflect the proposed transfer. The changes are shown in Attachments 2 and 4 to the letter transmitting this Application. Administrative changes to documents other than the Permits may be necessary upon Nuclear Development's assumption of control over the Bellefonte site. Changes to documents such as the quality assurance (QA) and quality verification (QV) programs will be achieved as required by NRC regulations, such as 10 CFR 50.34, 10 CFR 50.55, and 10 CFR 50.55a.

2. Statement of Purpose of Transfer and Nature of the Transaction Making the Transfer Necessary or Desirable

The purpose of the transfer of the Permits from TVA to Nuclear Development is to complete construction of the Bellefonte Units. Nuclear Development will assume possession of and managerial responsibility for all licensed activities, including the QA and QV programs in deferred status, as well as the ultimate completion of construction of the Bellefonte Units. Nuclear Development will be licensed to possess, maintain and construct the Bellefonte Units and to ultimately complete them.

The transfer of the Permits is desirable because Nuclear Development intends to complete the long-delayed construction of the Bellefonte Units. Nuclear Development will be able to complete the Bellefonte Units using the project financing model used for other major infrastructure projects.

Nuclear Development's business objectives are to obtain the appropriate authority to safely complete high quality construction of Units 1 and 2, update and reactivate the docketed Operating License Application, begin commercial operation, and sell clean, safe, reliable power from the plants in the regional wholesale market. Toward those objectives, Nuclear Development has begun a methodical, stepwise approach to this project, including: identify leaders in the nuclear industry to augment its core team to better develop a regulatory roadmap, ensure appropriate oversight of quality and safety, plan construction methods and reliably estimate costs, solicit interest of potential power customers, and pursue available financial incentives that make private sector pursuit of a project of this magnitude achievable and economical. It has made substantial progress on all of these fronts and expects to proceed with the purchase as planned. Nuclear Development approaches this project with an appreciation for

the safety significance of the approvals it is requesting and an appreciation for its responsibilities to provide the NRC the requisite bases for the supporting findings the agency must make before granting each requested approval in sequence.

Both Bellefonte Units are currently in Deferred Plant Status. In 2011, NRC extended the construction date for Unit 1 to October 1, 2020. In 2014, TVA requested an extension of the completion date for Unit 2. On March 31, 2017, TVA provided an update on that extension request noting the continuing timely renewal status of that application under 10 CFR § 2.109 and informing NRC of the planned sale of the Bellefonte Units to Nuclear Development. This update also deferred action regarding a revised construction completion date to interaction between NRC and Nuclear Development. Thus, Unit 2 remains in timely renewal status; this Application provides the basis for and requests updated construction completion dates for both units, i.e., October 1, 2029 for Unit 1, and October 1, 2030 for Unit 2.

Nuclear Development recognizes that Section 185 of the Atomic Energy Act and NRC regulations at 10 CFR 50.10(c) require that a company hold a Construction Permit before performing licensed construction, subject to any other regulatory restrictions. Nuclear Development plans to close on acquisition of the Bellefonte Units (and related Purchased Assets), but undertake no licensed construction activities unless and until the NRC grants the authority requested in this Application. Nuclear Development is guided in this approach by the considerations explained in Section III.B.2 of the Deferred Plant Policy related to transfers of plants in deferred or terminated construction status, and whose Construction Permits have not been withdrawn by the NRC. Once the Permits have been transferred, Nuclear Development plans to continue only the status quo physical preservation, security and safety activities now being conducted by TVA. The Application describes Nuclear Development's plans for oversight of these site preservation, security and safety activities in the interim period and following Permit transfer and before restarting licensed construction, during which they will no longer be subject to TVA's oversight. Specifically, and as noted above, to the extent the Permits are not transferred to Nuclear Development prior to closing, Nuclear Development has no intent to, and will not, perform licensed or construction activities on the site prior to Permit transfer.

3. General Corporate Information Regarding Nuclear Development LLC

    a. General Corporate Information and Description of Business

Nuclear Development is a special purpose entity owned by Mr. and Mrs. Franklin L. Haney and trusts for members of their family, as follows:

Franklin L. Haney, Sr.	15%
Emeline W. Haney	10%
Emeline W. Haney as trustee for Irrevocable Trusts for the Benefit of :	75%
Mary Alice Haney	15%
Mae Haney Grennan	15%
Margaret Haney	15%
E. Michelle Haney Maddux	15%
Franklin L. Haney, Jr.	15%

Nuclear Development is controlled by Franklin L. Haney, Sr. It is a manager managed LLC, and Mr. Haney is the sole manager. Mr. William R. McCollum, Jr. is its Chief Executive Officer (CEO) and Chief Nuclear Officer (CNO), and Frank L. Haney, Jr. is its President. Mr. Larry D. Blust is its General Counsel and Secretary. Resumes for these key management personnel are provided in Enclosure 2.

b. No Foreign Ownership, Control, or Domination

The owners and key management personnel of Nuclear Development are all U.S. citizens. Consistent with the requirements of 10 CFR 50.38, Nuclear Development is not owned, controlled or dominated by an alien, a foreign corporation, or a foreign government.

c. No Agency

Nuclear Development is not acting as the agent or representative of another person in the proposed transfer of the Permits. As the licensed entity with possession and responsibility for management and construction of the Bellefonte site, Nuclear Development will act for itself.

4. Technical Qualifications

As described below, Nuclear Development is technically qualified to carry out its responsibilities as the holder of the Permits in Deferred Plant status. Nuclear Development will complete the required design, engineering, and construction activities to complete the construction of the Bellefonte Units by leveraging the project finance model for completing the plants. This model will both allow it to maintain the plants in their current deferred status and then to transition to construction activities once engineering planning is completed.

a. Owner Oversight Organization and Contractors

Nuclear Development will staff its Owner's oversight organization and build its internal technical capabilities. Nuclear Development has retained Mr. McCollum as its CEO and CNO. Mr. McCollum's resume is provided in Enclosure 2.

Nuclear Development also expects to offer employment to members of the existing Bellefonte site personnel upon completing the transaction. Consistent with Section III.A.3 of the Deferred

Plant Policy Statement, and upon transfer of the Permits, Nuclear Development will ensure effective quality assurance and implement oversight activities commensurate with applicable regulatory and Permit requirements.

Nuclear Development has engaged an experienced, recognized and respected Engineering, Procurement and Construction Management ("EPCM") contractor, SNC-Lavalin Nuclear (USA) ("SLN") to lead the next engineering and construction phases of the Bellefonte project. SLN and its affiliates have substantial nuclear design and construction experience in North America and around the world and are well suited to this construction completion project. As such, Nuclear Development is technically qualified to maintain the Bellefonte Units in Deferred Plant status. SNL will be responsible for day to day QA activities under a 10 CFR Part 50, Appendix B QA Program.

Nuclear Development has retained a qualified QA Manager to conduct oversight of the SNL QA Plan upon transfer of the Bellefonte Units. His responsibility includes review and audit functions. Nuclear Development expects to receive the Permits in the same Deferred Plant status in which they currently exist, and as described in TVA's letter to the NRC dated May 12, 2009.[1]

Prior to moving beyond Deferred Plant status and beginning licensed construction activities, Nuclear Development plans to enhance its Owner's oversight organization by engaging experienced professionals and/or an experienced nuclear plant operating company with a track record for successfully managing important safety-related projects of comparable scale. Prior to reactivating construction, Nuclear Development will submit the information required by Section III.A.6 of the Deferred Plants Policy, including a "description of the management and organization responsible for construction of the plant" as required by Section III.A.6.e. If necessary and/or desirable, the NRC staff could impose a license condition requiring that resumes for the individuals intended to staff the construction organization be submitted with the notice to NRC contemplated by Section III.A.6.

The organization for the completion of the Bellefonte Units will provide:

(1) A single Project Director and Site Executive Director ("Project Director"). In this role, the Project Director will be accountable for overall management, leadership, performance, nuclear safety, QA, QV, and employee safety.
(2) A contracted technical support adviser. Nuclear Development has contracted with MPR Associates ("MPR"), a leading specialty engineering and technical services firm in the U.S. power industry. MPR will serve as the owner lead for oversight, support, and review of key strategic activities, including, for example, instrumentation and control ("I&C") implementation, seismic studies and implementation, and electrical distribution work. MPR will also support Nuclear Development on nuclear regulatory issues. MPR will report directly to the Project Director.

[1] Letter from M. Bajestani to U.S. Nuclear Regulatory Commission, "TVA Implementation of Order Granting Reinstatement of Construction Permits Nos. CPPR-122 and CPPR-123 (May 12, 2009) (ADAMS Accession No. ML091340285).

(3) A project controls organization staff. Nuclear Development has engaged High Bridge, a leading project controls and project management services firm in the U.S. nuclear industry, to serve in this capacity. High Bridge will also be supported by MPR. This organization will report directly to the Project Director.
(4) A Site Director. This director will have day-to-day responsibilities to maintain the Bellefonte Units in their deferred status while engineering and other management activities continue.
(5) These owner representatives will support Nuclear Development and the Project Director in supervising various Senior Managers. Nuclear Development currently anticipates that these senior managers will include a Manager, Site Operations, a Construction Manager, and an Engineering Manager. Because the Permits will be transferred in a deferred status, with Nuclear Development not recommencing construction activities without prior notice to the NRC, these Senior Managers have not yet been engaged.
(6) Several Managers, directly reporting to the appropriate Senior Managers, with responsibilities for, industrial safety, project administration and financial services, training, labor relations, regulatory affairs, quality assurance, quality verification, licensing, environmental, project controls and, when appropriate, for radiological safety. These Managers may be contractors of their respective partners of Nuclear Development. This organization will provide a nuclear management team with control over the design, licensing and construction programs.
(7) Implementation of high industry standards, best practices, effective programs and processes, and management controls.
(8) Effective and integrated oversight and technical support functions.

The Bellefonte construction organization will provide an experienced nuclear management team to assure compliance with the requirements of the Permits and the Commission's regulations. Nuclear Development will implement a management approach to assure efficient and effective engineering; construction planning, preparation, and execution; an effective corrective action program; performance reporting, monitoring, and metrics; procurement oversight; configuration management; effective quality assurance and quality verification program implementation; appropriate project controls; a safety conscious work environment; security; day-to-day industrial safety and management rigor; personnel performance; financial controls; and, when appropriate, preparations for operation including radiological safety.

Nuclear Development plans to implement an approach by which it harnesses the technical expertise of multiple partners. For example, Nuclear Development anticipates engaging Framatome, Inc. ("Framatome"), the successor of the owner of the B&W 205 design, to assist with the nuclear steam supply system design in the design phase. During the design and construction phases of the project, Nuclear Development plans to bid scopes of work to select experienced and qualified candidates. The successful bidders will perform their scopes under SLN's EPCM authority and Nuclear Development's oversight.

Nuclear Development intends to subcontract technical support work only to qualified contractors who have the experience and past performance to ensure the timely and safe completion. Contractors will be expected to have an excellent safety record and approved 10 CFR Appendix B quality assurance plans to support their scopes of work. Contractor support workers for the project will report to the appropriate Senior Manager. Regulatory compliance, safety performance and schedule performance will be emphasized in all contracts. The Nuclear Development integrated approach and the implementation of common programs, processes and best practices will ensure that the support functions for the Bellefonte Units' construction are carried out efficiently**.**

b. Executive Oversight Board

Further, Nuclear Development will establish an Executive Oversight Board. The Executive Oversight Board will be comprised of senior representatives from each important stakeholder to the project. This Executive Oversight Board will meet monthly to review the progress of the Project. Based on these meetings and the scope of responsibility for each of the key stakeholders, Nuclear Development expects that key recommendations will be provided and implemented to resolve issues that develop during the Project. Furthermore, this Oversight Board will review the results of these actions and take additional measures and actions as necessary. The meetings of the Executive Oversight Board will provide formal, independent oversight of project performance and safety.

c. Conclusion

The Nuclear Development management team is experienced and qualified, and the organization is well-designed to accomplish the final design, planning, and ultimate construction of the site. The necessary management processes and controls will be applied, with clear lines of authority and communication. In addition, Nuclear Development will rely upon the experience and expertise of its strategic partners to perform key, specific portions of work scope to ensure safe and efficient construction of the Bellefonte Units. Accordingly, the proposed transfers have the potential to achieve synergies and management efficiencies at the Bellefonte Nuclear Plant, as well as expedite the completion of the Bellefonte Units. For these reasons, Nuclear Development and its management team have the necessary technical qualifications to safely complete construction of the Bellefonte Units.

5. Financial Qualifications

Nuclear Development has been established solely for the purpose of constructing the Bellefonte Units. Under the Purchase and Sale Agreement, Nuclear Development has been reimbursing TVA for the ongoing costs of maintaining the Bellefonte Units in Deferred Plant status since November 2016. Until commercial financing of the project has been completed, Nuclear Development plans to continue to pay those costs using funds provided by its owners.

Nuclear Development is pursuing a project finance model for completion of construction of Bellefonte Units 1 and 2, similar to the approach applied in other recent merchant plant combined license applications issued by the NRC. Nuclear Development has obtained

production tax credits from the Internal Revenue Service for the output of the Bellefonte Units. It is negotiating with the Department of Energy (DOE) Loan Program Office for a loan guarantee under the Energy Policy Act of 2005 and expects to receive a conditional commitment. In that process Nuclear Development has developed high quality cost and schedule estimates for completion of construction. Consistent with NRC precedents, Nuclear Development is requesting an exemption pursuant to 10 CFR § 50.12 from certain regulatory requirements related to financial qualifications for construction permits and has proposed the use of alternative financial qualification standards. Enclosure 3 provides Nuclear Development's "Request for Exemption Regarding Financial Qualifications Applicable to Application to Transfer Construction Permits CPPR-122 and CPPR-123."

This Application requests a financial qualification license condition that is required to be satisfied before commencing licensed construction. The license condition would require that Nuclear Development provide an updated cost estimate, documentation of differences from previous estimates, and documentation of closing on the financing for the project. Nuclear Development has adopted the approach explained in SECY-15-0123. This Application demonstrates satisfaction of the alternative standards by showing that Nuclear Development possesses or has reasonable assurance of obtaining the funds necessary to cover the estimated costs of possessing and maintaining the facility in a deferred status prior to resuming construction, and that it appears to be financially qualified to complete construction of the facility upon satisfying the license condition.

a. Maintaining and Possessing the Partially-Constructed Facility

Nuclear Development possesses or has reasonable assurance of obtaining the funds necessary to cover estimated costs of possessing and maintaining the Bellefonte Units prior to resuming construction. The owners of Nuclear Development have funded the maintenance of the Bellefonte Units since November 2016, and they will continue to do so until construction financing is put in place to satisfy the license condition for commencing construction. As already noted, Mr. Haney has built a development business worth $10 billion. Moreover, the owners have demonstrated their ability to pay these costs given that they have already been doing so for the last two years.

b. Resuming and Completing Construction

As demonstrated below, Nuclear Development is financially qualified to resume and complete construction of the Bellefonte Units. The information below reflects the financial capacity of Nuclear Development to obtain the necessary funding for the project and demonstrates its level of understanding of the size and scope of the project, including the level of capital necessary to undertake the project, and reflects the organizational and human resources, experience, skills, and expertise required to obtain proper financing and ultimately finance the project, when appropriate.

(1) Construction Cost Estimate

Enclosure 4P provides the Projected Total Project Costs for Bellefonte Units 1 & 2. The estimate includes amounts for contingency, escalation, owner's costs, capitalized interest during construction, and other financing costs. **Note: Enclosure 4P is the proprietary version of this information; it is proprietary and confidential, and should be withheld from public disclosure. An affidavit in support of its proprietary nature is provided in Enclosure 4.** A redacted, non-proprietary version of this enclosure that is suitable for release to the public is provided as Enclosure 4.

(2) Proposed Construction Permit Condition

Nuclear Development proposes amending the Permits to include the following condition:

> The licensee will notify the NRC at least 120 days prior to its anticipated date of resuming construction that this license condition has been fulfilled and that the following are available for inspection:
>
> - An updated cost estimate for completion of construction;
> - Documentation justifying any material variances from the original cost estimate provided in the application; and
> - Documentation demonstrating that the licensee has secured financing to fund the updated cost estimate for the completion of construction. This documentation will include operative closing documents, and may include documented proof of parent and affiliate assurances, or capital from other sources (as required to close the financing) that reflect financing for the project.

As used in this proposed license condition, the term "construction" has the same definition as contained in 10 CFR 50.10(a).

(3) Financial Capacity Plan

This plan demonstrates Nuclear Development's level of understanding of the size and scope of construction of the Bellefonte Units, including the level of capital necessary to undertake the project. The plan also discusses the organizational and human resources, experience, skills, and expertise required to obtain proper financing and ultimately finance the project. The plan includes a description of the management team as it pertains to financing, and the team's experience and expertise in the areas of finance, capital sourcing, and large build projects.

i. Description of Management Team for Financing

This section discusses Nuclear Development's management team for financing of construction of the Bellefonte Units. The management team includes experienced financing professionals from Nuclear Development, as well as representatives and financial advisors from consultants. This section describes their experience with potential sources of project funding, including financing of the construction and operation of large energy and other infrastructure projects.

A. Nuclear Development's Internal Financing Team

Nuclear Development's internal management team includes experienced financing professionals. Franklin Haney, Sr. is an experienced developer of large infrastructure projects, and Frank Haney, Jr. is an experienced financial executive and developer. Mr. Larry D. Blust also has extensive experience with project finance. In 1967, Mr. Haney founded the Franklin L. Haney Company, LLC, a highly-successful, privately-held real estate and property development company with headquarters in Chattanooga, TN and Washington, DC. The Franklin L. Haney Company has more than 40 years of experience in project development and a development portfolio of more than $10 billion. Its model for success has included engaging partners with project-related expertise, as with the Dulles Greenway Toll Road project. This major project involved the private development of fourteen miles of toll highway connecting Leesburg with Dulles Airport. Both Mr. Franklin Haney and Mr. Frank Haney were involved in arranging for $2 billion in senior and mezzanine debt in connection with an expansion of the project to add a new lane in each direction.

Another large project is the Portals Office Building I and II, which includes 1.8 million square feet of prime office space, 125,000 of highly desirable retail and restaurant space and the 400-room Mandarin Oriental Hotel. The headquarters of the Federal Communications Commission is located in the Portals project. Other projects include the Birmingham Social Security Center (660,000 square feet), Dawson Creek, Colorado (1,900 acre residential development), and 101 Marietta Tower in Atlanta (680,000 square feet).

Further information regarding numerous past projects of the Franklin L. Haney Company, LLC is available at:

https://www.flhcompany.com/past-projects/

Nuclear Development is negotiating a term sheet and conditional loan commitment with the DOE Loan Programs Office.

B. Nuclear Development's External Financing Consultants

Nuclear Development has used expert consultants to support various aspects of project funding and will continue to do so as needed and appropriate. Nuclear Development retained a prominent international financial institution as its primary financial advisor in regard to the rating, financing structure and financial plan for the project. MPR Associates, a well-regarded engineering firm with nuclear expertise, acted as independent engineers. MPR developed and validated the cost estimate and construction schedule. ICF International Inc., a global consulting services firm, advised on market conditions, and its consultants studied and validated the projected price for electricity in the relevant market.

ii. Description of Anticipated Funding Methods and Sources

This section provides a description of the anticipated funding methods and sources.

Nuclear Development has applied for a loan from the U.S. Federal Finance Bank through the DOE Loan Guarantee Program. As noted earlier, Nuclear Development is negotiating the detailed loan guarantee term sheet and conditional loan commitment from the DOE Loan Programs Office. Nuclear Development expects the amount of this guarantee to cover 80% of the anticipated cost of completing construction of the Bellefonte Units.

Nuclear Development also anticipates that it will arrange for equity contributions for the remaining 20% of the cost of completing construction.

* * *

Nuclear Development's management team has an understanding of the complexities of financing a large nuclear power plant, the challenges in raising capital, and the need for ensuring financing before resuming reactor construction. Members of Nuclear Development's management team expect to obtain a conditional loan commitment and possess the capacity to obtain the final loan guarantee and other funding necessary to complete construction of the Bellefonte Units.

6. Restricted Data

This Application does not contain any Restricted Data or other classified National Security Information, and it is not expected that such information will become involved in Nuclear Development's licensed activities. However, in the event that such information does become involved, and in accordance with 10 CFR 50.37, "Agreement Limiting Access to Classified Information," Nuclear Development agrees that it will appropriately safeguard such information and will not permit any individual to have access to such information until the individual has been appropriately approved for such access under the provisions of 10 CFR Part 25, "Access Authorization for Licensee Personnel," and/or Part 95, "Facility Security Clearance and Safeguarding of National Security Information and Restricted Data."

7. Other Nuclear Regulatory Issues

a. Date of Completion

In conformance with 10 CFR 50.33(h), Nuclear Development plans to complete construction of the Bellefonte Units after approximately a half year of planning, two years of engineering and four years of construction and refurbishment activity. Nuclear Development currently anticipates that both Units will be complete by 2024.

b. Antitrust

The Energy Policy Act of 2005, Pub. L. No. 109-58, § 625, 119 Stat. 784 (2005), added subsection (c)(9) to Section 105 of the Atomic Energy Act, which states that the need for a NRC antitrust review "does not apply to an application for a license to construct or operate a utilization facility or production facility under section 103 or 104b. that is filed on or after the date of enactment of this paragraph." For similar reasons as those stated in the Commission's

decision in *Kansas Gas & Electric Co.* (Wolf Creek Generating Station), CLI-99-19, 49 NRC 441 (1999), transfers of construction permits are exempt from antitrust review. *See also* NUREG-1574, Rev. 2, Standard Review Plan on Transfer and Amendment of Antitrust License Conditions and Antitrust Enforcement at 2 (Dec. 2007) (ML072260035) ("In light of the *Wolf Creek* decision, no ["significant changes"] analysis or antitrust review is undertaken when there is a license transfer application, regardless of whether it involves a direct or indirect license transfer."). Accordingly, the Atomic Energy Act does not require or authorize antitrust reviews of this Application.

c. QA Program

Upon consummation of the transfer, Nuclear Development will assume responsibility for the overall QA program requirements associated with maintaining ownership of Permits as specified for the Bellefonte Units in the TVA Nuclear Quality Assurance Program Description (QAPD), Revision 33 (or later revision if affected). TVA will transfer responsibility for the QA program requirements at Bellefonte to Nuclear Development. Nuclear Development will establish a QA Program that meets the NRC requirements in 10 CFR Appendix B, including review and audit functions that will allow it to oversee SLN. Nuclear Development has retained Mr. John A. Sablinski, who is experienced and fully qualified to act as QA Manager. In particular, he will perform this review and audit function. Mr. Sablinski's resume is provided in Enclosure 2.

SLN has a 10 CFR Appendix B, QA Program that meets NRC's requirements, and SLN will perform the day-to-day QA function under its plan. SLN also has developed a QA Plan specifically for Bellefonte, retaining the existing requirements of the TVA QA program. This plan has been reviewed and approved by Nuclear Development. A copy of the SLN QA Plan for Bellefonte is provided as Enclosure 5. Nuclear Development and SLN do not anticipate significant further changes to the existing QA program for the Bellefonte Units beyond conforming changes consistent with the license transfer, but any changes that do occur will be made by SLN in accordance with 10 CFR 50.54(a) with oversight provided by Nuclear Development for any changes.

d. QV Program

Similarly, upon consummation of the transfer, Nuclear Development will assume authority and responsibility for the functions necessary to fulfill the QV requirements of the Permits as specified for the Bellefonte Units in the TVA Nuclear Quality Verification Program. TVA will transfer all of the current functions of the existing QV program at Bellefonte to Nuclear Development, which will establish its own QV organization and program. This QV organization and program will be supported by SLN for QV oversight and inspections. While the Bellefonte Units remain in deferred status, SLN and Nuclear Development do not anticipate any changes to the existing QV program for the Bellefonte Units beyond conforming changes consistent with the license transfer, but any changes that do occur will be made in accordance with 10 CFR 50.54(a). Nuclear Development plans to address the QV program's conclusions in any submittal it makes to the NRC prior to resuming construction activities.

e. Organizational Functions

Upon consummation of the transfer, Nuclear Development will maintain the existing Bellefonte site organizational structure, personnel, procedures and programs in the same structure as is currently in place under TVA. This applies to the following functions related to maintenance of the deferred construction permit;

- Document Control
- Configuration Management
- Training
- Security
- Corrective Action Program
- Material Control
- Equipment Maintenance

f. Insurance

As required by 10 CFR 140.13, Nuclear Development will file with the Commission proof of financial protection (in the manner specified in 10 CFR 140.15) before the Commission issues it an operating license under 10 CFR Part 50 or a license under 10 CFR Part 70 authorizing ownership, possession and storage only of special nuclear material at the site for use as fuel in operation of the Bellefonte Units after issuance of an operating license under 10 CFR Part 50.

8. Requested Review Schedule and Other Required Approvals

Nuclear Development respectfully requests that the NRC review and complete action expeditiously on this Application toward issuance of the NRC consent to the transfer of the Permits to Nuclear Development. In any event, Nuclear Development requests issuance of an Order and conforming license amendments by May 1, 2019. Nuclear Development is prepared to work closely with the NRC Staff to facilitate the Application's review.

9. Regulatory Safety Analysis

The changes proposed for the Bellefonte Nuclear Plant Unit 1 are shown in Attachment 2, and clean pages are provided as Attachment 3 to the transmittal letter. Similar changes are provided for the Bellefonte Nuclear Plant Unit 2 in Attachments 4 (changes) and 5 (clean pages). The changes conform the Permits to reflect the proposed transfer of authority and responsibility for licensed activities under the Permits to Nuclear Development. Consistent with the generic determination in 10 CFR 2.1315, "Generic determination regarding license amendments to reflect transfers," paragraph (a), the proposed conforming permit amendments involve no significant hazards consideration, because they do no more than conform the permits to reflect the transfer action.

The proposed permit amendments do not involve any change in the design or licensing basis, plant configuration, the status of the Bellefonte Units, or the requirements of the Permits.

Therefore, the proposed approval does not: (1) involve an increase in the probability or consequences of an accident previously analyzed; (2) create the possibility of a new or different kind of accident from the accidents previously evaluated; or (3) involve a significant reduction in a margin of safety.

10. Environmental Considerations

This Application and accompanying administrative amendments are exempt from environmental review under 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," because they fall within the categorical exclusion at 10 CFR 51.22(c)(21) ("Approvals of direct or indirect transfers of any license issued by NRC and any associated amendments of license required to reflect the approval of a direct or indirect transfer of an NRC license"). Accordingly, neither an Environmental Assessment nor an Environmental Impact Statement is required.

11. Summary

In summary, the proposed transfer of the Permits to Nuclear Development will be consistent with the requirements of the Atomic Energy Act, NRC regulations, and regulatory guidance. Upon consummation of the transfer, Nuclear Development will maintain the Bellefonte Units in their deferred status while it proceeds expeditiously to complete engineering and design of the Bellefonte Units, with an ultimate goal of completing the construction of the Bellefonte Units. There will be no adverse impact on public health and safety during either activity. The transfer of the Permits will not be inimical to the common defense and security and does not involve foreign ownership, control or domination. Nuclear Development therefore requests that the NRC consent to the transfer in accordance with 10 CFR 50.80 and approve the conforming administrative amendment pursuant to 10 CFR 50.92.

ENCLOSURE 1

BELLEFONTE NUCLEAR PLANT SITE PURCHASE AND SALES AGREEMENT

TVA Tract No. XBEGP-3

BELLEFONTE NUCLEAR PLANT SITE
PURCHASE AND SALES AGREEMENT

THIS PURCHASE AND SALES AGREEMENT (this "Agreement") is entered into as of the 14th day of November, 2016 (the "Effective Date"), by and between THE UNITED STATES OF AMERICA, ACTING BY AND THROUGH THE TENNESSEE VALLEY AUTHORITY ("TVA") and NUCLEAR DEVELOPMENT, LLC, a Delaware limited liability company ("Buyer") (TVA, on the one hand, and Buyer on the other hand, are each referred to herein as a "Party" and collectively as the "Parties)."

RECITALS:

A. TVA has custody and control of the Bellefonte Nuclear Plant Site, located in Jackson County, Alabama, including certain infrastructure and other assets located thereon (the "BLN Property");

B. The real property that comprises the BLN Property was acquired by the United States of America by virtue of the instruments of record identified in Schedule R.1(a);

C. The BLN Property nominally consists of approximately 1,600 acres; however, TVA excluded from sale most of the shoreline as well as two archeological sites, and the location where a sewer treatment plant is operated by the Jackson County Water Authority. In addition, TVA is excluding a pole yard training center that is used to train transmission line repair and maintenance personnel employed by TVA and members of the Tennessee Valley Public Power Association located on the Site (the "Pole Yard Training Center"), unless Buyer elects to take fee title to this center (as provided herein below) and if Buyer does so elect, TVA will retain a permanent easement to continue to use the Pole Yard Training Center;

D. With the exclusions referenced in Recital C above, the approximate acreage being conveyed by TVA to Buyer is approximately 1,400 acres and is described more fully in Schedule R.1(a) and shown on the survey in Schedule R.1(b) (the "Site"). TVA has drawn the Site boundaries to separate the acreage and associated assets at the Site from the acreage and portions of the BLN Property that will not be conveyed in a sale. TVA's primary objective in drawing these asset boundaries is to meet certain TVA programmatic needs and provide the Buyer with ownership and operating control of only that portion of the BLN Property necessary to optimize the use of the location and its long-term value. Accordingly, the auction sale included only those structures and improvements located on the Site;

E. The Site includes two partially-constructed B&W pressurized water nuclear reactors with associated infrastructure including, but not limited to, two cooling towers, reinforced containment buildings, spent fuel storage pools, water intake and discharge systems on the Tennessee River, two training centers in addition to the Pole Yard Training Center, office and warehouse buildings, diesel powered generators, a railroad spur, a helicopter landing pad, parking lots, and 161-kV and 500-kV switchyards and associated on-site transmission lines that are located within the boundaries of the acreage being sold;

F. The TVA Board of Directors at its regularly scheduled meeting on May 5, 2016 declared the Site to be surplus and authorized its sale in whole or in part at public auction under Section 31 of the Tennessee Valley Authority Act (subject to successful completion of any additional environmental reviews);

G. TVA through its consultant Concentric Energy Advisors, Inc. ("Concentric") and its own communications has widely advertised the availability of the Site for purchase, and provided

interested buyers the opportunity to access Site documents, tour the Site, and to meet with TVA management to discuss the purchase and sale;

H. TVA used a two-stage auction process for the sale of the Site: Stage 1 included an opportunity for interested buyers to submit on a confidential basis indicative bids to TVA describing their potential use of the Site, spend plan for investing in the Site and surrounding area, financial capabilities, and other information, and Stage 2 during which additional due diligence activities by interested buyers could be conducted leading to a public auction that was open to all interested buyers which were determined to be financially qualified ("Bidders");

I. TVA established as the minimum acceptable bid for the Site the sum of Thirty-Six Million, Four Hundred Thousand U.S. Dollars ($36,400,000) based on a professional appraisal that was completed for TVA by Federal Appraisal and Consulting;

J. TVA held a public auction open to all qualified Bidders starting at 9:00 a.m. (CST) November 14, 2016;

K. Buyer participated in the public auction and TVA determined that Buyer made the highest and best bid in terms of sales price and investment schedule;

L. TVA desires to sell the Site to Buyer and Buyer desires to purchase the Site; and

M. TVA has acquired replacement steam generators (the "Steam Generators") for the two partially-constructed B&W pressurized water nuclear reactors pursuant to TVA Contract No. 4088 between TVA and Babcock & Wilcox Canada Ltd. (the "B&W Contract") The Steam Generators are being manufactured in Canada and are scheduled to be completed by May 31, 2017. As further set forth herein, TVA is willing to grant an option to Buyer to purchase the Steam Generators on the terms set forth herein.

AGREEMENT:

IN CONSIDERATION of the mutual covenants herein contained and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

1. Purchase and Sale.

At the Closing (as defined in Section 5 below), TVA shall sell, transfer, convey, assign and deliver title and possession to Buyer, and Buyer shall purchase and pay for, all of TVA's right, title and interest in each of the following (the following items (a) through (f) being, collectively, the "Purchased Assets"):

(a) All the real property comprising the Site (together with all buildings, structures, fixtures, and other improvements located thereon), all as more particularly described in Schedule R.1(a) and shown on the survey in Schedule R.1(b) (the "Real Property");

(b) All materials, equipment, machinery, tools, parts, supplies, consumables (meaning any and all of the expendable materials, supplies and other items consumed at the Bellefonte Nuclear Plant facility (the "Facility") in the ordinary course of the operation of the Facility), tangible personal property and other such items present or held for use at the Facility;

(c) If requested by Buyer within 180 days of Closing (as defined in Section 5 below), TVA shall provide within 90 days of being requested by Buyer, the following: all books, operating records, permitting records, quality assurance records, purchasing records, and equipment repair, maintenance or service records relating primarily or exclusively to the design, construction, permitting or operation of the

infrastructure located on the Site, including, but not limited to, the two partially-constructed B&W nuclear reactors; and all Site-related operating, safety and maintenance manuals, inspection reports, environmental assessments, environmental reports, engineering design plans, documents, blueprints and as built plans, specifications, procedures and other similar items of TVA, wherever located within TVA's facilities, relating primarily to the Site; whether in electronic or physical form, owned by and in possession or control of TVA at Closing (as defined in Section 5(a) below) other than the books and records of TVA excluded under Section 3(b) below (the "Facility Books and Records"); provided, however, that TVA shall have the right to retain copies of all such books and records described in this Section 1(c) for its use and shall treat as confidential certain of these records that Buyer designates as confidential to the extent permitted by law;

(d) All assumed agreements and obligations (to include the benefit of any prepayments and deposits, if any, made for the account of the same, but excluding any agreements and contracts expressly requiring the consent of TVA's counter-parties prior to any assignment and assumption between TVA and Buyer) listed on Schedule 1(d) (the "Assumed Agreements"), if any, and as further provided in Section 2 below, as the same may be updated at Closing pursuant to Section 6(g)(i); and

(e) To the extent feasible and permitted by applicable law, all permits, licenses or authorizations issued or required by Governmental Authorities or third parties in connection with the operation of the Site and listed on Schedule 1(e) (the "Permits"); provided, however, that with regard to the transfer of the two permits issued to TVA by the Nuclear Regulatory Commission ("NRC") to construct two B&W pressurized water nuclear reactors, this Section 1(e) shall not require TVA to certify that Buyer is qualified and fit to complete construction of and operate those reactors and, if Buyer informs TVA that it does not seek transfer of these NRC permits, TVA shall take whatever action is necessary to terminate those permits. Further, if, an applicable Governmental Authority has not accepted or otherwise allowed the transfer of a permit, license or authorization pursuant to this Section 1(e) by Closing, TVA's obligations under this Section 1(e) shall cease.

(f) Any and all other assets owned, leased, licensed or contracted for by TVA and used at the Site as of the Closing (as defined in Section 5(a)) located on the Site, but specifically excluding those certain Excluded Assets as defined in Section 3 below and those listed in Schedule 3(a), if any.

2. Assignment and Assumption of Assumed Agreements and Assumed Liabilities.

On the terms and subject to the conditions set forth in this Agreement, effective as of the Closing (as defined in Section 5), Buyer shall assume, pay, discharge, perform and be responsible for the following obligations from and after the Closing (collectively, the "Assumed Liabilities"):

(a) Obligations under the Assumed Agreements accruing on or after the Closing; and

(b) Obligations and liabilities relating to the ownership and use of the Purchased Assets arising from and after the Closing, excluding TVA's Retained Environmental Liabilities (as hereinafter defined).

3. Excluded Assets.

Notwithstanding Section 1, the Purchased Assets shall not include TVA's interests in the following agreements, assets and properties (the "Excluded Assets"), and Buyer shall have no liability with respect thereto:

(a) Certain large components located on the Site, as delineated in Schedule 3(a), which TVA shall have the right to remove before Closing; provided, however, that if TVA has not removed such components within that time period and Buyer has not agreed to extend such time period, then Buyer shall take ownership of any of these components that remain on the Site;

(b) Books and records of TVA not relating directly and materially to the Purchased Assets including either of TVA's minute books, tax records, financial statements, accounting records and related notes, records related to other Excluded Assets or Excluded Liabilities (as defined in Section 4 below), market projections, marketing materials, Bidder information, reports prepared for management, lenders, and affiliates of TVA, and appraisals and information prepared in connection with the sale of the Purchased Assets;

(c) Rights of TVA arising under this Agreement, the Transaction Documents (as defined in Section 6(c) below), and any other instrument or document executed and delivered pursuant to this Agreement;

(d) As further set forth in the Special Warranty Deed in the form attached as Exhibit A hereto (the "Warranty Deed"), the following retained easements: (i) a permanent non-exclusive easement to enter and leave the Pole Yard Training Center along Bellefonte Road for TVA's employees, contractors, agents, and invitees and (ii), if Buyer elects to take fee title to the Pole Yard Training Center under the terms set forth in the Warranty Deed, a permanent easement to continue to use the Pole Yard Training Center by TVA, its employees, and invitees subject to Buyer's right to reasonable control access at times that may be necessary under applicable permits or licenses; provided, however, that (A) Buyer shall be required to provide TVA with notice of its intent to elect to take fee title to the Pole Yard Training Center and enter into such permanent easement not less than thirty days prior to Closing, and (B) the easements described above in this subpart (d) shall include the right for Buyer or any successor-in-title to Buyer to: (y) place underground utilities on the Pole Yard Training Center provided that such easements do not interfere with TVA's use of the Pole Yard Training Center and provided, further, that TVA is fairly compensated for the location of such utilities and is reimbursed for its expenses in connection with such placement, and (z) relocate the Pole Yard Training Center and the access road thereto at any time, and from time to time, to another location on the Site or in the vicinity of the Site having, as determined by TVA in its reasonable discretion, comparable access, facilities, topography, utility for training linemen, at the cost and expense of the Buyer or the successor-in-title to Buyer requesting the relocation, which relocation shall be memorialized in a publicly recorded amendment to the easements, thereby releasing the former Pole Yard Training Center and access roads if applicable, thereto from the encumbrance of the former Pole Yard Training Center and access easements;

(e) Acreage and fixtures outside the boundary of the Site, as depicted on the survey map found at Schedule R.1(b) and as more fully described in the legal description at Schedule R.1(a), including but not limited to (i) two areas that have been determined to have potentially-important archeological resources; (ii) areas along the shoreline that contain wetlands; (iii) the Pole Yard Training Center (unless Buyer elects to take fee title to this center), and (iv) the location where the Jackson County Water Authority operates a sewer treatment plant. Notwithstanding the foregoing, upon Buyer's request (which request shall be made by Buyer to TVA not less than thirty days prior to Closing), TVA shall provide Buyer an easement to access and use the metrological tower and associated equipment (the "Met Tower") located within the Pole Yard Training Center or, alternatively, TVA will allow Buyer to remove and relocate the Met Tower. Additionally, if TVA, in its sole discretion, ceases to use the Pole Yard Training Center at any time in the future, TVA shall convey the Pole Yard Training Center to Buyer or, alternatively, shall terminate the permanent easement if the Buyer elected to take fee title to the Pole Yard Training Center at no additional cost;

(f) The Steam Generators; provided, however, that Buyer shall have the option on or before Closing to purchase the Steam Generators and to assume (subject to consent from Babcock & Wilcox Canada Ltd.), all of TVA's rights and obligations under the B&W Contract upon advance written notice to TVA and payment to TVA of the additional sum of $1,193,130, which is the estimated scrap value of the Steam Generators. In the event that Buyer elects to purchase the Steam Generators, TVA shall transfer ownership to Buyer upon payment of such amount by Buyer ; on or before Closing, Buyer shall be responsible for making arrangements to continue to store the steam generators or to have them delivered to another location;

(g) Ownership of the 161-kV and 500-kV transmission line conductors and towers located on the Site to the points of terminus in the 161-kV and 500-kV switchyards on the Site including a permanent

easement to access and maintain this infrastructure; provided, however, that Buyer shall have the option to take ownership of this infrastructure by delivering written notice to TVA not later than thirty days in advance of the Closing. If Buyer exercises this option, this infrastructure shall be transferred with other transferrable assets on Closing;

(h) Notwithstanding anything to the contrary in this Agreement, Buyer may control access to and use of the excluded real property that comprised the approximately 1,600 acres of the Bellefonte Nuclear Site that was acquired by the United States of America by virtue of the instruments of record identified in Schedule R.1(a) to the extent necessary to establish owner-controlled access for NRC permitting and licensing purposes and to the extent reasonable and consistent with the rights TVA reserves and the covenants Buyer makes in the Warranty Deed; and

(i) Notwithstanding anything to the contrary in this Agreement, Buyer shall not be entitled to obtain or view the records relating to TVA's employees, both those working on the Site at and before Closing, and those working at other TVA locations or facilities, including salary and benefit information and any other personally identifiable information.

4. Excluded Liabilities.

Buyer shall expressly not assume and is not assuming pursuant to this Agreement any liability or obligation of TVA set forth below:

(a) Obligations, liabilities or duties of TVA for (i) any environmental liabilities incurred, accrued, existing or arising during the period prior to Closing and related to the Purchased Assets, (ii) any liability or obligation to any Governmental Authority prior to Closing, and (iii) any contractual obligations not assumed under the Assumed Agreements (collectively, "TVA's Retained Environmental Liabilities");

(b) Obligations incurred under Assumed Agreements prior to the Closing, including any obligations attributable to any failure by TVA prior to the Closing to comply with the terms of any such Assumed Agreement; and

(c) Obligations or liabilities with respect to employees of TVA and contractors of TVA (unless such contractual obligations are Assumed Liabilities); regardless, in each case, of when a claim may be asserted;

each of the above Sections 4(a) through 4(c) being, collectively, the "Excluded Liabilities."

5. Closing and Purchase Price.

(a) The closing of the transaction contemplated by and under this Agreement (the "Closing") shall occur on November 14, 2018; provided, however, that all conditions to the Closing set forth in Section 6 below shall have been satisfied or waived by the Party to whom the condition benefits. Closing shall take place at such location as the Parties may mutually agree. Provided that the Closing Condition set forth in Section 6(a)(i) has been satisfied and subject to the terms and conditions of this Agreement and the Warranty Deed, including but not limited to TVA's right under the Warranty Deed to undertake remediation activities subsequent to the Closing, Buyer shall have the right and option to elect to close the purchase of the Purchased Assets, and take title to the Purchased Assets on a closing date specified by Buyer, before TVA has completed its close-out activities at the Site, including removal of the Excluded Assets or the satisfaction of the condition set forth in Section 6(a)(ii), by Buyer giving TVA not less than sixty (60) days prior notice of the date Buyer elects to close the purchase of the Purchased Assets (for purposes of this Section 5(a), the "Early Closing Date"). Should Buyer exercise its option to close on an Early Closing Date, and the removal of the Excluded Assets from the Site and satisfaction of the condition provided in Section 6(a)(ii) below has not been fulfilled, then Buyer shall as of the Early Closing Date grant TVA an easement, having a term not to exceed two (2) years from the Early Closing Date and otherwise on terms acceptable to TVA in its sole discretion, permitting TVA to complete its close-out activities at the Site subsequent to the Early Closing Date, including the removal of the Excluded Assets.

(b) In consideration of the sale, assignment, conveyance, transfer and delivery by TVA to Buyer as of the Closing, Buyer shall pay to TVA an amount equal to One Hundred Eleven Million Dollars ($111,000,000.00) (the "Purchase Price") in cash, payable in two installments as follows:

(i) One installment of Twenty-Two Million Two Hundred Thousand Dollars ($22,200,000.00), which is equal to twenty percent (20%) of the Purchase Price, payable immediately upon execution of this Agreement (the "Down Payment"); and

(ii) One installment of Eighty Eight Million Eight Hundred Thousand Dollars ($88,800,000.00), which is equal to eighty percent (80%) of the Purchase Price, payable at the Closing.

Each such payment shall be made by wire transfer of immediately available funds to such account as TVA shall provide to Buyer.

(c) In addition to the Purchase Price, Buyer shall also compensate TVA for its costs and expenses that TVA incurred in selling the Site, which include: (i) the cost of appraisals, property surveys and realty services, (ii) other associated administrative costs including the cost of TVA staff and payment to Concentric for its services, (iii) the cost of relocating off the Site certain large electrical components, and (iv) the cost of additional environmental reviews (collectively, the "Compensated Costs"). The amount due TVA under subparagraphs (c)(i) and (ii) is fixed at $750,000 and shall be paid by Buyer immediately upon execution of this Agreement when the first installment of the Purchase Price is paid by wire transfer. The amount due under subparagraphs (c)(iii) and (iv) is fixed at $1,650,000 and shall be paid on or before Closing by wire transfer.

6. Conditions to Closing.

(a) The obligations of TVA and Buyer to consummate the transactions contemplated by this Agreement shall be subject to the fulfillment, at or before the Closing, of each of the following conditions:

(i) TVA's Chief Executive Officer (the "TVA CEO") determines that potential environmental impacts have been appropriately addressed or are acceptable; provided, however, that notwithstanding any other provision of this Agreement, it is recognized that such determination is in the discretion of the TVA CEO and if the TVA CEO does not make such determination by Closing, then this condition shall be considered impossible or impracticable to satisfy and such impossibility or impracticability shall not be considered a breach by TVA of this Agreement;

(ii) Environmental substance contamination that exists on the Site has been appropriately remediated under Section 120(h), 42 U.S.C. § 9620;

(iii) Each of the Parties shall have performed and complied with the agreements, covenants and obligations required by this Agreement to be so performed or complied with by it at or before the Closing in all material respects;

(iv) Each of the representations and warranties made by the other Party in this Agreement shall be true and correct in all material respects on and as of the date hereof and the Closing as though made at and as of the Closing (except to the extent expressly made at an earlier time);

(v) There shall not be in effect at the Closing any law, statute, rule, regulation, permit, certificate or binding order, decree or decision of any Governmental Authority (as defined in Section 9(a)(ii) below) restraining, enjoining or otherwise prohibiting or making illegal the consummation of the transactions contemplated by this Agreement; and

(vi) The Parties shall have executed and delivered to one another the items set forth in each of Sections 6(b) and 6(c) below.

(b) At the Closing, Buyer shall pay or have paid to TVA the Purchase Price and Compensated Costs in accordance with Section 5 above and execute (as applicable) and deliver the following items (collectively, the "Buyer Transaction Documents") to TVA:

(i) a Bill of Sale, Assignment and Assumption Agreement (the "Bill of Sale and Assignment Agreement") in substantially the form of Exhibit B attached hereto as necessary for TVA to sell, transfer and deliver the Purchased Assets to Buyer and for TVA to assign and Buyer to assume TVA's rights and obligations with respect to the Purchased Assets, including but not limited to the Assumed Agreements;

(ii) an incumbency certificate of the Secretary or Assistant Secretary of Buyer identifying the name and title and bearing the signatures of the officers of Buyer authorized to execute and deliver this Agreement and the other agreements and instruments contemplated hereby;

(iii) a certificate addressed to TVA dated as of the Closing executed by the duly authorized officer of Buyer (A) as to the matters in Section 8(a)(ii), and (B) to the effect that Buyer has performed and complied with the agreements, covenants and obligations required by this Agreement to be so performed or complied with by Buyer at or before the Closing in all material respects;

(c) On or before the Closing, TVA shall execute (as applicable) and deliver to Buyer the following items (collectively, the "TVA Transaction Documents"):

(i) the Bill of Sale and Assignment Agreement, together with fully executed copies of any and all Assumed Agreements, to deliver exclusive title to and possession of the non-realty Purchased Assets to Buyer;

(ii) the Warranty Deed and any closing statement and other documents necessary to deliver exclusive title to and possession of and convey the Site to Buyer;

(iii) bills of sale and certificates of title, where applicable, for the items of vehicles and equipment that are part of the Purchased Assets;

(iv) copies, certified by the Secretary of TVA, of resolutions or actions on written consent of the members and managers of TVA authorizing the execution and delivery of this Agreement and all of the other agreements and instruments, in each case, to be executed and delivered by TVA in connection herewith;

(v) an incumbency certificate of the Secretary of TVA identifying the name and title and bearing the signatures of the officers of TVA authorized to execute and deliver this Agreement and the other agreements and instruments contemplated hereby, and such other evidence of the approval of the transactions provided for hereunder, TVA's authority, due execution of documents and due organization as may be reasonably required by Buyer; and

(vi) a certificate addressed to Buyer dated as of the Closing executed by the duly authorized officers of TVA (A) as to the matters in Sections 7(a)(ii) and (iii), and (B) to the effect that TVA has performed and complied with the agreements, covenants and obligations required by this Agreement to be so performed or complied with by it at or before the Closing in all material respects.

(d) The Buyer Transaction Documents and the TVA Transaction Documents shall be collectively referred to as the "Transaction Documents."

7. TVA's Representations and Warranties.

(a) To induce Buyer to enter into this Agreement, TVA represents and warrants to Buyer as follows:

(i) TVA is an agency and instrumentality of the United States created and existing under the Tennessee Valley Authority Act of 1933, as amended, 16 U.S.C. §§ 831-831ee.

(ii) TVA has the authority to execute this Agreement and to transfer the Site to Buyer. This Agreement has been duly and validly executed and TVA has the authority to execute and deliver to Buyer the deed transferring ownership of the Site to Buyer.

(iii) At its regularly scheduled meeting on May 5, 2016, the TVA Board of Directors declared the Site surplus and authorized the TVA CEO to sell the Site in whole or in part. No other authorization or approval is needed for the actions contemplated by this Agreement.

(iv) Any environmental substance contamination that exists on the Site has been or will be appropriately remediated by Closing by TVA under Section 120(h), 42 U.S.C. § 9620 and TVA shall remain liable to remediate any other environmental substance contamination that exists on the Site before the Closing if discovered after Closing to the extent necessary under applicable environmental laws. Buyer shall provide TVA reasonable access to the location of any such post-closing discovered contamination to remediate it without charge.

(v) William D. Johnson, President and the TVA CEO, is authorized to execute this Agreement on TVA's behalf.

(vi) No investigation, action or proceeding is pending and, to TVA's knowledge, no action or proceeding is threatened and no investigation looking toward such an action or proceeding has begun, which questions the validity of this Agreement or any action taken or to be taken pursuant hereto.

(vii) TVA has full right, power and authority to execute and deliver this Agreement and to consummate the purchase and sale transactions provided for herein, and no authorization, consent or approval or other order or action of or filing with any Governmental Authority is required for the execution and delivery by the TVA of this Agreement or the consummation by the TVA of the transactions contemplated hereby.

(viii) To TVA's knowledge and except as disclosed in the Warranty Deed and in that certain Offering Memorandum issued by Concentric with regard to the Site dated August 19, 2016, no options to acquire easements, options to purchase, purchase agreements, purchase and sale agreements, rights of refusal or other rights or options to acquire or lease all or any portion of the Site, or any gas, oil, coal, geothermal, mineral or mining rights with respect to the Site, exist.

(b) The representations and warranties made in this Agreement by TVA shall be deemed remade by TVA as of the Closing with the same force and effect as if made on, and as of, such date.

8. Buyer's Representations and Warranties.

(a) To induce TVA to enter into this Agreement, Buyer represents and warrants to TVA as follows:

(i) Buyer is a limited liability company, duly formed, validly existing and in good standing under the laws of the State of Delaware, is authorized to transact business as a limited

liability company in the State of Alabama, and has full limited liability company power and authority to own, use and lease, as applicable, and acquire the Purchased Assets and to enter into and perform its obligations under this Agreement and to consummate the transactions contemplated hereby.

(ii) Buyer has taken all necessary action to authorize the execution, delivery and performance of this Agreement and upon the execution and delivery of any document to be delivered by Buyer on or prior to the Closing, this Agreement and each such document shall constitute the valid and binding obligation and agreement of Buyer, enforceable against Buyer in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws of general application affecting the rights and remedies of creditors and to the extent that the availability of the remedy of specific performance or injunctive or other forms of equitable relief may be subject to equitable defenses or would be subject to the discretion of the court before which any proceeding therefor may be brought.

(iii) No investigation, action or proceeding is pending and, to Buyer's knowledge, no action or proceeding is threatened and no investigation looking toward such an action or proceeding has begun, which questions the validity of this Agreement or any action taken or to be taken pursuant hereto.

(iv) Neither the execution, delivery or performance of this Agreement by Buyer, nor compliance with the terms and provisions hereof, will result in any breach of the terms, conditions or provisions of, or conflict with or constitute a default under, the terms of any indenture, mortgage, deed of trust, note, evidence of indebtedness or any other agreement or instrument by which Buyer is bound.

(v) Buyer warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon agreement or understanding for a commission, percentage, brokerage or contingent fee for which TVA will be liable.

(vi) No authorization, consent or approval or other order or action of or filing with any Governmental Authority is required for the execution and delivery by the Buyer of this Agreement or the consummation by the Buyer of the transactions contemplated hereby.

(vii) Except for express representations and warranties of TVA set forth herein, any of the Transaction Documents and any other agreement delivered in connection with Buyer's purchase of the Purchased Assets and Buyer's assumption of the Assumed Agreements, Buyer has relied and is relying solely on its own inspections, investigation and analyses of the Purchased Assets and the Assumed Agreements.

(b) The representations and warranties made in this Agreement by Buyer shall be deemed remade by Buyer as of the Closing with the same force and effect as if made on, and as of, such date.

9. Covenants. After the Effective Date and Prior to Closing.

(a) The Parties hereby make to one another the following covenants to be effective after the Effective Date and prior to Closing:

(i) Subject to the terms and conditions herein, each of the Parties agrees to use its commercially reasonable best efforts to consummate and make effective as soon as is commercially reasonable, the transactions contemplated hereby, including the satisfaction of all conditions thereto set forth herein.

(ii) Each Party shall provide reasonable cooperation to the other Party in obtaining consents, approvals or actions of, making all filings with and giving all notices to any federal,

state, local, foreign or other governmental subdivision, regulatory or administrative agency, commission, body, court, tribunal, arbitral panel, or other authority exercising or entitled to exercise any administrative, executive, judicial, legislative, police, regulatory, tax or other authority or power (each, a "Governmental Authority") over the matters specified as to the Site consistent with Section 1(e). The Parties shall keep each other apprised of the status of any communications with and any inquiries or requests for additional or supplemental information from applicable Governmental Authorities, and shall provide any such additional or supplemental information that may be reasonably requested in connection with any such filings or submissions. All applications, appearances, presentations, briefs, and proposals made or submitted by or on behalf of either Party before any Governmental Authorities in connection with the approval of this Agreement and the transactions contemplated hereby shall be subject to the control of the Party making such application, appearance, presentation, filing or submission.

(iii) Buyer and its officers, employees and agents shall have access upon reasonable prior notice to the Site, if requested, all for purposes of inspection and review. During any inspection or review, Buyer shall comply and shall cause its employees, officers and agents to comply, with all applicable safety and security procedures applicable to the Site and to conduct any inspection or review in a manner causing minimum interference with TVA's activities, and Buyer shall further have the right to enter the Site and conduct any survey, operational or equipment inspection (including with respect to inventory validation), or environmental inspection or assessment; provided, that neither Buyer nor any of its representatives shall collect or analyze any environmental samples (including building materials, indoor or outdoor air, surface or groundwater, or surface or subsurface soils) without TVA's prior consent, such consent not to be unreasonably conditioned, withheld or delayed. Notwithstanding anything to the contrary contained herein, Buyer shall not be permitted to contact any of TVA's vendors or suppliers without TVA's prior consent (not to be unreasonably withheld, conditioned or delayed) with respect to the Site or the transactions contemplated by this Agreement.

(iv) TVA shall give prompt notice to Buyer that, upon learning of any material change in any condition with respect to the Purchased Assets or of any event, circumstance, occurrence or non-occurrence which makes any representation or warranty of TVA to Buyer under this Agreement untrue, misleading or inaccurate in any material respect, TVA shall promptly notify Buyer thereof (Buyer mutually agreeing, on learning of any such fact or condition, likewise promptly to notify TVA thereof);

(v) TVA shall not, without the prior written consent of Buyer: (A) dispose of, assign, or transfer all or any portion of the Purchased Assets or any rights therein or thereto, or incur, create or permit any lien or encumbrance on, any of the Purchased Assets; or (B) enter into, amend, modify, terminate, grant any waiver of any term under or give any consent with respect to any easement, any Assumed Agreement, or any new contract or any permit related to the Site, in any manner adverse to Buyer in any material respect; provided, however, that the consent of Buyer shall not be required in the event of any emergency situations in which TVA must take action to prevent injury to persons or physical loss or damage to the Purchased Assets or as required to comply with applicable law. Additionally, TVA shall not (1) except in the ordinary course of TVA's operations at the Site, including transmission line maintenance, or to the extent caused by emergency or events of force majeure, commit or permit the cutting or severing of any timber, trees or other vegetation on the Real Property; (2) commit or permit the withdrawal or severing of any gas, oil coal, geothermal or minerals from the Real Property within the control of TVA; (3) perform or consent to any zoning, re-zoning, land use change or annexation affecting the Real Property except as requested by Buyer; or (4) enter into any options to purchase, purchase agreements, purchase and sale agreements, rights of refusal or other rights or options to acquire or lease all or any portion of the Purchased Assets, or any gas, oil, coal, geothermal, mineral or mining rights with respect to the Purchased Assets.

(b) From time to time after the Closing, without further consideration, TVA will, at its own expense, execute and deliver such documents to Buyer as Buyer may reasonably request in order to vest more

effectively in Buyer the right, title and interest in and to the Purchased Assets. If, after the Closing, TVA, on the one hand, or Buyer or any of its affiliates, on the other hand (as applicable, the "Receiving Party"), receives any funds that, pursuant to the terms of this Agreement, belong to the other party (the "Entitled Party"), the Receiving Party shall hold such funds in trust for, and immediately pay over such funds to, the Entitled Party.

10. Site and Area Expenditure Requirements.

(a) Buyer agrees to make a cumulative total expenditure of $25 million in capital improvements to be made at the Site or to other land or easement areas located in Jackson County, Alabama in the amounts and by the dates indicated in Table 10(a) below:

Table 10(a)

Expenditure Date (After Closing)	Cumulative Amount (Minimum)
One year	$ 5 millions
Two years	$ 10 millions
Three years	$ 15 millions
Four years	$ 20 millions
Five years	$25 millions

For purposes of this Section 10, demolition, removal and/or restoration costs paid with respect to work on the Site shall be credited towards satisfaction of the Cumulative Amounts set forth above. Additionally, the crediting of any capital improvements located off the Site but within Jackson County shall be subject to TVA's determination, in its sole discretion, that such improvements are connected to Buyer's improvements on the Site and would not have been made but for Buyer's development of the Site. The Parties further agree that the acquisition of additional realty rights shall not constitute a capital improvement for purposes of this Section 10.

(b) Buyer shall notify TVA in writing within 90 days when each of the above expenditure requirements is satisfied by Buyer and shall generally describe what it invested in.

(c) If Buyer fails to meet any of these expenditure requirements when scheduled, it shall explain to TVA in writing why it did not make the required expenditure within 30 days of the expenditure date and shall have 180 days from the expenditure date to cure such failure; provided, however, that if Buyer has made a good faith effort towards obtaining required federal, state or local permits or licenses necessary for the construction of such capital improvements and such time limitation expires through no fault of Buyer, then TVA at its reasonable discretion, and upon request, may extend such time limitation to facilitate Buyer's obtaining of such permits or licenses.

(d) In the event that Buyer fails to meet an expenditure requirement and fails to cure this pursuant to Section 10(c) above, TVA in its sole discretion, and as agent for the United States of America upon written notice to Buyer, may reenter the Site and take possession of the Purchased Assets, as if the conveyance provided for pursuant to this Agreement had never been made and without repayment of the Purchase Price or Reimbursable Costs and without making any other payment to Buyer. Upon receipt of such notice, Buyer shall cease any ongoing activities on the Site in a safe manner within 30 days of receipt of notice and shall vacate the Site. Within this same 30-day period, Buyer shall have the right to remove any personal property that it brought onto the Site. Any of Buyer's personal property remaining on the Site after this 30-day period shall become TVA's property if TVA in its sole discretion decides to take ownership of it. Buyer must remove from the Site any personal property that TVA chooses not to take ownership of and if Buyer fails to do this, TVA may remove it at Buyer's expense.

(e) At the end of each year described in Table 10(a), TVA agrees to promptly execute and deliver to Buyer a certification, in recordable form, for purposes of memorializing in the public records the Cumulative Amount of expenditures pursuant to Table 10(a) that Buyer demonstrates to have been made for such year, provided, however, that the Cumulative Amounts expended shall be fully effective and shall apply to the satisfaction of such capital improvements requirement, whether or not any such certification is executed or delivered by TVA.

11. Termination; Waiver.

(a) This Agreement may be terminated as described in Section 12 below. In addition, it may be terminated at any time prior to the date on which Closing is to occur pursuant to Section 5(a) (the "Closing Date"), as provided below:

(i) By the mutual consent of both Parties in writing;

(ii) By Buyer, if the closing condition set forth in Section 6(a)(ii) is unfulfilled as of the Closing Date or if there has been a violation or breach by TVA of any covenant, agreement, representation or warranty contained in this Agreement and such violation or breach (A) is not cured by TVA within thirty (30) days following notification by Buyer, and (B) such failure, violation or breach has not been waived by Buyer in writing;

(iii) By TVA, if there has been a violation or breach by Buyer of any covenant, agreement, representation or warranty contained in this Agreement and such violation or breach (A) is not cured by Buyer within thirty (30) days following notification by TVA, and (B) such failure, violation or breach has not been waived by TVA in writing;

(iv) By either Party, upon written notice to the other Party, if (A) any judicial decision or order of a Governmental Authority prohibiting the sale of the Site has been issued and made final or non-appealable, (B) the closing conditions set forth in Sections 6(a)(i) or 6(a)(v) are unfulfilled as of the Closing Date, or (C) the parties are not able to negotiate pursuant to Section 12(c) an adjustment to the Purchase Price in the event of damage to a Purchased Asset; or

(v) By either Party, upon written notice to the other Party if Closing has not occurred on or prior to November 14, 2018 ;

(vi) By Buyer at its convenience at any time prior to the Closing, upon written notice to TVA;

provided, however, that the termination of this Agreement under either of Sections 11(a)(ii) or 11(a)(iii) shall not relieve the non-terminating Party for liability for any breach or default that occurred prior to termination; and provided, further, that the right to terminate this Agreement pursuant to Section 11(a)(v) shall not be available to a Party if such Party shall have failed to perform, or caused any of its affiliates to perform, any of its respective obligations under this Agreement.

(b) Upon any termination or expiration or this Agreement, TVA shall be entitled to retain the Down Payment and any Compensated Costs paid by Buyer on or before termination or expiration, unless termination is under Section 11(a)(ii) or Section 11(a)(iv), in which event TVA shall return the Down Payment and any Compensated Costs paid by Buyer to Buyer within 30 days by check or electronically as directed by Buyer.

(c) At any time prior to the Closing, either Party, in its sole discretion, may (i) extend the time for the performance of any of the obligations or other acts of the other Party, (ii) waive any inaccuracies in the representations and warranties contained in this Agreement or in any document delivered pursuant to this Agreement or (iii) waive compliance with any of the covenants, agreements or conditions contained in this Agreement. Any such extension or waiver shall be valid only if set forth in writing signed by the Party to

be bound thereby. The waiver by a Party of a breach of any term or provision of the Agreement shall not be construed as a waiver of any subsequent breach.

12. Risk of Loss.

(a) Except as otherwise provided in this Agreement, prior to Closing, Buyer shall not bear any risk of loss or damage to the Purchased Assets. Until Closing occurs, TVA shall perform reasonable and normal maintenance activities to preserve the Purchased Assets in their current condition until Closing. If a Purchased Asset is damaged, TVA shall inform Buyer within 15 days of the event and Buyer shall have the right to view and inspect the damaged Purchased Asset.

(b) Subject to Section 12(c) below, TVA shall use commercially reasonable efforts, at TVA's cost and expense, to replace or repair any damaged Purchased Asset if requested to do so by Buyer if the asset was damaged before Closing. TVA shall take such action as necessary to replace or repair the damaged Purchased Asset as expeditiously as practicable. TVA shall have the right to access the damaged Purchased Asset as necessary to complete replacement or repair if control of the Site has been transferred to Buyer before this work is completed.

(c) TVA shall have the right not to repair or replace the damaged Purchased Asset, in which event it shall notify Buyer in writing and TVA shall negotiate in good faith with Buyer to adjust the Purchase Price to account for the reduced value of the damaged Purchased Asset. If such negotiations cannot be completed to the satisfaction of the Parties within 30 days, then this Agreement may be terminated in accordance with Section 11(a)(iv)(C).

(d) After the Closing, if TVA's access to and continued operation of the 161-kV switchyard, associated controls and on-site 161-kV transmission lines, and its fiber optic system results in damage to other Purchased Assets transferred to Buyer, TVA shall, at TVA's cost and expense, use commercially reasonably efforts to replace or repair any such damaged assets if requested to do so by Buyer. TVA shall take such action as necessary to replace or repair the damaged Purchased Asset as expeditiously as practicable. TVA shall have the right to access the damaged Purchased Asset as necessary to complete replacement or repair.

(e) Notwithstanding anything provided herein, if Buyer elects by written notice to TVA to have TVA continue to maintain assets that support completion and operation of the two unfinished nuclear units in a manner sufficient to meet NRC quality control requirements until Closing, Buyer shall pay TVA $875,000 per quarter (every three-month period from the date this Agreement is signed until Closing) by wire transfer without further invoicing or billing by TVA.

13. Deed Covenants; Tax Matters.

(a) Buyer, by acceptance of the Warranty Deed from TVA, covenants and agrees on behalf of itself and its successors and assigns to all of the deed covenants expressed in the Warranty Deed.

(b) TVA is a federal agency and instrumentality and is not subject to local, state, or federal taxes. Accordingly, its ownership and sale of the Site does not result in any taxes payable by TVA. Buyer is solely responsible for the payment of any local, state, or federal taxes that its purchase and ownership of the Site may generate.

(c) TVA shall deliver exclusive possession of the Real Property to Buyer free and clear of all tenants, occupants, parties in possession, leases, licenses and permits, however subject to the rights of third parties and the reserved rights of TVA as expressly set forth in this Agreement and the Warranty Deed,

14. TVA Employees.

Until after the Closing, Buyer shall not contact or discuss with any current TVA employee possible future employment at the Site or in connection with activities that support development of the Site, including completion of the two nuclear reactors located at the Site, without TVA's prior express notification and permission.

15. TVA Disclaimers and Buyer Acknowledgements.

(a) Except as expressly set forth in this Agreement, the Site is sold expressly in an "AS IS, WHERE IS," "WITH ALL FAULTS" condition, with no representations or warranties of any kind including as to the infrastructure and personal property located on the Site that are being transferred to Buyer, or their condition, operability, value or any other matter other than as expressly provided in this Agreement. TVA does not represent that the Site will be acceptable as security for loans of money or that it will not be rendered unacceptable as such security by reason of the deed provisions and restrictions applicable thereto. While TVA may have suggested or recommended in its advertising or otherwise what it believes to be the highest and best use of the Site, it does not represent or warrant that the same is safe or suitable in any respect for any such use.

(b) The Site is being conveyed to Buyer expressly subject to each of the following: (i) such rights as may be vested in the state, county, or adjoining owners in any public road running through the Site, (ii) such rights as may be vested in third parties to rights of way for telephone, electric, or other utilities, (iii) such rights of third parties as would be revealed by a physical inspection or survey of the Site, (iv) such rights of third parties as would be revealed by an examination of the public records of Jackson County, Alabama, (v) such burial rights and rights of ingress and egress as may be vested in third parties to that certain cemetery known as the Finnel Cemetery as recited in the Judgment recorded in Deed Book 007, page 62, Office of the Judge of the Probate, Jackson County, Alabama, and (vi) any known or unknown encroachments located on the Site.

(c) Buyer hereby acknowledges that TVA has not made any representation or warranty, express or implied, as to the accuracy or completeness of any information regarding the Site not otherwise expressly included in this Agreement. Buyer further acknowledges that:

(i) Buyer, either alone or together with its representatives and agents, has knowledge and experience in transactions of this type and is therefore capable of evaluating the risks and merits of acquiring the Site;

(ii) Buyer has relied on its own independent investigation, and has not relied on any information or representations furnished by TVA or any of its representatives or agents (except as specifically set forth in this Agreement), in determining to enter into this Agreement;

(iii) Neither TVA nor any of its representatives or agents has given any investment, legal or other advice or rendered any opinion as to whether the purchase of the Site is prudent, and Buyer is not relying on any representation or warranty by TVA or any of TVA's representatives or agents except as set forth in this Agreement;

(iv) Buyer has conducted extensive due diligence, including a review of the documents provided by or on behalf of TVA; and

(v) TVA has made available to Buyer documents, records and books pertaining to the Site that Buyer and Buyer's attorneys, accountants and advisors have requested, and Buyer and its attorneys, accountants and advisors have had the opportunity to visit the Site and to ask questions and receive answers concerning the Site and the assets located thereon and the terms and conditions of this Agreement. All such questions have been answered to Buyer's complete satisfaction.

(d) Buyer hereby acknowledges that (i) electric service at the Site is currently provided by TVA and the North Alabama Electric Cooperative, (ii) a two-mile, 13-kV three-phase circuit owned by the North Alabama Electric Cooperative provides service to various training facilities and storage huts, (iii) the balance of electric service needs are provided by TVA and that both services are metered and billed to the Site, and (iv) Buyer is responsible for obtaining electric service to the Site after Closing.

16. **Section 26a Application Rights; Certain Real Property Matters**.

(a) TVA will grant Buyer the right to apply under § 26a of the Tennessee Valley Authority Act, as amended, to construct, operate, and maintain water-use facilities on and over the adjoining land lying between the boundary of the Site and the adjacent waters of Guntersville Reservoir and in and on such waters; and the further right of suitable ingress and egress to and from the waters of the lake and to and from all structures, facilities, and improvements maintained in, on, or over said land or waters pursuant to the rights herein conveyed, all upon the express condition that said rights shall be subject to and shall not in any way interfere with TVA's statutory program for river control and development, including those rights set forth in the Warranty Deed.

(b) The acreage being conveyed as part of the Purchased Assets and that acreage being excluded as part of the Excluded Assets is generally depicted on the map attached as Schedule R.1(b). TVA believes the acreage is correctly stated; provided, however, the Site is not sold on an acreage basis and no representation or warranty as to acreage is made by TVA.

(c) TVA shall convey the real property that comprises the Site to Buyer by Warranty Deed substantially in the form attached as Exhibit A. Title to the Site was examined by TVA prior to purchase and is believed to be good, but no further warranties or insurance will be furnished by TVA except as otherwise expressly provided as to risk of loss in Section 12.

17. **Jurisdiction and Venue**.

Each Party hereto irrevocably submits to the sole and exclusive jurisdiction of the United States District Court for the Northern District of Alabama for the purposes of any action arising out of or based upon this Agreement or relating to the subject matter hereof. Each Party hereto further agrees that service of any process, summons, notice or document by U.S. registered or certified mail to such Party's respective address set forth in Section 18 below shall be effective service of process for any action, suit or proceeding with respect to any matters to which it has submitted to jurisdiction in this Section 17. Each Party hereto irrevocably and unconditionally waives any objection to the laying of jurisdiction and venue of any action, suit or proceeding in the United States District Court for the Northern District of Alabama, and hereby further irrevocably and unconditionally waives and agrees not to plead or claim in any such court that any such action, suit or proceeding brought in any such court has been brought in an inconvenient forum. TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES ALL RIGHT OF TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT, THE TRANSACTION DOCUMENTS OR ANY MATTER ARISING HEREUNDER OR THEREUNDER.

18. **Notices**.

Unless this Agreement specifically requires otherwise, any notice, demand or request provided for in this Agreement, or served, given or made in connection with it, shall be in writing and shall be deemed properly served, given or made if delivered in person or sent by facsimile or sent by registered or certified mail, postage prepaid, or by a nationally recognized overnight courier service that provides a receipt of delivery, in each case, to a Party at its address specified below:

If to TVA, to:

Tennessee Valley Authority
Attn: Senior Manager, Realty Services and GIS
1101 Market Street
Chattanooga, Tennessee 37402
Tel: (423) 751-7175
Fax: (423) 751-8458

With a copy to:

Tennessee Valley Authority
Attn: Office of General Counsel
400 West Summit Hill Drive, WT 6A
Knoxville, Tennessee 37902
Tel: (865) 632-4131
Fax: (865) 632-2422

If to Buyer, to:

Nuclear Development, LLC
c/o Franklin L. Haney Company, LLC
1250 Maryland Avenue S.W., Suite 503
Washington, DC 20024
Tel: (423) 421-3451
*Fax:*_____

With a copy to:

Larry D. Blust, Esq.
Hughes Socol Piers Resnick & Dym, Ltd.
70 West Madison Street
Suite 4000
Chicago, Illinois 60602
Tel: (312) 604-2672
Fax: (312) 580-1994

Notice given by personal delivery, mail or overnight courier pursuant to this Section 18 shall be effective upon physical receipt. Notice given by fax pursuant to this Section 18 shall be effective as of (i) the date of confirmed delivery if delivered before 5:00 p.m. Eastern Time on any business day; or (ii) the next succeeding business day if confirmed delivery is after 5:00 p.m. Eastern Time on any business day or during any non-business day. By giving at least thirty (30) days' prior written notice thereof, any party may from time to time and at any time change its mailing addresses for notices to be given pursuant to this Section 18.

19. **Post-Closing Efforts and Further Assurances**.

(a) After the Closing, each of the Parties shall, without further consideration, at the other Party's prior reasonable request, use commercially reasonable efforts to execute and deliver to one another, as necessary, such other instruments and documents of sale, transfer, conveyance, assignment, notice, and confirmation, and provide documents, information and assistance, as are reasonably necessary or desirable for the complete effectuation and consummation of the transactions provided for and contemplated under this Agreement, and shall furnish to the requesting Party, at the requesting Party's reasonable request and sole expense, non-privileged books and records in connection with any audits, tax filings and other proceedings involving the Purchased Assets, subject to applicable confidentiality obligations; provided, however, that such cooperation shall not interfere with either TVA's or Buyer's operation of their respective businesses.

(b) Without limiting the foregoing, to the extent that TVA, in connection with any compliance requirements or any investigation or monitoring process of any Governmental Authority, including but not limited to NRC, the Federal Energy Regulatory Commission, the North American Electricity Reliability Corporation or the SERC Reliability Corporation, with respect to activities, matters, inactions, or other issues occurring, arising or associated with periods prior to Closing, Buyer shall provide TVA with access to any and all types of documentary or electronic information, or individual knowledge, pertinent to the subject of such investigation, monitoring process or self-report to the extent that such information or knowledge was transferred to Buyer under this Agreement.

20. **Entire Agreement.**

This Agreement, and all schedules and exhibits hereto, supersedes all prior discussions and agreements, whether oral or written, between the Parties or their respective affiliates with respect to the subject matter hereof, including the certain Mutual Nondisclosure Agreement, dated as of August 23, 2016 ("Mutual Nondisclosure Agreement"), and contains the sole and entire agreement between the Parties hereto with respect to the subject matter hereof and thereof.

21. **Expenses**.

Except as otherwise expressly provided in this Agreement, whether or not the transactions contemplated hereby are consummated, each Party will pay its own costs and expenses incurred in connection with the negotiation, execution and performance under this Agreement and the Transaction Documents and the transactions contemplated hereby and thereby, provided, however, that Buyer shall pay any recording fees incurred in connection with such transactions and, provided, further, that Buyer shall be responsible for the Compensated Costs as specified in Section 5(c); except to the extent otherwise provided in Section 11(c).

22. **Public Announcements**.

TVA or Buyer may issue or make any press releases or similar public announcements concerning this Agreement or the transactions contemplated after this Agreement; provided, however, each Party shall inform the other Party of any such releases or announcements and shall to the extent feasible provide the other Party copies of such public releases or announcements at least eight hours prior to the public release or announcement.

23. **Confidentiality**.

(a) Each Party hereto will hold, and will use commercially reasonable efforts to cause its affiliates, employees, agents, and representatives to hold, in strict confidence from any other person, unless (i) compelled to disclose by judicial or administrative process (including in connection with obtaining the necessary approvals of this Agreement and the transactions contemplated hereby of Governmental Authorities) or by other requirements of law or (ii) disclosed in an action or proceeding brought by a Party hereto in pursuit of its rights or in the exercise of its remedies hereunder, all documents and information concerning the other Party labeled or marked as proprietary or confidential and furnished to it by the other Party or on such other Party's behalf in connection with this Agreement or the transactions contemplated hereby ("Confidential Information"), except to the extent that such documents or information can be shown to have: (w) been in the public domain (either prior to or after the furnishing of such documents or information hereunder) through no fault of such receiving Party, (x) been later acquired by the receiving Party from another source if the receiving Party is not aware that such source is under an obligation to another Party hereto to keep such documents and information confidential, or (y) become the property of the receiving Party at or subsequent to Closing, provided that either Party may disclose Confidential Information to its lenders, investors, and affiliates provided they are advised of the confidential nature thereof. In the event the transactions contemplated hereby are not consummated, upon the request of the other Party, each Party hereto will use commercially reasonable efforts to cause its affiliates, employees, agents, and representatives to promptly (and in no event later than fifteen (15) business days after such request) destroy or cause to be destroyed all copies of Confidential Information and information furnished

by the other Party in connection with this Agreement or the transactions contemplated hereby and destroy or cause to be destroyed all notes, memoranda, summaries, analyses, compilations and other writings to the extent containing such Confidential Information prepared by the Party furnished such Confidential Information. Notwithstanding the foregoing, Buyer agrees that TVA may release in its entirety the bid that Buyer submitted at the auction referenced in the recitals of this Agreement and a copy of this Agreement after execution.

(b) The Parties acknowledge and agree that (i) divulgence or unauthorized use of confidential information could damage the disclosing Party and that the disclosing Party therefore has an interest in protecting the Information by all legal means; (ii) that breach of the obligations set forth in Section 23(a) above could cause irreparable damage to the disclosing Party possessing proprietary rights in information wrongfully disclosed; and (iii) further that in the event of such breach, the disclosing Party may seek an injunction, specific performance, or other equitable relief to prevent the violation of the promises mentioned above. Under 18 U.S.C. § 1905, because Buyer's officers and employees are subject to criminal liability in the event confidential information is disclosed unless such disclosure is authorized by law, TVA acknowledges and agrees that, in addition to the equitable relief identified above in this Section 23(b), TVA shall only be entitled to recover from Buyer, its officers, agents and employees any and all gains wrongfully acquired, directly or indirectly, from unauthorized disclosure of any confidential information covered under the provisions of this Section 23.

(c) The obligations contained in this Section 23 shall survive for a period of three (3) years following the Closing or any termination of this Agreement pursuant to Section 11 above.

24. **Waivers**.

Any term or condition of this Agreement may be waived at any time by the Party that is entitled to the benefit thereof in that Party's sole discretion, but no such waiver shall be effective unless set forth in a written instrument duly executed by the Party waiving such term or condition. No waiver by any Party of any term or condition of this Agreement, in any one or more instances, shall be deemed to be or construed as a waiver of the same or any other term or condition of this Agreement on any future occasion. Except as otherwise expressly provided herein, all remedies, either under this Agreement or by law or otherwise afforded, will be cumulative and not alternative.

25. **Exercise of Remedies**.

To the fullest extent that is permitted by law, no failure or delay of any Party, in any one or more instances, (a) in exercising any power, right or remedy (other than failure or unreasonable delay in giving notice of default) under this Agreement or (b) in insisting upon the strict performance by the other Party of such other Party's covenants, obligations or agreements under this Agreement, shall operate as a waiver, discharge or invalidation thereof, nor shall any single or partial exercise of any such right, power or remedy or insistence on strict performance, or any abandonment or discontinuance of steps to enforce such a right, power or remedy or to enforce strict performance, preclude any other or future exercise thereof or insistence thereupon or the exercise of any other right, power or remedy. The covenants, obligations, and agreements of a defaulting Party and the rights and remedies of the other Party upon a default shall continue and remain in full force and effect with respect to any subsequent breach, act or omission.

26. **Amendment.**

This Agreement and any of the Transaction Documents may be amended, supplemented or modified only by a written instrument duly executed by or on behalf of each Party hereto.

27. **No Construction Against Drafting Party**.

The language used in this Agreement is the product of both Parties' efforts, and each Party

hereby irrevocably waives the benefits of any rule of contract construction that disfavors the drafter of a contract or the drafter of specific words in a contract.

28. **No Third-Party Beneficiary**.

The terms and provisions of this Agreement are intended solely for the benefit of each Party hereto and their respective successors or permitted assigns, and it is not the intention of the Parties to confer third-party beneficiary rights upon any other person.

29. **Headings**.

The headings of all articles, paragraphs and sections used in this Agreement have been inserted for convenience of reference only and do not define or limit the provisions hereof.

30. **Invalid Provisions.**

If any provision of this Agreement is held to be illegal, invalid or unenforceable under any present or future law, and if the rights or obligations of any Party hereto under this Agreement will not be materially and adversely affected thereby, (a) such provision will be fully severable, (b) this Agreement will be construed and enforced as if such illegal, invalid or unenforceable provision had never comprised a part hereof, (c) the remaining provisions of this Agreement will remain in full force and effect and will not be affected by the illegal, invalid or unenforceable provision or by its severance herefrom and (d) Buyer and TVA shall negotiate an equitable adjustment in the provisions of the Agreement with a view toward effecting the purposes of the Agreement, and the validity and enforceability of the remaining provisions, or portions or applications thereof, shall not be affected thereby.

31. **Governing Law**.

TVA is a corporate agency and instrumentality of the federal government of the United States of America; therefore, federal law shall at all times govern the validity, interpretation, and enforceability of this Agreement and (unless clearly specified to the contrary therein) the Transaction Documents and the transactions contemplated by this Agreement; provided, however, that to the extent there is no body of federal law for guidance or federal law adopts State law for a rule of decision or procedure, the laws of the State of Alabama, but not its choice of law provisions or principles thereof regarding resolution of conflicts of law, shall so govern.

32. **Required Federal Contracting Clauses**.

No member or delegate of the United States Congress or resident commissioner or any officer, employee, special government employees, or agent of TVA shall be admitted to any share or part of this Agreement, the Transaction Documents and the closing of the transactions contemplated hereby or to any benefit to arise therefrom unless the agreement be made with a corporation for general benefit, nor shall Buyer offer or give, directly or indirectly, to any officer, employee, special government employee or agent of TVA, any gift, gratuity, favor, entertainment, loan or any other thing of monetary value, except as provided in 5 C.F.R Part 2635; any breach of this provision shall constitute a material breach of this Agreement. Furthermore, to the extent legally required, this Agreement and the Transaction Documents shall be subject to all contract provisions and clauses required under the federal laws of the United States of America applicable to TVA and parties contracting with TVA, set forth in 18 C.F.R. Part 1316. To the extent applicable, this Agreement incorporates by reference the Equal Opportunity clause, 41 C.F.R. 60-1.4.

33. **Court Costs; Interest.**

With respect to any court proceeding between the Parties, the non-prevailing Party shall pay the prevailing Party (i) all court costs, and (ii) pre- and post-judgment interest at the rate of six percent (6%) per annum on the amount awarded from the date of the applicable breach until paid.

34. **No Assignment; Binding Effect**.

Neither this Agreement nor any right, interest or obligation hereunder may be assigned by any Party hereto without the prior written consent of the other Party hereto (which consent shall not be unreasonably withheld), and any attempt to do so will be void, except for (i) collateral assignment to its or its affiliate's lenders, (ii) assignments and transfers to any entity that controls, is controlled by or under common control with Buyer, provided, however, that Buyer shall remain obligated under this Agreement or, at TVA's option, guaranty the affiliated entity's obligations to TVA, and (iii) assignments and transfers by operation of law. Any purported assignment or delegation not effected in accordance with this Section 34 shall be deemed void. This Agreement is binding upon, inures to the benefit of and is enforceable by the Parties and their respective successors and assigns.

35. **Specific Performance; Limitation on Damages**.

EACH PARTY AGREES THAT THE DAMAGE REMEDIES SET FORTH IN THIS AGREEMENT MAY BE DIFFICULT OR IMPOSSIBLE TO CALCULATE OR OTHERWISE INADEQUATE TO PROTECT ITS INTERESTS AND THAT IRREPARABLE DAMAGE MAY OCCUR IN THE EVENT THAT PROVISIONS OF THIS AGREEMENT ARE NOT PERFORMED BY THE PARTIES IN ACCORDANCE WITH THE SPECIFIC TERMS OF THIS AGREEMENT. ANY PARTY MAY SEEK TO REQUIRE THE PERFORMANCE OF ANY OTHER PARTY'S OBLIGATIONS UNDER THIS AGREEMENT THROUGH AN ORDER OF SPECIFIC PERFORMANCE RENDERED BY THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF ALABAMA. ADDITIONALLY, NOTWITHSTANDING ANY OTHER TERM OR PROVISION OF THIS AGREEMENT TO THE CONTRARY, IF BUYER COMMITS A DEFAULT, VIOLATION OR BREACH UNDER THIS AGREEMENT PRIOR TO CLOSING, THE SOLE AND EXCLUSIVE REMEDY OF TVA SHALL BE TO TERMINATE THIS AGREEMENT BY GIVING BUYER A WRITTEN NOTICE OF TERMINATION WHILE SUCH DEFAULT IS OUTSTANDING AND UNCURED, WHEREUPON, TVA SHALL KEEP AND RETAIN THE DOWN PAYMENT AND COMPENSATED COSTS PAID PRIOR TO THE DATE OF SUCH DEFAULT, VIOLATION OR BREACH AS FULL LIQUIDATED DAMAGES FOR BUYER'S DEFAULT, VIOLATION OR BREACH, IT BEING AGREED THAT TVA'S DAMAGES AS A RESULT OF ANY DEFAULT, VIOLATION OR BREACH BY BUYER MIGHT BE IMPOSSIBLE TO ASCERTAIN AND THAT SUCH DOWN PAYMENT AND COMPENSATED COSTS ARE NOT AND SHALL NOT BE DEEMED TO BE A PENALTY, BUT ARE A REASONABLE ESTIMATE OF TVA'S DAMAGES. THE FOREGOING LIMITATION SHALL NOT APPLY TO LIMIT BUYER'S LIABILITY, OR TVA'S RIGHT TO SPECIFIC PERFORMANCE, FOR ANY DEFAULT, VIOLATION OR BREACH UNDER THIS AGREEMENT SUBSEQUENT TO CLOSING. IN NO EVENT SHALL EITHER PARTY BE LIABLE FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, PUNITIVE, OR EXEMPLARY DAMAGES AS A RESULT OF DEFAULT, VIOLATION OR BREACH OF ANY COVENANT, REPRESENTATION OR WARRANTY CONTAINED IN THIS AGREEMENT.

36. **Counterparts**.

This Agreement may be executed in any number of counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument. Each Party expressly acknowledges the legal effectiveness and validity of faxed or electronic (e.g. pdf. format) signatures as original signatures. Furthermore, this Agreement may be executed and delivered by facsimile or electronic transmission. The parties intend that faxed or electronic (e.g. pdf. format) signatures constitute original signatures and that a faxed or electronic copy or counterparts of this Agreement containing signatures (original, faxed or electronic) of a party is binding upon that party. Each signature page to any counterpart of this Agreement may be detached from such counterpart without impairing the legal effect

of the signatures thereon and thereafter attached to another counterpart of this Agreement identical thereto except having attached to it additional signature pages.

37. **Time of the Essence.**

Time shall be of the essence in the performance of all obligations under this Agreement. If the time period by which any right, option or election provided under this Agreement must be exercised, or by which any act required under this Agreement must be performed, or by which Closing must be held, expires on a Saturday, Sunday or a holiday, then such time period shall be automatically extended to the next business day.

38. **Survival.**

All covenants, agreements, representations and warranties contained in this Agreement shall survive the Closing, transfer of the Real Property and Purchased Assets to Buyer and the payment of the Purchase Price, and shall not merge into any deed delivered at Closing; provided, however, that as between such surviving provisions and the terms of the Warranty Deed, the terms of the Warranty Deed shall control.

39. Memorandum of Agreement. Upon request of Buyer, the Parties shall execute and deliver to each other duplicate originals of an instrument in recordable form which will constitute a memorandum of this Agreement, setting forth a description of the Site and the term of this Agreement, which memorandum shall be recorded in the office of the Judge of Probate of Jackson County, Alabama. Upon any termination of this Agreement, the Parties shall, within 15 days of such termination, execute and deliver such instruments in recordable form as TVA may request to evidence such termination.

Signatures appear on following page

SIGNATURES

IN WITNESS WHEREOF, the Parties have executed this Agreement through their respective officers thereunto duly authorized as of the Effective Date.

TVA:

TENNESSEE VALLEY AUTHORITY

By: _____
Name: Aaron B. Nix
Title: Senior Manager, Realty Services and GIS

NUCLEAR DEVELOPMENT, LLC

By: _____
Name: Franklin L. Haney
Title: Sole Member and Manager

LIST OF SCHEDULES AND EXHIBITS

Schedule R.1(a)	Legal Description of the Real Property Comprising the Site and Property Survey
Schedule R.1(b)	Map of the Real Property
Schedule 1(d)	Assumed Agreements
Schedule 1(e)	Facility Permits
Schedule 3(a)	Excluded Assets
Exhibit A	Form of Special Warranty Deed
Exhibit B	Form of Bill of Sale, Assignment and Assumption Agreement

DEFINED TERMS

Defined term	Where defined
"Agreement"	Recitals
"Assumed Agreements"	1(d)
"Assumed Liabilities"	2
"Bidders"	Recitals
"Bill of Sale and Assignment Agreement"	6(b)(i)
"BLN Property"	Recitals
"Buyer"	Recitals
"Buyer Transaction Documents"	6(b)
"B&W Contract"	Recitals
"Closing"	5
Closing Date	11(a)
"Compensated Costs"	5(c)
"Concentric"	Recitals
"Confidential Information"	23(a)
"Cumulative Amount"	Table 10(a)
"Down Payment"	5(b)
"Early Closing Date"	5(a)
"Effective Date"	Recitals
"Entitled Party"	9(b)
"Excluded Assets"	3
"Excluded Liabilities"	4
"Facility"	1(b)
"Facility Books and Records"	1(c)
"Governmental Authority"	9(a)(ii)
"Met Tower"	3(e)(iv)
"Mutual Nondisclosure Agreement"	20
"NRC"	1(e)
"Party" or "Parties"	Recitals
"Permits"	1(e)
"Pole Yard Training Center"	Recitals
""Purchase Price"	5(b)
"Purchased Assets"	1
"Real Property"	1(a)
"Receiving Party"	9(b)
"Site"	Recitals
"Steam Generators"	Recitals
"TVA's Retained Environmental Liability	4(a)
"TVA"	Recitals
"TVA CEO"	6(a)
"TVA Transaction Documents"	6(c)
"Transaction Documents"	6(d)
"Warranty Deed"	3(d)

TVA TRACT NO. XBEGP-3

FIRST AMENDMENT
TO BELLEFONTE NUCLEAR PLANT SITE PURCHASE AND SALES AGREEMENT

THIS FIRST AMENDMENT TO BELLEFONTE NUCLEAR PLANT SITE PURCHASE AND SALES AGREEMENT (this "**Amendment**"), is entered into effective the 8th day of November, 2018, between the UNITED STATES OF AMERICA, acting by and through the TENNESSEE VALLEY AUTHORITY ("**TVA**"), and NUCLEAR DEVELOPMENT LLC, a Delaware limited liability company ("**Buyer**") (TVA, on the one hand, and Buyer on the other hand, are each referred to herein as a "**Party**" and collectively as the "**Parties**").

W I T N E S S E T H:

A. TVA and Buyer entered into that certain Bellefonte Nuclear Plant Purchase and Sales Agreement effective as of November 14, 2016 (the "**Agreement**"),with respect to the sale of the Site and Purchased Assets (as such terms are defined in the Agreement) following a public auction held on November 14, 2016.

B. The Agreement provides that the closing of the transaction contemplated thereunder (the "**Closing**") is to occur no later than November 14, 2018.

C. Each of Buyer and TVA is willing to extend the date of the Closing from November 14, 2018 to November 30, 2018.

NOW, THEREFORE, in consideration of the above premises specifically incorporated and the mutual promises recited herein, the receipt and sufficiency of which are acknowledged by the Parties, the Parties hereby agree as follows:

1. Defined Terms. All terms used but not defined herein shall have the meaning ascribed to them in the Agreement.

2. Closing Date Extension. All references found in Sections 5(a) and 11(a)(v) of the Agreement to "November 14, 2018" shall be deleted in full and shall be replaced in lieu thereof with "November 30, 2018" (the "Extended Closing Date").

3. Buyer's Elections to Purchase Certain Assets. Pursuant to the provisions of Sections 1(c), 3(d), 3(e), 3(f) and 3(g) of the Agreement, Buyer hereby confirms to TVA its election, in advance of the Closing, of Buyer's option to acquire at Closing each of the following assets: (a) fee title to the Pole Yard Training Center (which fee includes the space occupied by the Met Tower); (b) the Steam Generators; and (c) the 161-kV transmission line conductors and towers located on the Site to the points of terminus in the 161-kV and 500-kV switchyards on the Site. In accordance with Section 3(f), Buyer will pay the additional sum of $1,193,130 to TVA at Closing as the purchase price for the Steam Generators.

Except as specifically amended hereby, the Agreement shall continue in full force and effect in accordance with the terms thereof.

IN WITNESS WHEREOF, the Parties have executed this First Amendment to Bellefonte Nuclear Plant Site Purchase and Sales Agreement as effective as of the day and year set forth above.

TENNESSEE VALLEY AUTHORITY

By:_____
Name: Aaron B. Nix
Title: Senior Manager, Realty Services and GIS

NUCLEAR DEVELOPMENT, LLC

By:_____
Name: Franklin L. Haney
Title: Sole Member and Manager

IN WITNESS WHEREOF, the Parties have executed this First Amendment to Bellefonte Nuclear Plant Site Purchase and Sales Agreement as effective as of the day and year set forth above.

TENNESSEE VALLEY AUTHORITY

By: _____
Name: Aaron B. Nix
Title: Senior Manager, Realty Services and GIS

NUCLEAR DEVELOPMENT, LLC

By: _____
Name: Franklin L. Haney
Title: Sole Member and Manager

ENCLOSURE 2

RESUMES OF KEY MANAGEMENT PERSONNEL

William R. (Bill) McCollum, Jr.

Career Summary

Seasoned executive with 44-year track record of delivering results in all phases of the electric utility business. Demonstrated success in building executive teams, developing business strategy and creating alignment with employees and stakeholders to achieve sustainable improved business results.

Experienced in performance turnaround as performance transformation leadership, as well as M&A organizational consolidation. Demonstrated performance in a progression of responsible leadership roles including C-level positions over nuclear operations, fossil operations, transmission and power supply functions.

Strong experience in construction management, project management and controls implementation and project oversight functions.

Education:

BS in Electrical Engineering, Georgia Tech;
MS in Nuclear Engineering, Georgia Tech;
MBA from UNC-Charlotte.

Training: NRC Senior Reactor Operator's License (Catawba Nuclear Station)
Registered Professional Engineer-NC #10382
SC #22547

Work Experience:

07/01/2012-Present **Owner, McCollum Holdings, LLC**
Consultant to firms in the energy industry. Provides executive management consulting on nuclear industry issues, electric energy strategy issues and other energy matters.

05/01/2007-06/30/2012 **Chief Operating Officer, Tennessee Valley Authority**
Responsible for all Generation, Transmission, Construction and River Operations functions, and associated support activities for the nation's largest public power provider. Provide leadership for all operational functions as well as development and construction of new nuclear and conventional generation assets. Led an organization of over 9000 employees, a similar number of contractors, and an operating and routine capital budget of over $9B. Responsible for capital expansion projects with total budgets of over $5B. In addition to nuclear access clearances, held Top Secret clearance.
In this role, led a performance turnaround effort to re-tool the organization and assets, including significant reorganization, leadership change and introduction of a new management model to refocus the organization on operational excellence. Established improved labor relations, moving from an adversarial relationship to a collaborative relationship while gaining better management rights contract terms. Improved employee safety culture, resulting in recordable injury rates in top decile of industry.

10/24/2006-04/01/2007 **Executive Vice-President and Chief Regulated Generation Officer, Duke Energy Corporation**
Responsible for leadership of Regulated Fossil-Hydro Generation, Engineering & Technical Services, Procurement, Regulated Bulk Power Marketing and New Generation Construction (Fossil and Nuclear). Provide Operational leadership to achieve and improve business results of Regulated operations in Carolinas and Midwest regions. As a direct report to the CEO, provide leadership in developing and executing business and regulatory strategy to provide earnings growth through cost reductions, operational excellence and capital management.

4/1/2006-10/24/2006 **Group Vice-President, Regulated Fossil-Hydro Generation**
Responsible for operation of 21,000 MW of Fossil-fuel and Hydroelectric generating assets. Provide leadership for development and execution of growth strategy and planning for environmental compliance while achieving operational excellence.

1/1/2005-4/1/2006 **Vice- President, Strategic Planning and Business Development**
Primary Accomplishment: Led strategic planning efforts for Duke Power Company. Implemented a much more structured and disciplined approach to forward generation and financial planning. Expanded the planning horizon from three to ten years, in order to capture key decision drivers. Led efforts to acquire non-nuclear generation assets to expand the power company generation portfolio.

11/01/2002-12/31/2004 VP**, Nuclear Support** Duke Power Company
Annual O&M Budget: $150 Million
Primary Accomplishment: Managed nuclear support functions, including Nuclear Fuels management, core design and fuels purchasing, Nuclear Supply chain services, Regulatory/ Self-Assessment functions and Engineering/ Scientific Services.

12/14/1997-10/31/2002 **Site VP- Oconee Nuclear Station**; Duke Power Company Annual O&M Budget: $215 Million
Primary Accomplishment: Developed and implemented turnaround strategy to recover profitability while regaining regulatory confidence. Developed and led initiatives to change culture to support competitive success. Put in place a management team which would drive the organization to success. Implemented communications strategies to better engage workforce to support needed changes. Dramatically increased the discipline and structure for management decision-making. Led development of a five-year business and workforce plan to provide longer-term focus, rather than reactive approaches.

08/01/1995-12/14/1997 **Site VP - Catawba Nuclear Station**; Duke Power Company Annual O&M Budget: $160 Million
Primary Accomplishment: Led continuous improvement in business focus and results. Developed communication strategies to engage workforce in organizational improvement.

11/01/1991-08/01/1995 **Station Manager, Catawba Nuclear Station**, Duke Power Company Annual O&M Budget: $ 80 Million
Primary Accomplishment: Led group through re-organization and selected people for key management roles. Improved business results while engaging workforce. Led development of an approach to human performance improvement which became the model for the nuclear function.

01/01/1989-11/01/1991 **Maintenance Superintendent, Catawba Nuclear Station Duke Power Company**

03/01/1987-01/01/1989 **Superintendent of Station Services; Catawba Nuclear Station Duke Power Company**
Primary Accomplishment: Managed Human Resources function during times of first company-wide layoff. Coordinated selection and implementation planning for downsizing. Coordinated station communication planning and Employee Relations plans to ensure effective maintenance of employee engagement.

09/14/1974 03/01/1987 Held various roles in engineering, operations and project management within the Nuclear Generation function of Duke Power Company.

Professional Associations:

1.) B&W Owners Group Chairman of Executive Committee (2 years)
Led B&WOG during time of transition and challenges from industry consolidation and regulatory pressures.

2.) Member, INPO Executive Review Group (5 years)
Provided advice and consultation to management of INPO during time of significant changes. Often asked to work on subcommittees to provide assistance in shaping key process changes.

3.) Member, Nuclear Energy Institute Program and Resources Committee (2 years)
Developed plans for NEI involvement to improve industry position with regulators and legislators.

4.) Member, Electric Power Research Institute, Nuclear Power Council
Led industry efforts to deal with significant materials reliability issues in BWRs and PWRs, managed oversight of programs to deploy industry resources to address key technical and regulatory issues.

5.) Board Member, National Academy for Nuclear Training
Participated in and led Board reviews to determine accreditation of nuclear training programs for US, Canadian and South African power plants.

Civic Involvement:

1.) Board member, Chattanooga Aquarium:
Served as a member of the Board of Directors of the Chattanooga Aquarium, one of the largest aquarium and educational operations on the US. Helped lead expansion and redirection of the aquarium in response to changing economic conditions and competitive landscape.
2.) Board member, Chattanooga Chamber of Commerce:
The Chattanooga Chamber is a very active and effective force in recruiting new and expanded business into the Chattanooga area.
3.) Board member, Georgia Tech Nuclear and Radiological Health Physics Advisory Board
4.) Board Chair, Fluoride High Temperature Reactor External Advisory Board. Led an advisory Board for a multi-university government funded research project to move the design of an advanced Fluoride salt cooled reactor toward commercialization by resolving key technical barriers and analytical gaps.

1425 South Moore Road
Suite A
CHATTANOOGA, TENNESSEE 37412
423/265-0537 Fax 423/265-5422

FRANKLIN L. HANEY COMPANY, LLC
a Tennessee Limited Liability Company

3 Bethesda Metro Center
SUITE 515
Bethesda, Maryland 20814
202/479-1101 FAX 202/479-1106

FRANKLIN ("FRANK") L. HANEY, JR.

Professional Credentials:
Bachelor of Science, University of Colorado, 1998

Experience:
President - Franklin L. Haney Company, LLC, Washington, DC (1999-Present)
Financial Analyst - Oakes, Lyman & Co. Limited, London, England (1998-99)

I am responsible for securing and structuring new projects as well as selling or restructuring the financing of existing project owned by the Franklin L. Haney Company and its affiliates. My expertise lies in locating new projects for the Company, working with the state and local governments on the projects and developing the business and financial structure in order to obtain the projects. I have secured over $1,000,000,000 in financing for such projects.

In addition, I handle the day to day operations of the Franklin L. Haney Company and its related entities along with managing the employees, which total approximately 100. The Company has downsized or sold many assets over the last 5 years which drastically reduced the number of employees under employment in order to free up cash flow and refocus our attention on new more profitable projects. I also manage and review all financial data for the Company, which includes the DC and Birmingham Office Buildings, the Colorado property, the Dulles Greenway Toll Road, the Miller/Coors Distributing Company and all family cash assets and securities.

Relevant Experience:

The Portals I and II Office Complex, Washington, DC
The Dulles-Greenway Toll Road, Louden County, VA
The Social Security Payment Center, Birmingham, AL
The Miller/Coors Distribution Company, Northwest Arkansas
The Chattanooga Computer Center, Chattanooga, TN
The Chestnut Street Tower II, Chattanooga, TN
The Dawson's Ridge Property, Castle Rock, CO

Current Projects:

1) The Company is negotiating to purchase, finance and rehabilitate two (2) nuclear power plants for a combined potential financing of $12 billion.
2) I am currently renovating our 660,000 square foot building in Birmingham, Alabama. To date, I have negotiated and signed a thirty (30) year 300,000 square feet lease with the State of Alabama Department of Human Resources as of April 1, 2012. I am also in the final negotiations with the City of Birmingham to lease the remaining 360,000 square feet of the Birmingham Building to house The Cities Fire and Police departments.

Larry D. Blust

T. 312.604.2672
F. 312.604.2673
lblust@hsplegal.com (mailto:lblust@hsplegal.com)
70 W. Madison Street, Suite 4000, Chicago, Illinois 60602

Larry Blust became a Partner of Hughes Socol Piers Resnick Dym, Ltd. in 2014. Mr. Blust has been in private practice since 1968, except for three years during which he served as a Staff Judge Advocate and Military Judge in the U.S. Air Force. Mr. Blust has extensive experience in virtually every area of corporate, tax, wealth, and real estate law. Specifically, Mr. Blust practices in the areas of mergers and acquisitions; tax reporting, consulting and controversies; gaming transactions; taxable and tax exempt bonds; infrastructure financing; other types of financing; fund structures; maritime matters; tax credits; entity structuring; wealthy family representation; and real estate law. Mr. Blust has also conducted a tax dispute practice in federal and state courts.

Prior to joining HSPRD, Mr. Blust was a partner at Barnes & Thornburg, where he served as the head of its Chicago Corporate and Business Department. Prior to that, Mr. Blust was a partner at Jenner & Block, where he was the head of the transitional Tax Department for over 20 years and was on the firm's Management Committee for 15 years.

Prior to receiving his law degree, Mr. Blust received a degree in accounting and an Illinois CPA Certificate and worked for PricewaterhouseCoopers.

EDUCATION

- University of Illinois College of Law (J.D. 1968)
  - —Valedictorian
  - — University of Illinois Law Review
- University of Illinois at Urbana-Champaign (B.S. Accounting 1965)
  - — Co-valedictorian

ADMISSIONS

BAR ADMISSIONS

- Illinois (1968)

COURT ADMISSIONS

- Illinois Supreme Court
- U.S. Court of Appeals for the Seventh Circuit
- U.S. District Court for the Northern District of Illinois — Trial Bar
- Tax Court
- Court of Federal Claims

PROFESSIONAL RECOGNITION

- AV Preeminent'" Rating by Martindale-Hubbell'
- Selected by peers as Super Lawyer" (2005 to Present)
- Selected by peers as Leading Lawyer in the areas of Closely & Privately Held Business Law, Corporate Finance Law, Gaming and Casino Law, Mergers & Acquisitions Law, and Tax Law: Business.
- Law Member of Illinois CPA Board of Examiners (1978 — 1981)

MEMBERSHIPS / ASSOCIATIONS

CIVIC / COMMUNITY

► Member, Board of Directors, Bailiwick Chicago

► Founding Director, Wisdom Bridge Theater (a not-for-profit theater)

► Founding Director, Chicago Moving Company (a not-for-profit dance company)

► Former Member, Board of Directors, Victory Gardens Theatre

► Former Chairman of Operations & Finance Committee and Member, Board of Directors, Augustana Hospital

► Former Member, Board of Directors, Lutheran General Hospital

► Former Member, Board of Directors, Lincoln Park Conservation Association

► Former President and Member, Old Town Triangle Association

► Member, Neighborhood Urban Renewal Advisory Board by appointment of Mayor Byrne and Mayor Daley

► Mr. Blust has also been active in Chicago neighborhood organizations and in zoning and planning matters

MERGERS AND ACQUISITIONS

Mr. Blust represents buyers and sellers in M&A transactions, including complicated tax structuring and cross border

transactions. Some of his specialized niche areas are tax-exempt entity acquisitions and LLC acquisition structures minimizing tax on retained minority interests and Hart-Scott-Rodino filings. Recent transactions include:

► Sale of two consulting practices for large consulting firm

► Joint venture between state university and a publisher on financial index

► Acquisition of beer distributorship

► Sale of manufacturer with Canadian and European operations

TAX REPORTING, CONSULTING, AND CONTROVERSIES

Mr. Blust represents taxpayers at the audit, appellate, administrative hearing, and court levels regarding federal income, estate, and excise taxes and state and local income, sales, use, and franchise taxes. Recent matters include:

► Settlement of TEFRA audit

► Settlement of Chicago lease and use tax matter at administrative hearing level

► Settlement of federal accumulated surplus tax case at appeals

In addition to representing taxpayers in controversies, Mr. Blust counsels on situsing to minimize state and local taxes, handles unclaimed property audits and issues, develops structures for foreign clients for investments in the U.S. and negotiates and drafts tax reimbursement (secondment) agreements and tax allocation agreements regarding U.S. employees and operation located overseas. Mr. Blust also consulted for a former governor regarding Illinois tax legislation, including a possible gross receipts tax and regarding film tax credits.

TAXABLE AND TAX EXEMPT BONDS

Mr. Blust has acted as bond counsel, borrower's counsel, underwriter's counsel, issuer's counsel, and credit enhancer's counsel on virtually every type of tax exempt and taxable bond. He was a pioneer on 501(c)(3) and Indian bonds and various synthetic bond and credit enhancement structures. Recent taxable bond transactions include the financing of a number of failed condominium project loans for several community banks by taxable variable rate demand bonds credit enhanced by Federal Home Loan Bank back to back letters of credit.

Recent tax-exempt bond transactions include:

► Issuer's counsel on 2009 and 2010 Central DuPage Hospital bonds of $90 million and $240 million respectively

► Bond and borrower's counsel on $50,000,000 re-credit enhancement of housing bonds

► Several low and moderate income housing financings involving tax credits as well as tax exempt bonds

INFRASTRUCTURE FINANCING

Mr. Blust represents developers in structuring and financing infrastructure projects under public/private partnerships such as a toll road as to which he has represented the owners in over $2 billion in partnership financings and refinancings. In addition, he represented the same owners in $1 billion of mezzanine financing based on excess rated debt service coverage.

Mr. Blust also represents one of the largest developers and financers of federal and state office buildings in federal, state, and local government financings of buildings rented to government agencies in D.C. and other locations.

Mr. Blust is currently representing a client proposing to purchase and finance two partially completed nuclear reactors. This project also involves advanced nuclear facility production tax credits.

JOHN A. SLABINSKI

SUMMARY:

My education includes a Bachelor of Science degree in Nuclear Science from the University of Maryland and a Management Senior Reactor Operator (SRO) certification with 29 years of verifiable experience in all aspects of Quality Assurance and project oversight. Competencies include:

- Project Quality Assurance Manager of several nuclear projects
- Completed LMJ International NQA-1 (2008 / 2009a) Lead Auditor Training Course April 2015
- Completed Villanova Six Sigma Green Belt Training March 2014
- Completed Villanova Lean Six Sigma Training July 2014
- Integrated ASME Code, contractual, quality, and regulatory requirements into project specific Quality Assurance and Project Oversight Plans
- Broad experience in developing, reviewing and writing quality programs, plans, and procedures
- Served as a member of the Watts Bar Nuclear Unit 2 Joint Test Group

EXPERIENCE:

Retired (11/15 – Present)
Tennessee Valley Authority (11/10 – 11/15)

Sr. Program Manager

- Assigned to the Watts Bar Unit 2 Nuclear Plant for construction completion and preoperational testing
- Assigned to the Bellefonte Nuclear project as the principle QA representative responsible for oversight and implementation of all quality assurance activities associated with the Construction Permit and Deferred Activity program in accordance with Generic Letter 87-15 including oversight of the fabrication of the replacement Integrated Economizer Once Through Steam Generators (IEOTSG) project activities.

Project Assistance Corporation (07/10 – 10/10)

QA Manager – Program Specialist

- NQA-1, and
- ASME Section III and Section VIII programs

Science Applications International Corporation (10/05 – 07/10)

Sr. QA Engineer:
Graduated from the Flight Operations Training Academy and directly supported NASA's manned space program by developing and/or writing elements of the Quality Assurance requirements for:

- Orion Quality Assurance Plan
- Orion Contractor Surveillance Plan
- Quality Certifications for Flight Readiness for all U.S. & Russian launches

I also participated in the initial planning and coordinating meetings for:

- Orion Vehicle Integration and Acceptance Plan
- Crew Exploration Vehicle Avionics Integration Laboratory (CAIL)
- Exploration Electrical Power Systems Test-bed (EEST) facility

Bechtel Power Corporation (09/00 – 07/05)

Project Quality Assurance Manager:
Duties included the development of Project Quality Assurance Program Plans, comprehensive oversight and assessment plans, and more importantly the established the Quality interface between Bechtel's Management team and the client's quality and management organization at the following projects:

- Beaver Valley N-1 Outage, Steam Generator Replacement Project
- Bruce A, Units 1 & 2 Steam Generator Replacement Project, Ontario, Canada (Proposal Team)
- Browns Ferry (BFN) Unit 1 Restart
- Shearon Harris Steam Generator Replacement Project
- Arkansas Nuclear One Steam Generator Replacement Project

South Texas Project Nuclear Operating Company (02/85 - 05/00)

Operations Staff Specialist:
Performed oversight of all aspects of Plant Operations and Reactor Engineering activities including the planning, leading, and participation in performance and compliance based audits. These activities also assessed the audited department's ability to perform internal self-assessments and verified that local, state, and federal commitments were being met. Areas of responsibility included:

- Reactor Plant Startup, Operation, and Shutdown
- Reactor Initial Criticality and Low Power Physics Testing
- Reactor Engineering
- Representative to the STPEGS Plant Operations Review Committee (PORC) for 10 years
- Served as a member of the STPEGS Independent Safety Evaluation Group (ISEG) for 7 years

Engineering Staff Specialist:

Responsibilities included participation in Safety System Functional Inspections focusing on independent engineering and safety assessments of high-risk systems critical to reactor safety including any subsequent impact on the surrounding population, environment, and the facility

Quality Engineering Supervisor:

Responsibilities included the supervision of the Nuclear Assurance verification of Licensing Event Reports (LER), all correspondence with the Nuclear Regulatory Commission (NRC), plant configuration management, and site design engineering products

Project Quality Control Supervisor:

Responsibilities included the supervision of all Electrical, I&C, Mechanical and NDE inspection activities

Bechtel Power Corporation (02/78 – 11/85)

Department Administrator:

Functioned as the quality representative for the project manager and was responsible for the preparation of project review presentations for executive management and was responsible for the oversight of the configuration management databases.

Field Engineering Supervisor:

Responsible for the management of all aspects of the Clients Quality Assurance Program including the planning, implementation, and supervision of Electrical, I&C, Mechanical, and ASME Section XI, testing and inspection activities including the preparation, review, and administration of all documentation associated with these activities.

United States Navy - Honorable Discharge (1972 – 1978)

Navy Nuclear Reactor Operator:

SSN – 595 Responsible for the operation of the nuclear reactor during startup, shut down, normal and emergency conditions. Collateral duties included the testing, troubleshooting, and repair of all reactor plant monitoring, control, and safety systems.

Navy Nuclear Work Coordinator:

USS Dixon Responsible for the planning and implementation of work packages and procedures for the removal, repair, reinstallation, and testing of major mechanical components in the reactor plants of nuclear submarines.

EDUCATION, TRAINING, and CERTIFICATIONS

- Bachelor of Science degree in Nuclear Science — 08/28/1993
  University of Maryland, College Park, MD, GPA 4.0, Class Rank 1 in 482

- Completed LMJ International NQA-1 Lead Auditor Training Course (2012 Criteria) — 04/17/2015
- Completed Villanova Six Sigma Green Belt Training — March 2014
- Complete Villanova Lean Six Sigma Training — July 2014

- RABQSA ISO 9001–2000 / AS9100 Lead Auditor Training — 11/17/2006
  No. PL/RAB/AS/010/11/17/07
- Graduated from the United Space Alliance, Flight Operation Training Academy — 03/06/2006
- American Welding Society, Certified Welding Inspector, QCI-88 and QCI-96,
  Certificate No. 95090931 — 08/01/1998
- L. Marvin Johnson and Associates, INC., Professional Quality Assurance Lead
- Auditor for Commercial, Government, and Nuclear Industries — 12/05/1997
- American Society for Quality, Quality Auditor — 06/28/1996
- Management Senior Reactor Operator (SRO) Certification, STPNOC — 04/01/1994
- Executive Media Communications / Public Relations Training
- Wixted, Pope, Nora, Thompson, & Associates — 06/10/1994
- General Physics Corporation, Performance Based Auditing Techniques — 04/11/1990
- Current U. S. Passport — June 2020
- Honorable Discharge, U.S. Navy — 01/25/1978

ENCLOSURE 3

REQUEST FOR EXEMPTION
REGARDING FINANCIAL QUALIFICATIONS
APPLICABLE TO
APPLICATION TO TRANSFER
CONSTRUCTION PERMITS
CPPR-122 AND CPPR-123

Bellefonte Nuclear Station, Units 1 and 2
Docket Nos. 50-438 and 50-439

Request for Exemption Regarding Financial Qualifications Applicable to Application to Transfer Construction Permits CPPR-122 and CPPR-123

Nuclear Development LLC (Nuclear Development) submits this request to the U.S. Nuclear Regulatory Commission (NRC) for an exemption from the financial qualification (FQ) requirements for construction permit transfers in 10 CFR 50.80(b)(1)(i), 50.33(f) and Part 50, Appendix C, as applied to its construction permit transfer application (Transfer Application) for Bellefonte Nuclear Station, Units 1 & 2 (Bellefonte Units).

As explained further below, this exemption request is being filed in accordance with:

- Staff Requirements—SECY-13-0124—Policy Options for Merchant (Non-Electric Utility) Plant Financial Qualifications (April 24, 2014) (ML14114A358);
- SECY-15-0123, "Staff's Statement in Support of the Uncontested Hearing for Issuance of Combined Licenses for the South Texas Project, Units 3 and 4," at pages 14-16 (September 30, 2015) (ML15176A532); and
- Financial Qualifications for Reactor Licensing Rulemaking; Regulatory Basis Document (Oct. 2016) (ML15322A185).

On November 22, 2013, the NRC Staff issued SECY-13-0124, recommending that the Commission modify the FQ requirements of 10 CFR Part 50. The Commission agreed and, in the Staff Requirements Memorandum (SRM), directed the Staff to engage in a rulemaking to amend the FQ requirements in 10 CFR Part 50 to establish requirements similar to the FQ requirements in 10 CFR Part 70. Upon completion of the rulemaking, applicants could propose the use of license conditions to establish financial qualifications.

In the SRM authorizing the rulemaking, the Commission also stated that the Staff should consider utilizing an exemption process during the pendency of the rulemaking. On February 12, 2016, the Commission issued Combined Operating Licenses for South Texas Project, Units 3 and 4, a merchant plant. The South Texas Project application relied on an exemption from FQ requirements, based on the direction of the Commission in SRM-SECY-13-0124 and the draft regulatory basis document.

Nuclear Development requests that the NRC grant an exemption as contemplated in the SRM. Specifically, Nuclear Development requests an exemption from the FQ requirements in 10 CFR 50.80(b)(1)(i), 50.33(f) and 10 CFR Part 50, Appendix C, to allow use of a FQ standard appropriate for a partially-constructed facility, and similar to that contained in 10 CFR Part 70, including the use of license conditions, as applicable to the NRC's review of its Transfer Application.

A. Background and Purpose

Nuclear Development has submitted to the NRC an application to transfer Construction Permit Nos. CPPR-122 and CPPR-123 for the Bellefonte Units from the current holder of

the permits, Tennessee Valley Authority, to Nuclear Development. Section 5 of the Transfer Application addresses the FQ of Nuclear Development.

The FQ requirements for construction permit and combined license transfers have presented a challenge because Bellefonte Units would be "merchant" plants, *i.e.*, Nuclear Development does not have the benefit of traditional "cost of service" rate regulation and has had difficulty arranging for financing for construction prior to transfer of the construction permits. To resolve this issue, Nuclear Development proposes the use of a license condition requiring financial closing of a Project Finance prior to beginning construction, which would provide the reasonable assurance that is required for the NRC Staff to grant the transfers.

SECY-13-0124 discussed new approaches to evaluating FQ requirements for merchant plants. The Staff recommended that the Commission engage in rulemaking to modify the FQ requirements in 10 CFR Part 50. On April 24, 2014, the Commission issued a Staff Requirements Memorandum (SRM) for SECY-13-0124, which accepted the Staff s recommendations to initiate a rulemaking to amend the FQ requirements of 10 CFR Part 50 in order to make them similar to the FQ standards in 10 CFR Part 70. The Commission described the rulemaking's objective as creating a FQ requirement in Part 50 "that approximates, as appropriate, the approach currently used for 10 CFR Part 70 applications, but does not reduce the standard of review below that of 'appears to be financially qualified.'" Upon completion of the rulemaking, license applicants would be allowed to propose use of license conditions to address financial qualifications. The Commission also directed the Staff to "consider utilizing an exemption process to address existing and emergent cases, as appropriate and necessary, during the pendency of the rulemaking process and that anticipates the outcome of the proposed changes to the current financial qualification regulations."

In April 2015, the NRC Staff issued Proposed Financial Qualifications Requirements Included in the Draft Regulatory Basis for the Rulemaking on Financial Qualifications for Reactor Licensing (Draft Regulatory Basis) (ML15111A270). The Draft Regulatory Basis summarized a new reactor FQ standard (to be adopted through rulemaking and regulatory guidance) to replace the current standard, which requires the applicant to provide reasonable assurance of obtaining the funds necessary to construct the reactor, with a Part 70-type standard, in which the applicant appears to be financially qualified. The Draft Regulatory Basis contemplated satisfaction of this standard through submission of: (1) a construction cost estimate, (2) a financial capacity plan, and (3) proposed license conditions.

On February 12, 2016, the Commission issued a Combined Operating License for South Texas Project, Units 3 and 4, a merchant plant. The South Texas Project application relied on an exemption from FQ requirements, based on the direction of the Commission in SRM-SECY-13-0124 and the Draft Regulatory Basis Document. In October 2016, the NRC issued the Final Regulatory Basis Document for the rulemaking: Financial Qualifications for Reactor Licensing Rulemaking; Regulatory Basis Document (Oct. 2016)

(ML15322A185) (Regulatory Basis). The final version did not materially alter the bases underpinning the rulemaking or the NRC's exemption for the South Texas Project.

Under 10 CFR 50.12, the Commission has the authority to issue specific exemptions from application requirements. As discussed in Section C below, the exemption would meet the standards in 10 CFR 50.12 for such an exemption, namely: (l) it is authorized by law; (2) it will not present an undue risk to the public health and safety; (3) it is consistent with the common defense and security; and (4) special circumstances are present.

B. Requested Exemption and Proposed License Conditions

Section 50.80(b)(1)(i) requires construction permit transfer applications to provide "as much of the information described in Sections 50.33 and 50.34 of this part with respect to the identity and technical and financial qualifications of the proposed transferee as would be required by those sections if the application were for an initial license." 10 CFR 50.33(f) in turn requires applicants to state "information sufficient to demonstrate to the Commission the financial qualification of the applicant to carry out . . . the activities for which the permit or license is sought." More specifically, under Section 50.33(f)(1), the applicant must show that it "possesses or has reasonable assurance of obtaining the funds necessary to cover estimated construction costs and related fuel cycle costs, and shall indicate the source(s) of funds to cover these costs." Additionally, Appendix C to Part 50 specifies the types of financial data and other information necessary to demonstrate satisfaction of the requirements in 10 CFR 50.33(f).

As explained above, Nuclear Development requests an exemption from the FQ requirements in 10 CFR 50.80(b)(1)(i), 50.33(f), and Part 50, Appendix C, as applicable to its Transfer Application, and proposes the use of the following standards:

- As to possessing and maintaining a partially-constructed facility: The applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated costs of possessing and maintaining the facility prior to resuming construction.

- As to resuming and completing construction: The applicant appears to be financially qualified to complete construction of the facility.

Under the exemption, Nuclear Development would demonstrate its financial qualification to possess and maintain a partially-constructed facility by submitting an estimate of the costs of possessing and maintaining the facility prior to resuming construction, and indicating the source(s) of funds to cover those costs. Nuclear Development would further demonstrate its financial qualification to complete construction of the facility by submitting an estimate of the cost of completing construction, a financial capacity plan, and the following ministerial license condition:

The licensee will notify the NRC at least 120 days prior to its anticipated date of resuming construction that the license condition has been fulfilled and that the following are available for inspection:

- An updated cost estimate for completion of construction;
- Documentation justifying any material variances from the cost estimate provided in the Transfer Application; and
- Documentation demonstrating that the licensee has secured financing to fund the updated cost estimate for the completion of construction. This documentation will include operative closing documents, and may include documented proof of parent and affiliate assurances, or capital from other sources (as required to close the financing) that reflect financing for the project.

This approach will preserve financial qualification information in the licensing basis for Bellefonte Units, and will be consistent with NRC's monitoring of the potential for financial distress during construction.

C. Information Required by 10 CFR 50.12(a)

Section 50.12(a) states that the NRC may grant exemptions that are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security. In addition, the NRC will not consider granting an exemption unless special circumstances are present. As demonstrated below, this exemption request satisfies the provisions in 10 CFR 50.12(a).

1. The exemption is authorized by law

The Commission has the authority to issue Nuclear Development's requested exemption. The exemption would not conflict with any provision of the Atomic Energy Act (AEA) or any other law.

In particular, the NRC has broad discretion to evaluate financial qualifications, as provided in Section l82a of the AEA. The Commission itself has observed that the AEA "does not impose any financial qualification requirement; it merely authorizes the Commission to impose such financial requirements as it may deem appropriate." *Public Service Company of New Hampshire* (Seabrook Station Units 1 & 2), CLI-78-1, 7 NRC 1, 9 (1978). Federal courts have agreed, finding that "[the AEA] gives the NRC complete discretion to decide what financial qualifications are appropriate." *New England Coalition v. NRC*, 582 F.2d 87, 93 (1st Cir. 1978). Therefore, the exemption is authorized by law.

2. The exemption does not present an undue risk to the public health and safety

As explained above, the exemption would require demonstration that Nuclear Development is financially qualified to possess and maintain a partially-constructed facility; furthermore, license conditions would require, prior to resuming construction of Bellefonte Units, that Nuclear Development provide documentation demonstrating that it has secured financing to meet the updated cost estimate for the project. If the necessary funding is not secured, the plant will not be constructed, thereby ensuring that the exemption will not present a nuclear safety issue. Consequently, the exemption presents no undue risk to the public health and safety.

3. The exemption is consistent with the common defense and security

The exemption only pertains to the FQ requirements for Bellefonte Units and will not authorize the possession of licensed material or pertain to any NRC security requirements that apply to Bellefonte Units. Furthermore, as explained above, the license condition would require, prior to construction of Bellefonte Units, that Nuclear Development provide documentation demonstrating that it has secured financing to meet the updated cost estimate for the project. Those conditions ensure that the common defense and security will not be impacted. Therefore, the exemption is consistent with the common defense and security.

4. Special circumstances are present

Section 50.12(a)(2) states that special circumstances are present whenever any of six listed circumstances exist:

(i) Application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission; or

(ii) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule; or

(iii) Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated; or

(iv) The exemption would result in benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption; or

(v) The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation; or

(vi) There is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption. If such condition is relied on exclusively for satisfying paragraph (a)(2) of this section, the exemption may not be granted until the Executive Director for Operations has consulted with the Commission.

The following special circumstances apply here:

Section 50.12(a)(2)(ii) applies because the exemption will be consistent with the objective of the FQ requirements in Part 50, which is to protect public health and safety. As provided in 33 Fed. Reg. 9,704 (July 4, 1968), "the fundamental purpose of the financial qualifications provisions . . . is the protection of the public health and safety and the common defense and security." The regulation's practical objective is to prevent safety lapses from underfunded projects. Because the exemption will ensure that the applicant is financially qualified to possess and maintain a partially-constructed facility prior to resuming construction, and license conditions will ensure that construction of the project only proceeds once adequate funding is secured, the exemption satisfies the underlying purpose of the FQ requirements in Part 50. Consequently, the special circumstance described in 10 CFR 50.12(a)(2)(ii) applies to this exemption request.

Section 50.12(a)(2)(vi) applies because there is a material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption. Specifically, the Commission in the SRM on SECY-13-0124 has approved the Staff's request to initiate a rulemaking to amend the FQ requirements of 10 CFR Part 50 and to use FQ standards similar to those contained in 10 CFR Part 70, including allowance for the use of license conditions addressing financial qualifications. The Commission further authorized the Staff to consider issuing exemptions for applications reviewed during the pendency of the rulemaking, such as Bellefonte Units. Consequently, the special circumstance described in 10 CFR 50.12(a)(2)(vi) applies to this exemption request.

D. Conclusion

In accordance with the Commission's statements in the SRM for SECY-13-0124 and the Regulatory Basis, Nuclear Development seeks an exemption from the NRC's FQ requirements as applicable to the Transfer Application. The exemption would enable the applicant to demonstrate its financial qualification to possess and maintain a partially-constructed facility prior to resuming construction, and establish financial qualifications for resuming construction through the use of license conditions that would require, prior to resuming construction of Bellefonte Units, that Nuclear Development provide documentation demonstrating that it has secured financing to meet the updated cost estimate for the project. The exemption request satisfies the factors in 10 CFR 50.12. For the foregoing reasons, Nuclear Development respectfully requests that the NRC grant the requested exemption from the requirements of 10 CFR 50.80(b)(1)(i), 50.33(f) and Part 50, Appendix C, as applicable to the Transfer Application.

ENCLOSURE 4

PROJECTED TOTAL PROJECT COSTS

FOR

BELLEFONTE UNITS 1 & 2

(NON-PROPRIETARY)

	Costs in $MM's		
	Unit 1	**Unit 2**	**Total**
Construction Costs			
Contingency & Escalation			
Total Construction Costs			
Land Costs			
Power Uprate			
Total			
Construction Interest (DOE)			
Construction Interest (Equity)			
Total Construction interest			
Total Costs			

CITY OF WASHINGTON)
) SS.
DISTRICT OF COLUMBIA)

10 CFR 2.390 AFFIDAVIT OF WILLIAM R. MCCOLLUM, JR.

William R. McCollum, Jr., being duly sworn according to law deposes and says:

I am Chief Nuclear Officer, Nuclear Development LLC do hereby affirm and state:

1. I am authorized to execute this affidavit on behalf of Nuclear Development LLC ("Nuclear Development");

2. Nuclear Development requests that Enclosure 4P labeled "CONFIDENTIAL INFORMATION SUBMITTED UNDER 10 CFR 2.390", be withheld from public disclosure under the provisions of 10 CFR 2.390(a)(4).

3. Enclosure 4P contains confidential commercial financial information, the disclosure of which would adversely affect Nuclear Development.

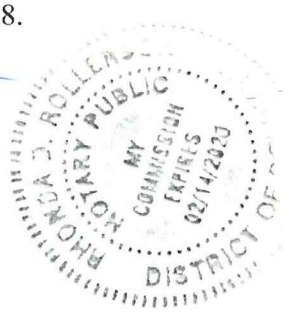
4. This information has been held in confidence by Nuclear Development. To the extent that Nuclear Development has shared this information with others, it has done so on a confidential basis.

5. Nuclear Development customarily keeps such information in confidence, and there is a rational basis for holding such information in confidence. The information is not available from public sources and could not be gathered readily from other publicly available information.

6. Public disclosure of this information would cause substantial harm to Nuclear Development's business interests because such information has significant commercial value to Nuclear Development and its disclosure could adversely affect Nuclear Development.

William R. McCollum, Jr.

Subscribed and sworn before me,
a Notary Public this 13th day of November, 2018.



ENCLOSURE 5

QUALITY ASSURANCE PLAN

FOR

BELLEFONTE UNITS 1 & 2

Title: **Bellefonte Project – Quality Assurance Plan**

Prepared By: Ashok V Wagadarikar
Project Quality Assurance Manager, BLN
Date: 2018.10.16

Reviewed By: Marie Gillman
Project Director, BLN
Date: 2018.10.18

Approved By: John Obuch
Director, Quality Assurance
Date: 2018.10.18

RECORD OF REVISION

Revision Number	Date	Description	Authorizing Signatures		
			Prepared By:	Reviewed By:	Approved By:
PA	2018.06.29	Release for review and comment	Ashok V Wagadarikar	Kevin Jones Marie Gillman John Obuch	N/A
PB	2018.09.18	Incorporated QA comments, revised to add section 19, Deferred Construction Permit for Bellefonte	Ashok V Wagadarikar	Marie Gillman	N/A
00	2018.10.18	Initial Issue	Ashok V Wagadarikar	Marie Gillman	John Obuch

Table of Contents

1 Project Information

1.1 Customer Information

Project Name: Bellefonte Project
Project Number: 152918
Customer: Nuclear Development, LLC, ND, Bellefonte Nuclear Plant, Hollywood, Alabama

Customer Contact: Frank Haney

Telephone: On record

1.2 Scope of Work

SNC-Lavalin Nuclear (USA) Inc., a subsidiary of SNC-Lavalin Nuclear Inc. (SLN), is contracted to complete Bellefonte Nuclear Generating Plant Units 1 & 2.

The Bellefonte (BLN) Project shall be executed in four (4) distinct phases as described in the EPC Agreement for Bellefonte Project. The Phases are:

- Design – complete and or upgrade all system designs and complete required engineering analysis to support all regulatory and code requirements.
- Construction – install all required components
- Start Up – testing of all components, systems and interfaces between systems
- Commercial Operation – plant operation

1.3 Scope of this QA Plan

This QAP describes the 10 CFR50 App B compliant QA Program to be applied to the Bellefonte Nuclear Generating Plant Units 1 & 2 plant facilities (as described under section 1.4) during the period of deferral of the construction period.

The QAP covers a description of the planned activities, organizational responsibilities and procedural controls that apply to the verification of construction status, maintenance and preservation of equipment and materials and the retention and protection of quality assurance records.

The QAP covers the QA surveillance / oversight and requirements to maintain the Bellefonte NRC Deferred Construction Permit following transfer of the site from the Tennessee Valley Authority (TVA).and is commensurate with the commitments made to the NRC prior to start of construction activities.

This QA Plan and attendant procedures shall be revised significantly when regulatory approval is provided to transition the Bellefonte site permit from deferred to active construction status.

General Information:

The Bellefonte Nuclear Generating Plant (BLN) project scope will be to complete and upgrade the two partially completed reactor plants; Bellefonte Unit 1 and Unit 2. Design will involve ensuring all regulatory requirements and standard nuclear industry initiatives are addressed, equipment that has been removed is replaced, and any required upgrades are designed. Construction will install all required plant components and refurbish existing equipment. Start Up testing will involve individual component and system testing, integrated system tests, hot functional testing, cold hydrostatic testing and reactor physics testing. Commercial operations will follow successful testing and plant synchronization to the grid. Schedule A of the Customer's Purchase Agreement (PA) provides the Scope of Work and Technical Specifications for the Bellefonte Nuclear Power Plant Completion.

Note: Procedures which govern the completion of the Bellefonte plant will be prepared and issued during the course of the project, and with exception of QA procedure references, all other procedure references are to be considered draft. The existing Bellefonte implementation procedures in place at the site will be maintained and controlled under ND, with oversight provided by the SNC-Lavalin QA organization.

1.4 Description of Plant Facilities

The following is a brief description of the Bellefonte Nuclear Generating Plant Units 1 & 2.

- NSSS: Framatome (formerly Babcock & Wilcox) 205 4-Loop Pressurized Water Reactor
- Current Plant Capacity: 3,600 Megawatt Thermal, 1260 Megawatt Electric
- Turbine: GE (formerly Brown Boveri) Steam Turbine (2LP / 1HP) and a hydrogen cooled electricity generator;
- Natural Draft Cooling Towers;
- Unit 1 was 90% physically complete in 1988. The resources required to complete BLN1 (time, manpower and capital) bring the current completion estimate to approximately 55%.
- The Bellefonte site also contains a second identical unit that was completed to approximately 58% in 1988, and is currently estimated to be 35% complete.

1.5 Project Scope

Except for those specific items as being provided by others, the scope shall include all necessary management, supervision, mobilization, project controls, administrative staff, home office support, engineering, design, construction, procurement, subcontract administration, project controls, human resources, specialty technicians, safety, fabrication, inspections, testing, qualified labor, materials, equipment, tools, supplies, consumables, services, oversight, ancillary facilities, demobilization, and all other items required to perform the Work as described in the Bellefonte contract.

The scope of the BLN Project includes engineering and construction services required to complete engineering, procurement, construction and testing as itemized, but not limited, to the list below.

- Development of all required nuclear programs and plans to support completion of BLN-1,2
- Complete all system designs ensuring all regulatory requirements are met
- Complete all required engineering programs and analysis
- Completion of engineering design to support required plant modifications and upgrades
- Upgrade FSAR
- Licensing activities required to support transition from deferred construction status to operating license
- Completion of major projects:
    i) Steam generator replacement
    ii) Turbine-generator upgrade
    iii) Containment sump replacement
    iv) Switchyard upgrade
    v) Security System Installation
    vi) Facility Building Construction
- Construction activities to complete physical installation of mechanical, civil, electrical and instrument and controls components and systems:
    i) Replace equipment that has been removed
    ii) Refurbish equipment that will be retained
- Procurement of all equipment, safety and non-safety related, in accordance with required quality and code requirements

- All testing required to ensure systems and components will meet design and safety requirements.
- Field engineering in support of the construction scope
- Materials management and warehousing for all material supplied
- Production of Comprehensive Work Packages and Integrated Test Plans for all field work performed under scope
- Production of closeout documentation for all field work performed

1.6 Project Quality Assurance Program Overview

SNC-Lavalin Nuclear (USA) Inc., a subsidiary of SNC-Lavalin Nuclear Inc. (SLN), The SNC-Lavalin Nuclear (USA), Inc. (SLN) Quality Assurance program is the overall Quality Assurance Program for the project. The SLN Quality Assurance Program, as described in this Nuclear Quality Assurance Plan (QAP)

- Complies with all applicable laws, follows prudent practice and is consistent with the requirements of the agreement between Nuclear Development LLC (ND) and SNC-Lavalin Nuclear Inc (SLN);
- Includes provision for audits by ND (or ND's Representative) for compliance with the ND Project Quality Assurance Plan for the scope of work as per the agreement between ND and SLN;

SNC-Lavalin Nuclear Inc., through SNC-Lavalin Nuclear (USA) Inc., will subcontract site fabrication and installation activities to qualified suppliers. The qualified suppliers shall implement and maintain a Quality Assurance program at the project site acceptable to SLN and ND. SLN shall maintain responsibility for all quality assurance requirements, including subcontracted activities and will perform oversight on activities performed by SNC-Lavalin and their suppliers in accordance with the Bellefonte Oversight Plan for the contracted SLN project work scope covering the following project activities:

- Design (SLN scope)
- Construction (Scope of a Sub-Supplier qualified by SLN)
- Procurement (SLN scope)
- Inspection and Testing (Scope of a Sub-Supplier qualified by SLN)
- Handling and storage of nuclear materials and components (Warehousing) (Scope of a Sub-Supplier qualified by SLN)
- Construction Work Packages (Scope of a Sub-Supplier qualified by SLN)

1.7 Nuclear Safety Culture

Nuclear safety culture is defined as the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment. The following Nuclear Safety Culture principles apply to the BLN Project:

- Responsibility and authority for nuclear safety are well defined and clearly understood. Reporting relationships, positional authority, and team responsibilities emphasize the overriding importance of nuclear safety;
- Project team members are watchful for assumptions, anomalies, values, conditions, or activities that can have an undesirable effect on plant safety;
- Communications maintain a focus on safety;

Executive and senior managers are the leading advocates of nuclear safety and demonstrate their commitment both in word and action. The nuclear safety message is communicated frequently and consistently, occasionally as a stand-alone theme.

1.8 Authority to Stop Work

SNC-Lavalin Nuclear QA and Contractor quality assurance and inspection personnel have the authority, and the responsibility, to stop work in progress which is not being done in accordance with approved procedures or where safety or structure, system or component integrity may be jeopardized. This extends to off-site work performed by suppliers furnishing safety-related materials and services to SNC-Lavalin.

1.9 Organization

SNC-Lavalin Nuclear Inc. will have overall responsibility for Project Quality Assurance and will comply with SNC-Lavalin Nuclear Inc. Quality Assurance Manual 2206-01912-QM-0001. The Quality Assurance Manual is SNC-Lavalin Nuclear Inc.'s commitment to meeting the Quality Assurance requirements of 10CFR50 Appendix B.

SNC-Lavalin Nuclear Inc., through SNC-Lavalin Nuclear (USA) Inc., will subcontract site engineering and construction activities to qualified suppliers, as required. The qualified suppliers shall implement and maintain a Quality Assurance program at the project site acceptable to SLN and ND. SLN shall maintain responsibility for all quality assurance requirements, including subcontracted activities.

This Bellefonte Project Nuclear QA Plan is considered a living document and will be revised, reviewed, and approved as changes are made.

The SNC-Lavalin Nuclear Inc. Quality Assurance Program is the overall Quality Assurance Program for the project. SNC-Lavalin and all direct suppliers to SNC-Lavalin Nuclear shall be qualified in accordance with requirements of this QAP. SLN shall plan and conduct surveillance on all activities performed by its sub-suppliers to assure adequate oversight of their performance.

The overall BLN Project organization shall be as defined in Bellefonte Project Execution Plan. The project Organization Chart shall be maintained and updated through the life of the project by the Project Manager or the Deputy Project Manager. This does not preclude the Project Manager from producing multiple organization charts to completely define the project structure.

1.10 Organizational Structure

Personnel performing activities on the BLN Project for all phases of project execution are shown in an integrated project organization chart that is developed and maintained through the life of the project by the BLN Project Director. This does not preclude the BLN Project Director from producing multiple organization charts to completely define the project structure. The Project Organization charts will be reviewed periodically and will be filed separately by Document Control.

1.11 Organizational Independence

For the BLN Plant, independence shall be maintained between the organization performing the checking (quality assurance and quality control) functions and the organizations performing the functions. This provision is not applicable to design review/verification.

1.12 Responsibilities

This QAP defines responsibilities related to implementation of the Quality Program applicable to execution of BLN project.

The detailed responsibilities of the key SNC-Lavalin individuals are defined in the Bellefonte Project Execution Plan. All other individual responsibilities shall be as described in the other detailed plans referenced by Project Management Plan. All SNC-Lavalin personnel assigned to this project shall perform their assigned duties in compliance with the SNC-Lavalin Nuclear Inc. Quality Assurance program and under the direction of SNC-Lavalin Nuclear qualified personnel. Records of personnel qualifications shall be available for inspection by ND as required.

1.12.1 Project Director

The Project Director reports to the SNC-Lavalin Chief Nuclear Officer and is responsible:

- for the implementation and effectiveness of this quality assurance plan;
- to develop and maintain the Project Organization Chart through the life of the project.
- to ensure that personnel assigned to perform activities are trained, qualified and competent to perform their assigned tasks effectively;
- for identifying Customer communication channels;
- for obtaining, assessing, and issuing information gained from experience for design, construction, installation and commissioning activities;
- for managing project staffing as necessary;
- for reviewing Customer's work request, tendering documents, contracts and associated documents, to determine that the requirements are defined and documented, and that SLN's resources and capability are adequate to meet the requirements;

- for assigning project resources appropriate for the work to be performed;
- for ensuring that the completion assurance is performed.

1.12.2 Project Controls Manager

The Project Controls Manager is responsible to manage all activities related to scheduling, planning, estimating, reporting, and cost control for the project.

1.12.3 Project Quality Assurance Manager

The Project Quality Assurance Manager reports functionally to SNC-Lavalin Director, Quality Assurance and to the BLN Project Director for implementation of the Project QA program, as described in this QAP. The SLN Quality Assurance Manager shall have overall responsibility for implementing, monitoring compliance, and reporting project performance with respect to quality assurance.

The Quality Assurance Manager has responsibility to plan and execute surveillance on project activities assigned to be performed by SLN's qualified suppliers responsible for execution of construction work.

The Quality Assurance Manager shall be independent of cost and schedule considerations and has the authority to plan, establish, implement and maintain this Quality Assurance Plan and is the management representative who has authority and responsibility to resolve quality matters, and has the organizational freedom, along with those responsible for verification, audit and program review functions, to:

- Identify and record quality problems and problems related to the effective implementation of this QAP;
- Initiate, recommend, or provide solutions to such problems through designated channels;
- Verify and confirm implementation and effectiveness of solutions;
- Control further processing, delivery, or installation of a nonconforming item or service until a disposition has been obtained.

The Quality Assurance Manager and persons responsible for the verification, audit, and program review functions have direct access to a level of management necessary to ensure that appropriate actions are implemented.

The Quality Assurance Manager has a direct line of communication to the BLN Project Director and is assigned the responsibility, authority, and organizational freedom, to initiate, implement and control the Quality Assurance Plan and is responsible:

- to represent the project team on all matters pertaining to quality;
- for planning, establishing, documenting, and maintaining this quality assurance plan;
- to direct the performance of internal and external quality audits;
- for verification of purchased items and services for construction and installation work;
- for planning and conducting oversight activities as necessary;
- for providing indoctrination and training in this Quality Assurance Plan (QAP);
- to ensure that trained, qualified, competent, and as required certified, personnel are assigned to perform quality related activities;

- to report to the Project Executive Committee, if requested, on the performance of the Quality Assurance Plan;
- for acceptance of quality services;
- for evaluating and ensuring contractors selected meet project quality requirements;
- for reviewing and accepting of supplier furnished documents;
- for providing support in ensuring satisfactory performance with regard to the Project Objectives.

1.12.4 Project Quality Control Manager

The Project Quality Control Manager reports functionally to the Director, Quality Assurance and to the Project Construction Manager for execution of project quality control activities and functionally reports to SNC-Lavalin Nuclear Quality Manager.

The Quality Control Manager shall be responsible for:

- Providing guidance to Quality Assurance Specialists assigned to the project.
- Providing oversight of incoming, in-process, and final inspections on the project as detailed on the inspection and test plan and procedures.
- Staffing QC positions for the project with suitably qualified individuals.
- Providing support to project in ensuring satisfactory performance with regard to the project quality control objectives.
- Ensure that quality control plans/checklist and records are prepared and maintained
- Initiate, control and report nonconforming items during site installation phase;
- Ensure that quality records are compiled in HD/HF and approved prior submission for acceptance
- Providing on-job training of site inspection personnel on the quality project requirements.
- Interfacing on matters relating to quality with the Customer as well as the Regulatory Authorities as requested by project QA Manager.

1.12.5 Project Engineering Manager

The Project Engineering Manager reports to the BLN Project Director and is responsible for:

- overall design control,
- ensuring that design is defined, controlled and verified, and
- ensuring availability of appropriate verification and validation of design analysis tools.
- ensuring compliance with approved design, regulatory requirements, codes, standards and good engineering practices.
- providing general direction for establishing technical, safety and quality standards for engineering deliverables.
- reviewing and approving key technical documentation
- monitoring the technical quality of engineering deliverables
- providing assistance to engineering pertaining to codes, standards, regulatory requirements
- technical liaison with customers regarding the technical quality of engineering services

Lead Discipline Engineers are responsible to ensure that their staff performs design activities in accordance with applicable statutes, standards, codes, customer requirements, and corporate policies and procedures. Specific responsibilities include but are not limited to:

- reviewing and approving the selection of design inputs,
- correctly translating design input into specifications, drawings, procedures, instructions and other design documents,
- ensuring appropriate quality standards are included in design documents and their selection is reviewed and approved,
- selection and review for suitability of application of design methods, materials, parts, equipment, and processes that are essential to the safety-related functions of structures, systems and components,
- making applicable information derived from operating experience available to appropriate design personnel
- performing design analysis and verification;
- assigning work activities to design staff and revise as required,
- providing status reporting of work activities to Project Managers, or Vice Presidents, as required,
- monitoring staff performance to customer requirements

1.12.6 Project Construction Manager

The BLN Project Construction Manager reports to the BLN Project Director and is responsible for:

- executing construction and installation activities,
- ensuring adequate resources are available, and
- interfacing with quality assurance personnel on quality matters

1.12.7 Project Procurement Manager

The BLN Project Procurement Manager reports to the BLN Project Director and is responsible for:

- supervision of supply chain personnel,
- approving procurement documents, prior to issue,
- communications and transactions between the project and suppliers; and
- supplier commercial contract review.

1.12.8 Project Training Manager

The Training Manager reports to the BLN Project Director and is responsible for:

Ensuring that the Training Plans meet the training requirements of the Project;

- Ensuring that necessary resources are identified, planned for, and effectively applied;
- Leading, organizing, and verifying the training and work activities of the training department;
- Ensuring that the BLN Training Program follows and meets the requirements set out by the Contract with ND and the BLN Quality Assurance Plan;
- Approving plans, work instructions, and training packages;
- Ensuring Instructors are qualified in accordance with the training and procedures specified in this Plan;
- Monitoring training facilities and support infrastructure, and reporting inadequacies to the BLN Performance Improvement Director;
- Ensuring Trainees are qualified as required by the Project;
- Ensuring that the BLN Training Coordinator maintains all training records accurately, and to an auditable standard;
- Arranging self-assessments and internal audits to ensure procedures and best practices are followed; and
- Obtaining feedback from the field (through OE reviews by Training Supervisors) and ensuring they are incorporated into the training program (continuous improvement process).

1.12.9 Project Onboarding Training Manager

The Onboarding Training Manager reports to the BLN Training Manager, and is responsible for the following:

- For the creation and maintenance of all training records in a learning management system;
- For the interfacing with, and population of information into the ND's Operators learning management system (LMS);
- To ensure that personnel assigned to perform engineering and support activities are trained, and qualified to perform their assigned tasks effectively.

2 Quality Assurance Program

SNC-Lavalin Nuclear Inc. will have overall responsibility for Project Quality Assurance for the Bellefonte Project and will comply with SNC-Lavalin Nuclear Inc. Quality Assurance Manual 2206-01-00-QM-0001.

SNC-Lavalin's Nuclear Quality Assurance Program complies with applicable clauses from the following national and international standards:

- ASME Boiler and Pressure Vessel Code, Section III, Division 1;
- ASME NQA-1:2017, Part 1 Requirements for Quality Assurance Processes for Nuclear Facilities;
- 10 CFR Part 50 Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants.

SNC-Lavalin Nuclear Inc. will subcontract certain activities defined in the Procurement and Subcontract Management plan to qualified supplies for the activities they are subcontracted to perform. SLN shall accomplish oversight quality assurance for subcontracted activities in accordance with clause 0, Control of Purchased Items and Services.

The quality assurance program and supporting procedures (if applicable) will be identified and described in the following clauses. Throughout the life of the project procedures may be revised. These procedures may be SLN corporate procedures, SLN project specific procedures or supplier procedures for meeting Code and contract requirements. If this occurs, the SLN Quality Assurance Manager shall review these changes to ensure the change does not affect any commitment made in this Quality Assurance Plan. This is accomplished by the following procedures;

- 2206-01-20-OP-0001, Quality Assurance Document Control
- 2206-01-40-OP-0010, Evaluation of Supplier Quality Program Manuals

Where a quality requirement is being met by a subcontractor, the applicable clause will describe the requirements that must be met to achieve project quality.

Subcontractors will comply with their Quality Assurance program accepted by SLN in addition to the additional project quality requirements included in this SLN Quality Assurance Plan (QAP) Subcontractors will demonstrate compliance to their Quality Assurance program and the applicable requirements of the SLN Quality Plan during the SLN supplier qualification maintenance process. This may be through audit or performance monitoring.

2.1 Personnel Indoctrination and Training

In addition to the mandatory Indoctrination and Training on the SLN Quality Assurance Program, The BLN Project team shall be indoctrinated in this QAP. Project personnel shall meet the indoctrination and training requirements of the Quality Assurance Program that controls the activities.

Project personnel performing or otherwise verifying activities affecting quality shall be competent on the basis of appropriate education, training, skills, experience and written examination. They will be provided with the appropriate indoctrination and training as necessary to assure suitable proficiency is achieved and maintained.

Personnel shall receive indoctrination and training prior to performing activities under this PQP when they change areas of responsibility and when this PQP and/or referenced procedures are revised. Training records shall be maintained for BLN Project personnel.

Indoctrination and training of personnel shall be carried out in accordance with SLN Operating Procedure 2206-03-10-OP-0001, Personnel Indoctrination and Training, as related to their job function. Supplier / Constructor personnel performing activities controlled directly by SLN Quality Manual shall be indoctrinated and trained to the SLN Quality Requirements.

Project specific training and qualification requirements shall be identified in the BLN Project Training Plan.

For organizations providing sub-contract services, any special qualifications or training requirements for their personnel working on the project, shall be specified in the subcontract agreements. All subcontract personnel shall be qualified for the work they are carrying out prior to performing any activity for which qualification is required by the project organization performing the work. In addition, subcontract personnel may be required to comply with the training requirements identified in the BLN Project Training Plan. All other non-quality related training shall be defined and described in the Project Training Plan.

2.1.1 Personnel Qualification

All personnel shall be qualified for the work they are performing prior to performing any activity for which qualification is required by the project organization performing the work. Personnel qualification records shall be reviewed and verified by SLN during qualification of the supplier or during project surveillance of that activity.

Personnel qualifications will be recorded, maintained, and stored in accordance with the following SLN Procedures:

- 2206-01-40-OP-0003, QA Audit Personnel – Qualification Requirements;
- 2206-01-40-OP-0012, Inspection Personnel – Qualification Requirements;
- 2206-03-10-OP-0001, Personnel Indoctrination and Training;
- 2206-03-30-OP-0002, Engineering Qualifications Management;

SLN will audit and accept QA Programs of qualified Suppliers / Constructors. Personnel qualifications will be recorded, maintained and stored in accordance with procedural requirements. Personnel requiring qualification and certification include:

- Test Personnel;
- Receiving Personnel;
- Inspection Personnel;
- Source Surveillance Personnel;
- Non-destructive Examination Personnel;
- Audit Personnel;
- Engineering Personnel performing American Society of Mechanical Engineers (ASME) Code Certification activities;
- Welders and Trade Personnel.

Personnel performing visual inspections required by the ASME Boiler and Pressure Vessel Code shall be qualified and certified according to ASME Code requirements.

2.1.2 Qualification of Engineering Personnel

Personnel performing engineering work shall be qualified in accordance with SLN Operating Procedure 2206-03-10-OP-0002, Engineering Qualifications Management.

The Engineering Manager shall ensure Design Engineers involved in evaluating changes to final design have the demonstrated competence in the specific design area of interest and have an adequate understanding of the requirements and intent of the original design.

In addition, if there are project specific qualification requirements, the Engineering Manager shall ensure those requirements are incorporated into the Engineering Plan, and ensure personnel are qualified before assigning them to these specific roles.

3 Design Control

3.1 Control of Design and Interfaces

SLN has overall responsibility for engineering activities and shall directly perform design activities and provide support during construction and Start Up. Engineering activity shall be subcontracted to qualified suppliers as required.

The Engineering Manager has overall responsibility for design activity and control of design change ensuring that all designs/design changes on the BLN Project are defined, controlled, and verified. The Design Inputs shall be correctly translated into specifications, drawings, procedures and instructions. Design adequacy shall be verified by individuals other than those who designed the item.

Design changes shall be governed by control measures commensurate with those applied to the original design. The governing process is described under section 3.4.4, Design Change Control.

Design interfaces shall be identified and controlled. In the course of the design development and control, SNC-Lavalin shall interface with suppliers, the plant Operator and ND at various steps. Deviations to the Interface Requirements will be documented in the Scope of Work or applicable Master EC Package.

Qualification of engineering personnel who perform verification activities shall be qualified in accordance with Operating Procedure 2206-03-10-OP-0002 Engineering Qualifications Management.

The Engineering Plan identifies the organizations, controls, and responsibilities among participating organizations for the preparation, review, approval, issue, distribution, and revision of design documents.

The Engineering Manager is responsible for identification and control of design interfaces and for coordination of the design efforts among the project organizations.

The Document Control Lead shall ensure information transmitted across interfaces shall identify the status of the design information or document provided. Where it is necessary to initially transmit design information orally or by other informal means, the transmittal shall be confirmed promptly by a formal submission.

Engineering interface control shall be described, as appropriate, in the following documents:

• The Engineering Plan for the project;

• The supporting Design Plan for the particular scope of work;

• The Design Verification Plan.

3.2 ND Enterprises Asset Management

The Enterprise Content Manager system (ECM) will remain as a repository for Engineering Design Changes (EDCs) and shall be used to control modification progression through SLN. Relevant ECM fields will be populated as needed to progress work and maintain configuration management. Engineering will be required to populate the relevant ECM fields at the end of the following modification phases:

- At the start of Scoping to register Master EDCs.
- At the end of Modification Planning to populate Master EDCs, and populate the Master Equipment List (MEL).
- At the end of Design Completion and prior to Available for Service to incorporate all field, and non-intent changes.
- Prior to Closeout to launch the AEL, and populate closeout related panels.

A scanned version of the approved Master EDC Binder and/or Design Package shall be uploaded to ECM. When the opportunity arises to populate ECM, the EDC packages shall be attached to the Reference Document List of the relevant Master or Design EDC.

Approval of the EDC resides with the scanned copies of the packages in ECM.

3.3 Design Planning

A Design Interface Agreement (“DIA”) will be put in place between ND and SNC-Lavalin Nuclear Inc. The DIA defines and documents the responsibilities of ND and SNC-Lavalin Nuclear Inc. in sufficient detail to cover the preparation, review and approval, issuance, distribution and revision of documents across design interfaces.

The overall responsibility for engineering resides with SLN.

The Engineering Manager has overall responsibility for design/design change and shall ensure all designs/design changes on the BLN Project are defined, controlled, and verified. The Design Inputs shall be correctly translated into specifications, drawings, procedures and instructions. Design adequacy shall be verified by individuals other than those who designed the item.

Engineering activities shall consist of a set of Engineering Design Changes (EDCs) documented in Modification Packages. The EDCs will provide the necessary authorization and directions to perform Plant modifications.

The Engineering Manager is responsible for preparation of an Engineering Plan and supporting Design Plans with the necessary level of detail to permit the design process to be carried out in a correct manner and to permit verification the design meets requirements. The Engineering Plan and supporting Design Plans shall include:

• Work Package Identification and Description;

• Work to be Sub-contracted;

- Interfaces and Division of Responsibility;
- Quality Assurance Program Requirements;
- Regulatory and Code Requirements;
- Design Inputs;
- Human Factors Engineering;
- Design Requirements;
- Assumptions and Validation of Assumptions;
- Design Processes and Tools;
- Design Tasks and Activities;
- Design Outputs and Deliverables;
- System Classification;
- Signing Protocol;
- Design Verification;
- Procurement Considerations;
- Design Change Control;
- Tasks and Deliverables Status;
- Assignment of Responsibility.

The Engineering Plan and supporting Design Plans shall be reviewed and approved in accordance with operating procedure XXX, Bellefonte Design Change Procedure. As changes occur during the design process, the Engineering Manager shall ensure Engineering Plan and supporting Design Plans are updated and maintained. The Engineering Plan and supporting Design Plans shall be prepared to fully reflect the requirements of the Project Quality Plan.

Modification Packages shall be submitted for review and acceptance, through the Engineering Manager. Following acceptance by SLN, the Modification Packages will be issued to the subcontractor in accordance with clause 6, Document Control.

3.4 Engineering Design Changes (EDCs)

3.4.1 Design inputs

The Engineering Manager shall ensure design inputs are identified and documented, and their selection reviewed for adequacy and approved. Design Inputs shall be accepted in accordance with XXX, Bellefonte Design Change Procedure.

Design inputs shall contain sufficient detail necessary to permit the design activities to be carried out in the correct manner and provide a reference basis for decision making, performance of design verification and evaluation of design changes.

Any changes to design input during the design process, shall be subject to acceptance in accordance with the original requirements.

3.4.2 Design Process

The Engineering Manager shall ensure requirements of the design specification have been correctly translated into technical specifications, drawings, procedures, and instructions, throughout the design process.

The design methods, material, parts, equipment and processes that are essential to the function of the item shall be selected and reviewed for suitability of application through the preparation, review, and approval of the Engineering Plan. Applicable information derived from experience, as set forth in reports or other documentation shall be made available to appropriate design personnel.

The Engineering Manager shall ensure the final design:

- Is relatable to the design input documentation in sufficient detail to permit design verification;
- Specifies required inspection and tests and includes or references appropriate acceptance criteria;
- Identifies assemblies and/or components that are part of the item being designed. When such an assembly or component part is a commercial grade item, the characteristics of the item to be verified for acceptance and the acceptance criteria for those characteristics shall be documented.

The Master Engineering Change (MEC) or Engineering Design Change (EDC) development shall follow the ND Enterprise Asset Management process, and applicable in the ND governance. In addition, the SLN design process shall comply with all required procedures related to the engineering design and configuration management process.

The Engineering Manager shall ensure design analysis is planned, controlled, and documented in accordance with the Design Plan. The design analysis document shall be legible and in a form suitable for reproduction, filing, and retrieval. In addition, design analysis shall be sufficiently detailed as to purpose, method, assumptions, design input, references, and units such that a person technically qualified in the subject can review and understand the analysis and verify the adequacy of the results without recourse to the originator of the design.

Design calculation shall be identified by document number and shall include, as a minimum, the following:

- Subject – including structure, system or component, to which the calculation applies;
- Preparer and date;
- Reviewer and date;
- Approver and date.

The Engineering Manager shall ensure pre-verified computer programs used in the design process are validated prior to software's first use. Validation shall be in accordance with SLN Operating Procedure 2206-07-50-OP-0003, Design Software Verification and Validation.

The Engineering Manager shall ensure design analysis documentation includes:

- The objective of the analysis;
- Design inputs and their sources;
- Results of literature searches or other applicable background data, e.g. Operating Experience (OE);
- Assumptions and indication of those assumptions that must be validated as the design proceeds;
- Identification of any computer program, including identification of the computer type, computer program name and revision, inputs, outputs, evidence or reference to computer program verification, and the bases (or reference thereto) supporting application of the computer program to the specific physical problem.

3.4.3 Design Verification

Design outputs shall be provided in a format suitable for verification against design inputs and shall be approved prior to issue as identified in the Design Verification Plan and Design Plan. The design output documentation shall be adequate to support the facility design, construction, and operation. Design output shall:

- Be uniquely identified;
- Meet the design input requirements;
- Specify the quality assurance requirements to be applied to the structure, system, or components and / or services;
- Specify jurisdictional requirements, codes, standards, classifications and other criteria;
- Provide appropriate information and traceability for subsequent phases including: purchasing, construction, installation, commissioning, operation, decommissioning, or software development;

- Contain or reference item or service acceptance criteria;
- Specify the characteristics of the item or service that are essential for its safe and proper use.

The Design Engineer shall determine the Quality Assurance Program Category and shall perform an empirical and functional evaluation.

Deficiencies found in Design Output documents during subsequent phases of purchasing, fabrication, installation, construction, commissioning, operations, decommissioning or software development, shall be handled in accordance with SLN Quality Assurance Manual, Section 15, Control of Nonconforming Items and Services.

When deficiencies are found by organizations other than SLN, the deficiencies shall be reported to SLN in accordance with the organization's quality assurance program that found the deficiency. SLN shall record, review and evaluate these deficiencies in accordance with SLN Quality Assurance Program. The results of the evaluation shall be communicated to relevant organizations in accordance with the following sections of the SLN Quality Assurance Manual:

- Section 15, Control of Nonconforming Items and Services;
- Section 16, Corrective Action;
- Section 3.8, Design Change Control.

The Engineering Manager shall ensure at appropriate stages in the design process, as detailed in the Design Verification Plan. The Design Verification Plan shall be issued in a timely manner to ensure the design output satisfies the design input requirements. The results of the design verification shall be documented based upon the verification method including identification of the verifier.

Verification shall be performed by competent individual(s) or group(s) independent of those who performed the original design.

The Engineering Manager shall ensure design verification is performed prior to releasing the design for procurement, fabrication, installation, or for use by another design organization. In addition, design verification must be completed prior to the structure, system, or component, is required to perform its intended function.

If the design is revised to resolve verification findings, the revised design shall be verified prior to release for use.

Where changes to previously verified designs have been made, design verification shall be required for the changes. The verification shall include an evaluation of the effects of the changes on the overall design and on any design analysis upon which the design in based. The Design Engineer shall ensure any other documents affected by the design change are revised and controlled.

The nature and extent of design verification shall be dependent upon:

- Importance or impact on safety of the structure, system, or component;
- Complexity of the design;
- Degree of standardization;
- The state of the art; and
- Similarity to previously proven designs.

Verification shall employ one or more of the following methods;

- Design Review;
- Alternate Calculations; or
- Qualification Testing.

Design reviews shall provide assurance the final design is correct and satisfactory by addressing the following:

- Were the design inputs correctly selected?
- Are assumptions necessary to perform the design activity adequately described and reasonable? Where necessary, are the assumptions identified for subsequent re-verification when the detailed design activities are completed? Were assumptions validated?
- Were appropriate design methods and computer programs used?
- Were the design inputs correctly incorporated into the design?
- Is the design output reasonable compared to design input?
- Are the necessary design inputs and verification requirements for interfacing organizations specified in the design documents or in supporting procedures or instructions?
- Have suitable materials, parts, processes, and inspection and testing criteria been specified?

Alternate calculations shall use alternate methods to verify correctness of the original calculation or analysis. Alternate calculations shall be performed by qualified individuals as identified in the Design Verification Plan. The appropriateness of assumptions; input data used; and the computer program, it's associated computer hardware and system software, or other calculation method used shall also be reviewed.

As documented in the Design Verification Plan, qualification testing shall be performed by a qualified sub-contractor controlled in accordance with this Project Quality Plan.

The test procedure(s) shall clearly define the test configuration, pre-requisites, methods, equipment, and acceptance criteria. The test procedure(s) shall be reviewed and accepted by the assigned verifier as documented in the Design Verification Plan.

Qualification testing shall demonstrate the adequacy of performance under conditions that simulate the most adverse conditions. Operating modes and environmental conditions in which the item must perform satisfactory shall be considered in determining the most adverse conditions. Where the qualification test is intended to verify only specific design features, the other features in the design shall be verified by other methods.

When tests are performed on models, scaling laws shall be established and verified. The results of model test work shall be subject to error analysis, prior to use in the final design.

All testing procedure(s) and complete documentation shall be included in the Qualification Test Report. This Report shall be submitted to the assigned verifier for review, and to the Engineering Manager for acceptance.

If qualification testing indicates modifications to the item are necessary to obtain acceptable performance, the Engineering Manager shall ensure the design output documents are revised, the item modified and retested.

The test procedure and test reports shall be retained in accordance with Section 17 of SLN Quality Manual.

3.4.4 Design Change Control

Design Change Control applies to ND accepted EDC packages. The Engineering Manager shall ensure non-intent design changes to final designs and field changes are justified, evaluated and subject to design control measures commensurate with those applied to the original design. Where the original personnel are not available, the Engineering Manager shall either assign qualified personnel / consult with ND to identify a new responsible organization for ND activities, and ensure the Engineering Plan, Design Plans and Design Verification Plan are updated.

The Engineering Manager shall ensure the evaluation include the effects of those changes on the constituent parts, delivered items, overall design, and on any design analysis upon which the design is based. The evaluation shall include facility configurations that occur during operations, maintenance, test, surveillance, and inspection activities.

Non-intent design changes initiated from Field Initiated Changes (FICs) shall be approved by the Design Engineer. For all intent design changes, the EC Package shall be revised and approved in the same manner as the original including ND acceptance.

3.4.5 Commercial Grade Dedication

SNC-Lavalin Nuclear shall ensure that controls are established for the Commercial Grade Dedication of purchased items as identified in the Design Specification.SLN shall ensure that all safety-related items are purchased as Basic Components, from suppliers whose quality program has been subject to audit by SLN and through examination of objective evidence has been evaluated to meet applicable requirements of 10 CFR Part 50 Appendix B and ASME NQA-1.

SNC-Lavalin Nuclear shall ensure that the Technical Determinations and records related to Commercial Grade Dedication are appropriately documented and included in the item's History Docket or History File.

3.4.6 Human Factors Engineering

The Human Factors Engineering Program (HFE), 152918-0000-31100-40HF-000x, provides requirements and details on the HF program for the BLN project. HFE plan and HFE preliminary report shall be prepared, during engineering phase, and the HFE report shall be finalized during the commissioning stage

The Human Factor Engineering Program Plan shall be provided to SLN for acceptance during the engineering phase.

4 Procurement Document Control

4.1 General Requirements

The procurement of Engineered Items and Services shall be undertaken by SLN and shall comply with SLN's Quality Assurance Program and the 152918-0000-00000-50IM-0001, Materials/Procurement Management Plan, which will include:

- Organizational responsibilities;
- Procurement methods;
- Items and services to be procured;
- Procurement schedule at a summary level.

The Discipline Engineer shall ensure that applicable design basis and other requirements necessary to assure adequate quality shall be included or referenced in documents for procurement of items and services.

For the purpose of this section, Procurement Documentation includes Requests for Quote, Request for Proposal, or Request for Tender, generically referred to as (RFX), and the Purchase Order (PO).

The design and quality requirements for the procured items and services will be defined, documented and provided in accordance with SLN's procedure 2206-07-30-OP-0007, Engineering Quotation Request. It shall comply with the requirements of Section 5.0.

SLN shall perform oversight by means of quality surveillance at the qualified supplier's premises or at site as applicable during the fabrication and manufacturing of Items prior to release for shipment and for Construction Services in accordance with the following SLN operating procedures:

- 2206-06-40-OP-0001, Preparation of Surveillance Plans;
- 2206-06-40-OP-0002, Performance of Quality Surveillance.

Applicable design basis and other requirements necessary to assure adequate quality of procured items and services shall be included or referenced in the procurement documents. According to SLN procedure 2206-06-40-0P-0001 Quality Surveillance Plans are prepared for each Purchase Order based on the following:

Supplier's Inspection and Test Plan (ITP);

- Evaluation of critical quality characteristics of the item;
- Jurisdictional and Code requirements, as applicable;
- Supplier's previous performance in the administration of quality programs and in the supply of items.

A Quality Surveillance Record shall be prepared by SLN to document surveillance activities performed. For oversight on other procurement activities not covered by ITPs, a graded approach will be used by SLN and a report using Controlled Form 2206-01-40-CF-0015, Surveillance Report will be filed in Document Control. Supplier Corrective Action Requests shall be issued by SLN for non-conformances found during oversight;

All nuclear pressure boundary items and related services will be procured in compliance with the requirements of NCA-4000.

Non pressure boundary items and related services will be procured in compliance with the applicable quality program category requirements determined during the design phase. Subparts of an assembly or related service may be evaluated by the Design Engineer for the appropriate quality level.

The design and quality requirements for the BLN procured items and services will be defined, documented and provided in accordance with SLN's procedure 2206-07-30-OP-0007, Engineering Quotation Request.

All approved suppliers to SNC-Lavalin shall be on the SLN's or ND's Approved Supplier List (ASL). Each supplier to the SNC-Lavalin shall control its suppliers in accordance with the respective supplier's Quality Assurance Program.

Identification and control of counterfeit, fraudulent and sub-standard materials or items shall be controlled in accordance with the Quality Assurance Program of the organization controlling the purchased items.

The following procedures shall apply for procurement activities undertaken by SLN:

- 2206-07-30-OP-0007, Engineering Quotation Request;
- 2206-06-00-OP-0001, Purchasing Strategy – Project and Customers;
- 2206-06-30-OP-0006, Preparation and Award of Purchase Orders;
- 2206-01-20-OP-0001, Quality Assurance Document Control;
- 2206-06-10-OP-0004, Quality Assurance Evaluation of Tenders;

4.1.1 Procurement Planning

Procurement planning shall start at the early stage of the project. The project procurement planning shall align with engineering planning to ensure that necessary engineering documents are planned, approved and ready when they are required for procurement activities.

The Materials/Procurement Management Plan, 152918-0000-00000-50IM-00xx describes the strategy and procurement processes used by the SNC-Lavalin for the BLN project during the design phase. The plan shall include also requirements for storage, security, screening, maintenance and control of shelf life items.

All items procured by SLN shall be delivered to SNC-Lavalin authorized warehouse. 2206-01-30-0P-0009, Receiving Inspection procedure defines SNC-Lavalin's process and requirements for performing the receiving and receiving inspection of supplied items for the BLN Project.

This procedure applies to all items delivered by SNC to SNC-Lavalin Warehouses or designated receiving areas for the BLN Project.

4.2 Content of Procurement Documents

4.2.1 General Requirements

The Buyer shall ensure that procurement documents provided to the supplier adequately describes the item or service to be purchased, including as a minimum, the following:

- Technical requirements as specified in the Engineering Quotation Package (EQP) or Purchase Requisition
- Quality Assurance Program requirements as specified in the Engineering Quotation Package (EQP) or Purchase Requisition
- Commercial Requirements, and
- Terms and Conditions (reviewed and accepted by ND).

The Project Director shall make available the contract information for procurement, engineering and quality assurance activities.

During the tendering process, the technical, quality assurance and commercial requirements will be communicated to a prospective supplier.

At Contract award, the Purchase Order will communicate the technical, quality assurance and commercial requirements to the selected supplier.

The Procurement Manager shall ensure that any changes affecting commercial, technical, or quality requirements are subject to the same degree of control as the original documents.

4.2.2 Scope of Work

The Procurement Manager shall ensure that the Request for Quote includes a statement of the scope of work to be performed by the supplier.

4.2.3 Technical Requirements

Engineering personnel shall ensure that Engineering Quotation Package or Purchase Requisition includes appropriate technical requirements. These requirements shall be documented and specified in an Engineering Quotation Package, as appropriate by reference to specific drawings, specifications, codes, standards, regulations, procedures, instructions, including revisions thereto that describe the items or services to be provided. The documented technical requirements shall include, as appropriate:

- technical performance requirements,
- codes, standards, and specifications,

- jurisdictional and/or regulatory requirements,
- inspection, test, and acceptance requirements, including any special instructions,
- delivery requirements,
- documentation submittal requirements and the timing of submittals and
- provision for packaging, working, handling, storage and shipping.

4.2.4 Quality Assurance Program Requirements

The Buyer shall ensure that purchasing documentation includes appropriate quality assurance program requirements including:

- quality assurance program certification requirements
- ASME Code Edition, addenda, and class of construction
- requirements for acceptance of item or service, procedures, processes, and equipment
- requirements for qualification of personnel
- inspection, test, and acceptance requirements, including any special instructions
- provisions for extending quality assurance requirements to sub-suppliers

4.2.5 Right of Access

The Request for Quote and the Purchase Order shall ensure that purchasing documentation includes right of access to the Supplier's and Sub-Suppliers places of work, facilities, and records for surveillance, inspection, or audit by the BLN Project, the Owner, or either's authorized or designated representatives, and if applicable, the ANII.

4.2.6 Documentation Requirements

The Request for Quote or Purchase Order shall identify the documentation required to be submitted for information, review, or acceptance, by SLN or the Owner and the timing of submittals. If the Supplier is required to maintain records, the retention times and disposition requirements shall be included in the Request for Quote or Purchase Order.

4.2.7 Non-conformances

The Purchase Order shall require the supplier to report item or service non-conformances and for SLN's acceptance or rejection of the suppliers recommended disposition.

Supplier's Non-conformances (NCRs) for "use as is" or "repair/rework" and Deviation Disposition Request (DDRs) applicable to manufacturing of items are submitted to SLN and processed as per 2206-01-20-OP-0003 Document Control Routines.

4.2.8 Spare and Replacement Parts

The Buyer shall ensure that the Purchase Order specifies requirements for spare and replacement parts or assemblies and the related technical and quality assurance requirements for ordering these parts or assemblies.

4.3 Procurement Document Review

Procurement Document review shall ensure that the content of Procurement documentation complies with the requirements of Clause 4.2 above.

The Project Procurement Manager shall review the adequacy of specified purchasing requirements contained in Procurement documents, and revisions thereto, prior to issue of Request for Quote or award of Purchase Order. This ensures that Procurement documents, when transmitted, include provisions to assure that items or services shall meet specified requirements. Evidence of this review shall be documented by the Project Procurement Manager's signing the Request for Quote or Purchase Order.

Technical, quality assurance program, or commercial changes required during the Tendering Process shall be evaluated prior to issue of an Addenda to the RFX.

Bid Evaluations shall be performed in accordance with 2206-06-10-0P-0004, Quality Assurance Review of Tenders and 2206-07-30-0P-0010, Technical Tender Evaluation.

Technical or quality assurance program changes made as the result of bid evaluations or negotiations shall be evaluated prior to being incorporated into the Purchase Order and supporting documents (EQP, data sheets, drawings, etc.), prior to Purchase Order award.

4.4 Procurement Document Changes

The BLN Procurement Manager shall ensure that any changes affecting commercial, technical, or quality assurance program requirements are subject to the same degree of control as the original documents.

Applicable Operating Procedures are as follows:

- 2206-01-20-OP-0001 Quality Assurance Document Control
- 2206-06-00-OP-0001 Purchasing Strategy - Projects and Customers
- 2206-06-30-OP-0006 Preparation and Award of Purchase Orders

5 Instructions, Procedures and Drawings

All activities affecting quality and services shall be prescribed by and performed in accordance with documented instructions, procedures, or drawings that include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed requirements have been satisfactorily accomplished.

Each activity shall be described to a level or detail commensurate with the complexity of the activity and the need to assure consistent and acceptable results. The need for, and level of detail in, written procedures or instructions shall be determined based upon complexity of the task, the significance of the item or activity, work environment, and worker proficiency and capability (education, training, and experience).

Documents, instructions, procedures, and drawings shall be made available at the point of use to SNC-Lavalin personnel and to the Customer or ANII as required.

The preparation, review, approval, revision, and issue of documents, instructions, procedures and drawings shall be in accordance with this QAP.

Applicable procedures are:

- 2206-01-20-OP-0001 Quality Assurance Document Control
- 2206-07-20-OP-0001 Preparation of Engineering Documents
- 2206-07-00-OP-0001 Drafting Procedure

6 Document Control

6.1 General Requirements

The preparation, review, approval, revision, and issue of documents that specify quality requirements or prescribe activities that affect quality shall be controlled to assure that correct documents are utilized by personnel at the location where activities affecting quality are being performed. All such documents shall be reviewed for adequacy and approved for release by authorized personnel. All documents, software and analytical tools related to the implementation of the Quality Assurance Program shall be controlled.

Documents, including changes, shall be reviewed for adequacy and approved for release by authorized personnel and be distributed to and used at the location where the activity is performed.

SLN's qualified Supplier / Constructor shall meet requirements of their QA Program's Document Control requirements.

6.1.1 Quality Assurance Documentation

The issue, distribution and retention of all project documentation shall be in accordance with 2206-01-20-OP-0003 Document Control Routines.

The preparation, review, approval, revision, issue and retention of Audit Plans, Audit Reports, Audit Checklists, completed Audit files and the Quality Assurance Report shall be controlled by the Director, Quality Assurance.

6.1.2 Engineering Documentation

The issue and retention of project Engineering Documentation shall be in accordance with 2206-01-20-OP-0003 Document Control Routines.

6.1.3 Supplier Documentation

Documentation identified as Supplier deliverables in a Purchase Order shall be formally submitted to the responsible SNC-Lavalin Nuclear Buyer or Expeditor.

The Buyer or Expeditor shall forward this documentation to Document Control for logging into PM+ or MyTRAK as applicable, followed by Vendor Internal Coordination Review which includes acceptance by Quality Assurance and Engineering.

When using MyTRAK, Suppliers shall continue using the PDMC Supplier portal to submit new or revised Supplier document/drawings and retrieve accepted or commented Supplier document/drawings.

6.2 Document Identification and Preparation

Quality Assurance documentation shall be identified in accordance with operating procedure 2206-01-20-OP-0001, Quality Assurance Document Control.

Engineering documentation shall be identified in accordance with operating procedure 2206-01-20-OP-0001 Quality Assurance Document Control. Operating procedure 2206-07-20-OP-0001 Preparation of Engineering Documents shall provide supplementary information on the preparation, review, and approval of Engineering documents.

All controlled documents shall be prepared using standard templates such as Controlled Forms and Template Forms as described in Operating Procedure 2206-01-20-OP-0001, Quality Assurance Document Control.

6.3 Document Changes

Changes to documents shall be reviewed and approved by the same organization that performed the original review and approval, unless other qualified organizations are designated.

The reviewing organization shall have access to pertinent background data or information upon which to base their review and approval.

Revised documents shall be distributed to and used at the location where the activity is performed. Distribution shall be controlled as detailed in clause 6 above.

Applicable Operating Procedures are:

- 2206-01-20-OP-0001 Quality Assurance Document Control
- 2206-01-20-OP-0002 Control of Quality Records
- 2206-01-20-OP-0003 Document Control Routines
- 2206-01-20-OP-0004 Permanent Records History Docket / History File
- 2206-07-20-OP-0001 Preparation of Engineering Documents

7 Control of Purchased Items and Services

7.1 General Requirements

Procurement activities shall be planned, documented and controlled to assure conformance with procurement documents. Such controls shall provide for the following as appropriate: supplier evaluation and selection, supplier qualification, evaluation of objective evidence of quality furnished by the supplier, source inspection, audit, and examination of items or services upon delivery or completion.

Additional requirements may be specified, depending on the quality assurance specifications or nature of the item or service provided. These additional requirements may include: quality surveillance, quality audits, and additional quality records.

The Project Procurement Manager, who reports to the Project Director, shall be responsible for all procurements activities related to the project. Procurement may be performed by SLN or subcontracted as defined in the Procurement and Subcontract Management Plan.

Procurement activities performed in accordance with 10CFR50 Appendix B, shall meet the requirements of 2206-01912-QM-0001 SNC-Lavalin's Nuclear Quality Assurance Manual and the following supporting procedures;

The following activities shall be undertaken by SLN:

- Perform quality surveillance at supplier's premises during the fabrication and manufacturing of items prior to release for shipment in accordance with the following SLN operating procedures: 2206-06-40-OP-0001, Preparation of Quality Surveillance Plans and 2206-06-40-OP-0002, Performance of Quality Surveillance; The extent of quality surveillance varies with the scope of contracted services and location of the services;

- Perform receiving inspection of Engineered Items and services upon receiving of the items at designated deliver location in accordance with operating procedure 2206-01-30-OP-0009, Receiving Inspection.

The following Operating Procedures shall be used to control items and services purchased by SLN:

- 2206-01-40-OP-0004, Performance of Audits;
- 2206-06-30-OP-0003, Evaluation and Selection of Suppliers;
- 2206-01-40-OP-0010, Evaluation of Supplier Quality Program Manuals;
- 2206-06-40-OP-0001, Preparation of Surveillance Plans;
- 2206-06-10-OP-0004, Quality Assurance Evaluation of Tenders;
- 2206-06-30-OP-0006, Preparation and Award of Purchase Orders;

- 2206-07-20-OP-0001, Preparation of Engineering Documents;
- 2206-01-20-OP-0003, Document Control Routines;
- 2206-01-20-OP-0004, Permanent Records History Docket / History File;
- 2206-06-40-OP-0002, Performance of Quality Surveillance;
- 2206-06-70-OP-0002, Supplier Performance Evaluation;
- 2206-01-30-OP-0002, Control of Nonconforming Items and Services.

The requirements for execution of purchasing activities are specified in the Project Materials/ Procurement Management Plan, 152918-0000-0000-50IM-000.

7.2 Procurement Planning

Overall Procurement (procurement) planning process shall include:

- requirements for preparation, revision, review, approval, and issue of procurement documents
- evaluation and selection of suppliers
- bid evaluation and award
- supplier control
- verification of purchased items or services which may include: source surveillance, surveillance, inspection, test, or audit
- control of supplier non-conformances and corrective actions
- release of items
- acceptance of items or services
- quality assurance records

The procurement requirements for a project shall be specified in the Project Execution Plan (PEP) or Project Management Plan.

The Project Execution Plan (PEP) shall be prepared by the Project Manager in accordance with operating procedure 2206-04-00-OP-0001, Project Management. Depending on the complexity and extent of supply-chain activities, the Director, Procurement may elect to supplement the Project Execution Plan (PEP) with a specific Project Procurement Plan (PPP). In either case, the Project Execution Plan (PEP) or Project Procurement Plan (PPP) shall identify long lead items or major purchases listed in the Contract between SNC-Lavalin Nuclear and the Customer. It shall also identify any customer specific procurement requirements over and above the requirements of this Quality Assurance Manual.

Procurement cannot proceed until the Project Execution Plan (PEP) is issued.

Supply Chain activities shall be initiated by the receipt of either an Engineering Quotation Package (EQP) or a Purchase Requisition. The preparation of these documents is controlled in accordance with Section 4, Procurement Document Control.

When procurement of items or services is undertaken by SNC-Lavalin, this activity shall be performed in accordance with 2206-06-00-OP-0001, Purchasing Strategy- Projects and Customers. The design and quality requirements for the procured items and services shall be defined, documented and provided as input to the procurement process.

Procured materials/items are controlled and verified by performing the following activities:

Surveillance activities at suppliers are performed in accordance with 2206-06-40-0P-0002 Performance of Quality Surveillance.

Receiving inspection is performed as per the procedure 2206-01-30-0P-0009 Receiving Inspection.

Quality Surveillance applies to nuclear and non-nuclear items and services for nuclear power plants facilities purchased from Suppliers.

- 2206-06-40-0P-0002 Performance of Quality Surveillance applies to the following scope:
- For the performance of inspection activities based on the Inspection and Test Plan(s) submitted by the supplier and accepted by SNC-Lavalin Nuclear;
- For the performance of verification activities by SNC-Lavalin Nuclear to ensure procedural compliance by a supplier (for any applicable nuclear life cycle activity) while executing work to their QA Program.
- The extent of quality surveillance varies with the scope of contracted services and location of the services. Applicable procedures are 2206-01-40-OP-0009 Evaluation of Supplier NDE Test and 2206-01-40-OP-0008 Evaluation of Inspection and Test Plans.

The Quality Assurance Specialist shall meet the following mandatory requirements when preparing the Quality Surveillance Plan and executing Quality Surveillance activities;

- Procedures, instructions or drawings shall be reviewed to verify that they have been accepted by SLN. These documents shall include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed requirements have been satisfactorily accomplished.

Personnel qualification records shall be reviewed and accepted prior to the individual performing any activity. Qualification records shall include;

i) NDE qualification records
ii) Welder qualification records
iii) Inspection personnel qualification records
iv) Test personnel qualification records

7.3 Supplier Evaluation and Selection

7.3.1 Supplier Evaluation for Bid Purpose

Buyer initiates Bidders List from an Engineering Quotation Request (EQR) or Purchase Requisition to identify potential supplier(s) for the item or service to be purchased.

Quality Assurance Specialist validates the potential supplier(s) Quality Assurance Program consistent with the quality requirements as defined in the EQR or Purchase Requisition. For each potential supplier, this is accomplished by review of one or more of the following:

Status on the SLN Approved Suppliers List [based on an approved Controlled Form 2206-06-30-CF-0003, Supplier Qualification Record (SQR)]

- Certificates of Authorization
- Quality Program Manual

ASME Code work shall be subcontracted to N Type Certificate Holders and Approved Suppliers for Design software only.

Results of the Supplier evaluation shall be documented on a Bidders List by the Quality Assurance Specialist as either “Acceptable” or “Not Acceptable” to submit a Tender Package to the potential Supplier. In addition, the potential Supplier shall be added to the Approved Suppliers List by the Quality Assurance Specialist as a minimum “Qualified to Bid” if not already listed.

7.3.2 Supplier Evaluation Prior to Purchase Order Award

On receipt of a Bid, Commercial, Technical and Quality Assurance evaluations of the Bid are initiated by the Buyer by submitting copies of the Bid Documentation to a Discipline Engineer and a Quality Assurance Specialist for their respective evaluations.

The Buyer must check that the Supplier is listed on the Approved Suppliers List as "Qualified to Award" for the specified Quality Assurance Program and scope of supply.

If the Supplier is not listed on the Approved Suppliers List as "Qualified to Award" or the scope of work is different, the Buyer initiates the preparation or revision of supplier qualification records.

7.4 Bid Evaluation

The Procurement Manager shall establish and implement processes for Bid evaluation and Award of Contract. These processes shall ensure that the basis for evaluations, selections and award of contract are documented.

The Bid evaluation shall consider technical, quality and commercial aspects

Technical Evaluation is accomplished by a Tender Technical Evaluation (TTE) performed by a Discipline Engineer to ensure that the tender complies with the technical requirements of the procurement documents. This may include evaluation and disposition of exceptions and deviations from the procurement documents.

Quality Evaluation is accomplished by the Quality Assurance Evaluation (QAE) performed by a Quality Assurance Specialist to ensure that the tender complies with the quality requirements of the procurement documents. This may include evaluation and disposition of exceptions and deviations from the procurement documents.

Commercial Evaluation is accomplished by the Commercial Evaluation (CE) performed by the Buyer to ensure that the tender complies with the commercial requirements of the procurement documents. This may include evaluation and disposition of exceptions and deviations from the procurement documents.

In addition to the above mentioned requirements, where applicable to the type of procurement, and as identified in the Project Execution Plan (PEP) the following items shall also be considered:

- suppliers key personnel
- suppliers production capability
- suppliers past performance

The Buyer is responsible for coordinating evaluations and selection of the successful bid.

Bid evaluations shall confirm a supplier's ability:

- accreditation, or capability of accreditation by relevant authorities or where applicable, acceptance of the supplier quality program by SNC audit, for the supply of product or service with applicable standards, codes, or jurisdictional requirements, and
- the product or service offered meets appropriate commercial, quality and technical requirements including: safety, reliability and maintainability.
- Prior to contract award, any exceptions or unacceptable conditions with respect to item or service requirements such as those listed in clause 4.2, or commercial considerations that are identified during bid evaluation shall either be resolved or the Supplier shall commit to resolve unacceptable conditions.
- Contract award documentation shall identify any changes to the Tender documents commercial, technical or quality requirements as a result of bid evaluations or pre-contract negotiations and shall contain or reference all product requirements as listed above.

7.5 Qualification of Suppliers

The Buyer initiates the supplier qualification process by communicating the requirements to qualify a supplier to the Quality Assurance Specialist using the 2206-06-30-CF-0003, Supplier Qualification Record.

The Suppler Qualification Record shall identify the required scope of qualification, items or services to be provided, and the associated quality assurance program requirements.

The Project Quality Assurance Specialist shall evaluate Supplier's capability to provide items or services in accordance with the requirements of the Supplier Qualification Record.

A Quality Assurance Specialist shall evaluate a Supplier's capability to provide items or services in accordance with the requirements of the Supplier Qualification Record. Supplier audits shall be performed to assess the effectiveness of their Quality Assurance Program.

Once qualified, the Quality Assurance Specialist shall complete 2206-06-30-CF-0003 Supplier

Qualification Record and add the supplier on the Approved Supplier List.

The Project Manager, Quality Assurance shall ensure the qualifications of supplier listed in the Approved Suppliers List and active for BLN project are reviewed, maintained and updated on a periodic basis.

7.6 Control of Supplier Generated Documents

The Project Procurement Manager shall implement appropriate controls to assure that the submittal and evaluation of supplier generated documents are accomplished. These controls shall provide for the receipt, processing, and recorded evaluation of the supplier generated documents. This evaluation shall consider the quality assurance, technical, and commercial requirements in support of acceptance of the item or service.

Documentation received by the Buyer from suppliers for acceptance shall be reviewed and accepted by qualified personnel. The Buyer shall initiate the review of supplier generated documents in accordance with operating procedure 2206-01-20-OP-0003, Document Control Routines.

7.7 Acceptance of Items or Services

7.7.1 General Requirements

The Project Quality Manager, as delegated by the SLN Director, Quality, shall ensure that purchased items or services conform to specified requirements. The type and extent of control applied to the supplier and purchased product shall be dependent upon the:

- impact on safety,
- complexity of the structure, system, component or service,
- degree of standardization,
- similarity to previously proven design,
- reliability requirements,
- performance or functional requirements,
- applicable regulatory or jurisdictional requirements.

Quality Assurance Specialists shall perform item or service acceptance activities. The procurement documents shall specify that prior to the item or service being offered for acceptance, the Supplier shall verify that the item or service being furnished complies with the requirements of the procurement documents.

Acceptance activities may be performed at the supplier's premises or the customer's premises.

The Quality Assurance Specialist shall review a Certified Material Test Report (CMTR) or Data Report to the ASME BPVC, Section II and Section III, and additional requirements of the ASME Code.

7.7.2 Methods of Acceptance

SLN shall utilize one or more of the following methods to accept an item or service from a supplier:

- a certificate of conformance provided by the supplier,
- source verification,
- receiving inspection,

The preferred method of acceptance is source verification where receiving inspection is not practical. Certificates of Conformance may only be used for items manufactured and delivered for simple, standard catalogue items, best commercial items and spare parts.

Notwithstanding the above, a receiving inspection shall be performed by the Receiving Quality Control Inspector Quality Assurance Specialist.

7.7.3 Certificate of Conformance

SLN shall implement appropriate processes to verify the validity of a supplier's certificates of conformance and the effectiveness of this process shall be evaluated during supplier audit, monitoring, or independent inspection and test of the material or equipment. Such audit, monitoring, or independent inspection activities shall be conducted by SLN at intervals commensurate with the supplier's past quality performance.

7.7.4 Source Verification

The Quality Assurance Specialist shall perform source verification at intervals consistent with the importance and complexity of the item or service, and shall include monitoring, witnessing, or observing selected activities as per 2206-06-40-0P-0002 Performance of Quality Surveillance. The Surveillance Plan shall identify the supplier's inspections, examinations, or tests at predetermined points for which the Quality Assurance Specialist requires to inspect.

Surveillance Plans are not required to be submitted to the ANI.

Results of inspections, examinations, or tests shall be documented by the supplier and shall be reviewed by SLN prior to acceptance of the item or service. The Quality Assurance Specialist sign-off on the Surveillance Plan indicates his acceptance of the inspection activity.

7.7.5 Receiving Inspection

The Operating Procedure 2206-06-30-0P-0001 Storage and Handling applies to items under the custody and control of SLN at a Storage Facility / Warehouse. Project-specific plans or procedures shall define how the material control system will be implemented to comply with technical document requirements, regulatory requirements and Codes and Standards requirements.

[Note: 2206-06-30-0P-0001 Storage and Handling does not apply if the storage and handling of items is sub-contracted by a project to a qualified Supplier / Constructor in accordance with the Project Quality Plan. In such cases, the qualified Supplier / Constructor shall implement their own Quality Assurance (QA) Program and SLN shall perform surveillance / oversight for the verification of their procedural compliance using 2206-06-40-0P-0002, Performance of Quality Surveillance].

2206-01-30-0P-0009 Receiving Inspection applies to all receiving inspection activities performed by SNC-Lavalin Nuclear and shall consider prior source verification.

Inspection Personnel performing receiving inspection activities will be qualified in accordance with 2206-01-40-0P-0012 Inspection Personnel - Qualification Requirements.

Receiving QC Inspector shall perform receiving inspection on purchased items to ensure conformance to procurement documents.

Items that conform to the specified requirements shall be identified as such (accepted) and either held in storage for later release or released and moved directly to their final location for subsequent processing or use.

Items that do not conform to specified requirements shall be identified as nonconforming and shall be segregated to prevent inadvertent processing or use.

7.7.6 Post Installation Testing

When post installation testing is utilized, SLN shall establish post installation testing requirements, including required documentation to support product acceptance, with the product supplier

7.7.7 Acceptance of Services Only

SLN shall accept services by using one or more of the following methods:

- technical verification of the data produced,
- surveillance and/or audit of the activity,
- review of objective evidence for conformance to the procurement document requirements.

7.8 Control of Supplier Non-Conformance

All NCRs generated by suppliers and dispositioned as “Use as is” or “Repair” shall be reviewed for acceptance by SLN. Following methods are recommended to be used for controlling supplier non-conformance:

- evaluation of nonconforming items,
- review of supplier submitted non-conformance reports including supplier recommended disposition (use-as-is or repair) and technical justification. Non-conformances to the procurement requirements or SLN approved documentation, which consist of one or more of the following, shall be submitted to SLN for approval of the recommended disposition:

- deviations from technical or material requirements;
- deviations from approved requirements for supplier documentation;
- non-conformance which cannot be corrected by continuation of the original manufacturing process or by rework;
- the item does not conform to the original requirements even though the item can be restored to a condition such that the capability of the item to function is unimpaired;
- evaluation and disposition of the supplier recommendation;
- verification of the implementation of the disposition;
- maintenance of records of supplier submitted non-conformance.

Non-conformances to design requirements dispositioned as use-as-is, rework or repair shall be subject to design control measures commensurate with those applied to the original design. Required as-built records shall reflect the use-as-is or repair condition.

In all cases, disposition of a supplier non-conformance cannot negate the requirements of the ASME Code. SNC-Lavalin review and acceptance is required prior to performing any repair or re-examination activities.

If the repairs are likely to affect the results of examination, inspection or tests, or work previously completed, appropriate re-examination, re-inspection, and re-testing shall be performed in accordance with approved procedures.

The Supplier has responsibility to identify nonconforming items by legible marking, tagging, or other methods not detrimental to the item, either on the item or on the container, or the package containing the item.

7.9 Commercial Grade Items and Services

The Commercial Grade Items and Services shall only be applied to non-pressure-boundary safety-related items.

Where SNC-Lavalin's nuclear design utilized commercial grade items, SNC-Lavalin Nuclear performs the same as per 2206-01-50-OP-0002 Dedication of Commercial Grade Items.

7.10 Purchase Order Administration

The Project Procurement Manager shall establish and implement appropriate controls for the administration of contracts and purchase orders.

Any changes affecting commercial, technical, or quality requirements proposed either by SLN, the customer, or a supplier, shall be documented and approved in accordance with the original document.

The Project Procurement Manager shall track and record supplier performance and retain hardcopies of this information in the applicable supplier history file for future reference. Electronic copies of this information may be stored in an electronic database.

7.11 Purchase Order Completion

The Procurement Manager shall establish and implement a close-out process for termination of contract agreements following acceptance of items or service or for cause.

The procedure 2206-06-70-OP-0001, Purchase Order Completion applies.

8 Identification and Control of Items

8.1 General Requirements

Identification and control of items shall ensure that:

- only correct and accepted items are used and installed
- identification is maintained on the item or in documents traceable to the item, or in a manner which ensures that identification is established and maintained.

The Project Quality Manager shall establish controls to assure that only correct and accepted items are used and installed.

8.2 Identification Methods

8.2.1 Item Identification

The Quality Assurance Specialist performing source surveillance and the Receiving QC Inspector shall identify items by tags, physical markings or documentation traceable to the item. Any marking applied to an item shall be clear, legible and not adversely affect the material, function or service of the item.

Records demonstrating unique identification of each item, or part thereof, shall be maintained as part of HD/HF (History Docket / History File). Where traceability is a requirement for purchased items, the procurement documents shall include requirements to control and record a unique identification of each item, or part thereof, and maintain records.

8.2.2 Physical Identification

Physical identification shall be used to the maximum extent possible. Markings shall be clear and permanent and shall not adversely affect the material, function or service life of the item so identified.Where physical identification on the item is either impractical or insufficient, physical separation, procedural control, or other appropriate means shall be employed. In such cases, the item must be included in records traceable to the item.

Any physical identification or marking applied to the item, shall not be hidden or obliterated by surface treatment or coating unless other means of identification are provided in accordance with documented procedures.

8.3 Specific Requirements

8.3.1 Identification and Traceability of Items

Quality Assurance Specialists shall ensure that identification and traceability requirements of applicable standards, codes, or specifications are applied as required to ensure traceability to heat, batch, lot, part number, serial number, specified inspection, test or other records as required by the EQR and PO.

Customer specified requirements for identification and traceability of items shall be documented in EQR and applicable technical specifications.

8.3.2 Limited Life Items

Limited Life Items shall be handled in accordance with Storage and Handling Procedure which is to be written.

8.3.3 Maintaining Identification of Stored Items

The BLN Project shall ensure that appropriate controls are implemented for maintaining item identification consistent with the planned duration and conditions of storage in accordance with the Material Control Plan, which is to be written.

9 Control of Processes

The scope of SLN's Certificate of Authorization requires fabrication and installation activities to be subcontracted to an appropriate ASME Certificate of Authorization holder. The controls for special processes will be the responsibility of the qualified Supplier subcontracted to perform fabrication and installation.

BLN project shall review and accept Supplier procedures in accordance with this section for welding, heat treating, and non-destructive examination to ensure compliance with the ASME Code, 10 CFR Part 50 Appendix B, ASME NQA-1,and Customer specified requirements.

9.1 Process Control

The Project Director shall ensure that the processes are controlled through the use of an Inspection and Test Plan (ITP) as applicable.

For all work subcontracted to qualified suppliers the Quality Assurance Specialist shall review and accept the supplier's Inspection and Test Plans as per the Operating Procedure 2206-01-40-OP-0008, Evaluation of Inspection and Test Plans.

Inspection and Test Plans shall include, but not limited to the following:

- identify required Verification, Witness and Hold points,
- the signature, initials, or stamp, and the date the activity was performed by the Quality
- Assurance Specialist,
- the signature, initials, or stamp, and the date the activity was performed by the Certificate Holders representative,
- the signature, initials, or stamp, and the date on which those activities were witnessed by the Authorized Nuclear Inspector (ANI),
- space for the signature, initials, or stamp, and the date the activities were witnessed by the Customer, as required,
- document number and revision to which the process conforms,
- space for reporting results of completion of specific operations,
- document number and revision to which the examination and test is to be performed, and
- space for recording results of examinations and tests.

The supplier is responsible to submit the Inspection and Test Plan to the SNC-Lavalin Document Control (for QA and Engineering review) as well as to the Authorized Nuclear Inspector (ANI) for acceptance and identification of their Hold or Witness points, prior to the start of fabrication and or installation.

Quality Assurance Specialists and Discipline Engineers with appropriate knowledge and experience shall evaluate Supplier submitted procedures related to Inspection and Test Plans.

9.2 Special Processes

Upon receipt of procedures for special processes (such as Welding, Heat Treatment, Non-Destructive Examination (NDE) etc.) SLN Document Control shall log them into PM+ or MyTRAK as applicable, followed by Vendor Internal Coordination Review which includes acceptance by Quality Assurance and Engineering.

9.2.1 Welding Procedures

The SLN qualified Supplier / Constructor shall ensure that welding is controlled in accordance with the Supplier's Quality Assurance program. Welding controls shall address;

- Weld Procedure Specification
- Procedure Qualification Records
- Welder Performance Qualification
- Weld Material Control
- Recording of Welding Data

Welding Procedure Specifications and Procedure Qualification Records shall be submitted to SLN for review and acceptance. Welding procedures shall meet the technical requirements as specified in the Modification Packages as appropriate.

9.2.2 Heat Treatment Procedures

The SLN qualified Supplier / Constructor shall ensure heat treatment is controlled in accordance with the Supplier / Constructor's Quality Assurance program. Heat treatments include;

- Pre-heat temperature control
- Post-heat temperature control
- Post Weld Heat Treatment control

Heat Treatment procedures shall be submitted to SLN for review and acceptance. Heat Treatment procedures shall meet the technical requirements as specified in the Modification Packages as appropriate.

Welding inter-pass temperature control shall be performed in accordance with the Weld Procedure Specification.

9.2.3 Nondestructive Examination Procedures

The SLN qualified Supplier / Constructor's Nondestructive Examination procedures shall be reviewed and accepted by a Quality Assurance Specialist and Discipline Engineer in accordance with operating procedure 2206-01-40-OP-0009 Evaluation of Supplier NDE Procedures.

The SLN qualified Supplier / Constructor shall ensure Nondestructive Examination shall be performed and controlled in accordance with the subcontractors accepted Quality Assurance program.

The subcontractor shall ensure that;

- NDE procedures are approved by a Level III and qualified in accordance with ASME Section III and Section V.
- NDE personnel are qualified in accordance with a written practice compliant with ASNT Recommended Practice Nos. SNT-TC-1A and/or CP-189, as appropriate
- NDE personnel are qualified in accordance with the requirements of clause 2.1.1.

The subcontractor shall be responsible for specifying NDE requirements in procedures or instructions and submitted to SLN for review and acceptance.

9.2.4 Special Processes Not Covered by Existing Codes and Standards

Special processes procedures or instructions not covered by existing codes and standards, or where quality requirements specified for an item exceed those of existing codes or standards, shall be reviewed and accepted by a SLN Quality Assurance Specialist and SLN Discipline Engineer as necessary.

The review shall ensure that the necessary requirements for qualifications of personnel, procedures, or equipment are specified or referenced in the procedures or instructions.

Records shall be maintained for the currently qualified personnel, processes and equipment of each special process.

9.2.5 Source Surveillance on Special Processes

Project Quality Assurance Specialists shall perform source surveillance on activities performed by Suppliers as per procedure 2206-06-40•0P-0002 Performance of Quality Surveillance.

10 Inspection

10.1 General Requirements

Quality Assurance Specialists shall ensure that inspections required to verify conformance of an item or activity to specified requirements, or continued acceptability, are executed. Characteristics subject to inspection and inspection methods shall be specified. Inspection results shall be documented. Quality Assurance Specialists shall confirm that inspection for acceptance shall be performed by qualified persons other than those who performed or directly supervised the work being inspected.

10.2 Inspection Requirements

Quality Assurance Specialists shall ensure that inspection requirements and acceptance criteria include specified requirements contained in the applicable design documents and where required, accepted by the customer.

10.3 Inspection and Hold Points

Quality Assurance Specialists shall ensure that specific hold points are indicated in the Inspection and Test Plan. In addition, work shall not be allowed to proceed beyond specified hold points unless consent to waive the specified hold point is obtained and recorded prior to continuation of work beyond the designated hold point.

10.4 Inspection Planning

10.4.1 Planning

Quality Assurance Specialists shall ensure that the characteristics to be inspected, methods of inspection, and acceptance criteria are identified during the inspection planning process. For items stamped with the ASME Certification Mark, an Inspection and Test Plan in conjunction with a Surveillance Plan shall be prepared by a Quality Assurance Specialist. Where SLN is purchasing a completed item, a Surveillance Plan is sufficient to document inspection planning requirements.

10.4.2 Sampling (Non ASME Work)

Quality Assurance Specialists shall ensure that sampling procedures, when used, are based upon valid statistical methods and contain reference to governing standards. Statistical techniques are not used other than in the sampling plans identified in 2206-01-30-OP-0009 Receiving Inspection.

10.5 In Process Inspection

Quality Assurance Specialists shall ensure that the inspection of items under fabrication, installation, or otherwise in-process is performed by the qualified supplier and as indicated in the Surveillance Plan. If inspection of processed items is impossible or disadvantageous, Quality Assurance Specialists shall observe the fabricator or installer's use of indirect control or monitoring of processing methods, equipment, and personnel.

Both inspection and process monitoring shall be provided when control is inadequate without both.

10.6 Final Inspections

10.6.1 Resolution of Non-conformance

Quality Assurance Specialists shall ensure that final inspections include a record of review of the results and resolution of non-conformance identified by prior inspections. Non-conformances shall be resolved in accordance with Clause 0.

10.6.2 Inspection Requirements

Quality Assurance Specialists shall ensure that completed items are inspected for completeness, markings, calibration, adjustments, protection from damage, or other characteristics as required to verify the quality of the item and conformance of the item to specified requirements.

10.6.3 Modifications, Repairs, or Replacement

Quality Assurance Specialists shall ensure that any modifications, repairs, or replacements, of items performed subsequent to final inspection shall require re-inspection and re-test, to verify acceptability

10.7 Records

Quality Assurance Specialists shall ensure that records are established, maintained, and as a minimum, identify the following:

- the item inspected,
- date of inspection,
- procedure number and revision level for the activity,
- Quality Assurance Specialist,
- type of observation,
- results or acceptability, and
- reference to information on action taken in connection with non-conformances.

11 Test Control

11.1 General Requirements

Tests required to verify conformance of an item to specified requirements and to demonstrate satisfactory performance for service shall be planned and executed. Characteristics to be tested and test methods to be employed shall be specified. Test results shall be documented and their conformance with acceptance criteria shall be evaluated. 2206-06-40•0P-0002 Performance of Quality Surveillance is the applicable procedure.

11.2 Test Requirements

The Quality Assurance Specialist shall ensure that all test requirements are appropriately planned and controlled. Test requirements shall be documented in a Surveillance Plan listed on the Inspection and Test Plan. Inspection and Test Plans provided to SLN by a supplier of an item or service shall be accepted in accordance with Clause 9

Controls applied to Inspection and Test Plans shall include:

- Test requirements and acceptance criteria shall include as appropriate: prototype qualification tests, production tests, proof tests prior to installation, construction tests, pre-operational tests, operational tests, and computer program tests such as software verification and validation, factory acceptance tests, site acceptance tests, and in-use tests.
- Required test shall be controlled under appropriate environmental conditions using tools and equipment necessary to conduct the test in a manner to fulfill test requirements and acceptance criteria. The tests performed shall obtain the necessary data with sufficient accuracy for evaluation and acceptance.
- Test requirements and acceptance criteria shall be based upon specified requirements contained in applicable approved design documents, or other pertinent technical documents.
- If temporary changes to the approved configuration of a facility are required for testing purposes, approval by the design authority is required prior to performing the test.

11.3 Test Procedures

The requirements of this section do not apply to the testing of computer programs, computer hardware or computer operating systems. Quality Assurance Specialist shall ensure that test procedures include the following, as appropriate:

- Test configuration and test objectives, provisions for assuring prerequisites and suitable environmental conditions are met and adequate instrumentation is available and used, and necessary monitoring is performed. Prerequisites shall include the following, as applicable: calibrated instrumentation, appropriate equipment, trained personnel, condition of test equipment and the item to be tested, suitable environmental conditions, and provision for data acquisition.

- As an alternative to (a) above, appropriate sections of related documents, such as ASTM or IEEE methods, supplier manuals, equipment maintenance instructions, or approved drawings or travelers with acceptance criteria, can be used.

11.4 Performance of the Component Pressure Test

The component pressure test shall be subcontracted and performed by the supplier fabricating the item. The test requirements and acceptance criteria shall be included in procurement documents.

The Quality Assurance Specialist performing source verification shall be responsible for supervising, witnessing, and accepting the pressure test with ANI involvement.

The Quality Assurance Specialist shall ensure that the test is controlled in accordance with a documented procedure accepted by SLN and the suppliers' approved Quality Assurance Program.

11.5 Test Results

The Quality Assurance Specialist shall ensure that test results are documented and evaluated by the supplier, the ANI, or Customer, to assure that test requirements have been satisfied prior to signing the supplier's pressure test report.

11.6 Test Records

The Quality Assurance Specialist shall ensure that component pressure test records are established and maintained to indicate the ability of the item to satisfactorily perform its intended function or to meet its documented requirements. The Component test record shall identify the following:

- Item tested;
- Date of test;
- Test personnel
- Type of observation;
- Test Procedure and revision used;
- Results and acceptability;
- Action taken for any deviations noted;
- Person evaluating test results;
- Action taken in connection with any deviations, and
- Gauges or instrument identification.

11.7 Certification of ASME Code Data Report and Application of Certification Mark

The Project Engineering Manager shall determine when the Data Report for the Code item is required to be registered with the National Board of Boiler and Pressure Vessel Inspectors at 1055 Crupper Avenue, Columbus, Ohio 43229-1183 from the Customer's purchase order document requirements.

ASME Code Data Reports shall be included in the History Docket as lifetime (permanent) records in accordance with 2206-01-20-0P-0004, Permanent Records – History Docket - History File. All Data Reports and referenced records shall be available to the ANI and enforcement authority having jurisdiction at the location of the nuclear power plant site.

12 Control of Measuring and Test Equipment

12.1 General Requirements

Tools, gages, instruments, and other measuring and test equipment used for activities affecting quality shall be controlled, calibrated at specific periods, adjusted and maintained to required accuracy limits.

Calibration and control measures may not be required for rulers, tape measures, levels, and other such devices, if such equipment provides adequate accuracy.

Periodic checks of equipment to check calibration is required. New measuring and test equipment shall be calibrated prior to use and registered in the calibration log

2206-01-30-0P-0016 Control of Measuring and Test Equipment (M&TE) applies to all Tools, Gauges and Instruments and other M&TE under the control of SLN. The Quality Assurance Specialist is responsible for selecting M& TE of the correct type, range, accuracy and tolerance to accomplish the function of determining conformance to specified quality requirements and to review and accept calibration records from supplier of calibration services.

12.2 Selection

The organization performing the work activity shall be responsible for selection of measuring and test equipment to assure that such equipment is of proper type, range, accuracy, and tolerance to accomplish the required measurements for determining conformance to specified requirements. The process shall be controlled in accordance with the organization's Quality Assurance Program performing the work.

12.3 Calibration and Control

Calibration and control of Measuring and Test Equipment shall be in accordance with the applicable Quality Assurance Program of the entity responsible for the work.

During surveillance or audit of the calibration services supplier, Quality Assurance Specialists shall ensure that documented calibration procedures include appropriate controls for measuring and test equipment.

Measuring and test equipment shall be traceable to its application and use.
When measuring and test equipment are found to be out of calibration, an evaluation, shall be made and documented including the validity of previously inspection or test results and the acceptability of items previously inspected or tested. Appropriate action shall be taken on the equipment and any affected items including removing the measuring and test equipment from service and quarantining any affected items.

Measuring and test equipment shall be properly handled and stored in accordance with 2206-06-30-0P-0001 Storage and Handling.

12.4 Records

Measuring and test equipment shall be suitably marked, tagged, labeled, or otherwise identified to indicate calibration status and establish traceability to calibration records. Status indicators must be inspected prior to use to ensure that only calibrated measuring and test equipment is used.

12.5 Calibration Services

Suppliers providing calibration services shall be qualified in accordance with SLN Operating Procedure 2206-06-30-0P-0003 Evaluation and Selection of Suppliers

13 Handling, Storage and Shipping

Handling, storage, cleaning, packaging, shipping and preservation of items shall be controlled to prevent damage or loss and to minimize deterioration. 2206-06-30-0P-0001 Storage and Handling applies for the control of storage and handling to preserve items from the time of their receipt to prevent their damage, deterioration, or loss when in the custody and control of SNC-Lavalin Nuclear Inc. (SLN).

Items can come under the custody of SLN through a number of methods as follows:

- From a supplier against a SLN purchase order;
- As 'free issue' from a Customer or Owner;
- Returned by a SLN qualified constructor I supplier after completion of work.

Procurement personnel are responsible for receiving and the Quality Assurance Specialist shall perform receiving inspection in accordance with operating procedure 2206-01-30-0P- 0009, Receiving Inspection.

Engineering shall specify special instructions related to preventing damage or loss, or minimizing item deterioration, equipment and material in EQRs, Technical Specifications and Drawings. Such requirements for handling, storage and preservation of SLN purchased items shall be defined in technical documents prepared in accordance with operating procedure 2206-07-20-0P-0001, Preparation of Engineering Documents by the Discipline Engineer. The technical documents shall consider the need for any special equipment (such as containers, shock absorbers, and accelerometers) and/or special protective environments (such as inert gas atmosphere, specific moisture content levels, and temperature levels).

When items are to be free-issued to SLN, the Project Manager shall ensure the requirements are specified by the item's owner and those requirements are incorporated into project plans. All items shall be controlled from their receipt, through handling, storage and preservation (as required), until released for installation, to prevent their abuse, misuse, deterioration, or loss of means of identification.

The control of storage and handling must ensure the following:

- Items are preserved from the time of their receipt to prevent their damage, deterioration or loss;
- Inspections are performed periodically and their results documented to ensure storage areas and the integrity of the items is maintained, as required;
- Appropriate instructions are available and implemented for any items requiring special handling or special tooling and equipment;
- Any special handling tools and equipment required are inspected and tested at specified times to verify they are adequately maintained.

14 Inspection and Test Status

14.1 General Requirements

The status of inspection and test activities shall be identified either on the items or in documents traceable to the items where it is necessary to assure that required inspections and tests are performed and to assure that items which have not passed the required inspections and tests are not inadvertently installed or used.

SLN Operating Procedure 2206-01-30-0P-0017 Inspection and Test Status describes the process to ensure that required inspections and tests are performed on items and to ensure that those that have not passed the required inspections and tests are not inadvertently installed, used, or operated. The status of inspection and test activities shall be identified either on the items or in documents traceable to them. The procedure applies to items while under the direct control of SNC-Lavalin Nuclear Inc. The procedure does not apply to items while under the control of SLN qualified suppliers including fabricators / constructors.

14.2 Status

SNC-Lavalin Nuclear ensures that the inspection and test status of items shall be indicated using the following methods:

- Application of a Status Tag;
- On the Inspection and Test Plan (ITP) or inspection records traceable to the item;
- At the Storage Location.

Upon request by project site personnel responsible for receiving, the Quality Assurance Specialist performs Receiving Inspection and uses the controlled form 2206-01-30-CF-0010, Receiving Report in accordance with 2206-01-30-0P-0009, Receiving Inspection.

In order to ensure that items that have not passed the required inspections and tests are not inadvertently installed or used, controls are in place to use status indication tags at the following stages at a project site warehouse:

- Receiving Inspection Stage;
- Handling and Storage Stage.

The Quality Assurance Specialist has the responsibility to perform receiving inspection in accordance with 2206-01-30-0P-0009, Receiving Inspection and apply, maintain and remove status indicators as required by this procedure.

15 Control of Nonconforming Items and Services

15.1 General Requirements

Item and process non-conformances that do not conform to specified requirements are controlled to prevent inadvertent use or installation or use. The controls shall provide for identification, documentation, evaluation, segregation when practical, and disposition of the nonconforming items, and for notification to the affected organizations.

Non-conformances shall be documented using Reporting Problems and Taking Action (ProAct) system as documented in ProAct Procedure, NU-912020-PRO-001. The ProAct nonconformance shall be sufficiently detailed to allow proper review, evaluation, and disposition by authorized personnel. The review, evaluation, and disposition shall be in accordance with the ProAct procedure to ensure that the nonconforming characteristics are reviewed and a recommended disposition is proposed and approved.

The Project Quality Assurance Manager shall ensure that work delivered to the jurisdiction of the United States of America, in accordance with ASME NQA-1, 10 CFR Part 50 - Appendix B, and 10 CFR Part 21 nonconformance reporting shall include:

- notification of the nonconformance to the Nuclear Regulatory Commission in a timely manner, in compliance with the statutory reporting requirements
- appropriate training for all personnel involved in such work of the statutory reporting requirement of the Nuclear Regulatory Commission
- posting of contact information for the Nuclear Regulatory Commission in conspicuous areas of the project office

SLN's qualified Supplier / Constructor shall process non-conformances as per their QA Program. Supplier's non-conformance/concessions and exceptions for dispositions for "use as is" or "repair/rework" to SLN through Document Control for acceptance as per 2206-01-20-OP-0003 Document Control Routines. The Technical Justification to support the recommendation shall be provided by SNC-Lavalin engineering as required. Nonconforming items shall be evaluated and recommended dispositions shall be proposed.

Further processing, delivery, installation, or use of a nonconforming item shall be controlled pending the evaluation and an approved disposition by authorized personnel. Personnel performing evaluations to determine a disposition shall have demonstrated competence in the specific area they are evaluating, have adequate understanding of the requirements and have access to pertinent background information.

Any BLN Project personnel can identify an undesirable condition. The initial report shall be sufficiently detailed to allow for proper review evaluation and disposition The Quality Manager shall evaluate the condition to determine if a Nonconformance Report is warranted.

16 Corrective Action

16.1 General Requirements

The Project Quality Assurance Manager shall ensure conditions adverse to quality are promptly identified and corrected. In the case of a significant condition adverse to quality, the cause of the condition shall be determined and corrective action taken to prevent recurrence.

16.2 Corrective Action

Any SNC-Lavalin Nuclear project employee can identify an undesirable condition. The Director, Quality Assurance shall ensure that all such identified conditions are subject to screening and further processed in accordance with the Reporting Problems and Taking Action through ProAct Procedure, NU-912020-PRO-001. Any BLN Project personnel can identify an undesirable condition adverse to quality. The process and documentation of conditions adverse to quality shall be in accordance with the organization's Quality Assurance Program who identified the condition.

Significant conditions adverse to quality are defined as follows:

- Conditions that could adversely impact health and safety of the public or environment;
- Conditions that could have a significant impact on reliability, availability, or maintainability of the equipment or facility;
- Conditions that could individually fall within the 'not significant' classification, but have been identified as recurring adverse conditions as a result of trend analysis;
- Based on judgment, the Quality Manager decides to classify a condition as significant that could otherwise be classified as not significant.

16.3 Supplier Corrective Action Request

Anytime the SNC-Lavalin discovers conditions adverse to quality associated with activities performed by suppliers, the Quality Manager shall ensure corrective action is requested using controlled form 2206-01-40-CF-0009, Supplier Corrective Action Request.

Anytime a Supplier / Constructor discovers conditions adverse to quality associated with activities performed by them or their sub-supplier, the Quality Manager shall ensure corrective action is requested, as required, by the Supplier / Constructor's QA Plan.

For each adverse audit finding, the Lead Auditor shall fill out section I of the Controlled Form 2206-01-40-CF-0009, Supplier Corrective Action Request and issue to the Supplier for a response in accordance with 2206-01-40-OP-0004, Performance of Audits.

Applicable Procedures

- NU-912020-PRO-001, Reporting Problems and Taking Action through ProAct
- 2206-01-30-OP-0004 Stop Work Order
- NU-905010-PRO-001Customer Feedback
- 2206-07-30-OP-0004 Corrective Action for Design Errors
- 2206-01-30-OP-0013 Causal Analysis
- NU-904010-PRO-001 Lessons Learned

17 Quality Assurance Records

17.1 General Requirements

All Quality Assurance records shall be indexed as soon as practical as the project executes by the Document Control Manager and controlled in accordance with 2206-01-20-OP-0002, Control of QA Records. These controls shall apply to the: generation, identification, authentication, storage, maintenance, and disposition, of quality assurance records. Requirements and responsibilities for these activities shall be documented.

Quality assurance records may be in any medium such as, paper hard copy, magnetic, electronic or optical computer disc, photograph, or any combination thereof. The customer and Authorized Nuclear Inspector shall be provided with access to quality assurance records at all times.

17.2 Generation of Records

Quality assurance records shall be complete, legible, and traceable to the associated items and activities and accurately reflect the work accomplished or information required.

Records to be generated, supplied, or maintained shall be specified in quality assurance program documents, such as design specifications, procurement documents, and test procedures.

17.3 Authentication of Records

Documents shall be considered valid records only if stamped, initialed, or signed and dated by authorized personnel.

Corrections to documents shall be reviewed and approved by the responsible individuals from the originating or authorized organizations

Electronic documents shall be authenticated as appropriate, with identification on the media, or authentication information contained within or linked to the document itself.

Following authentication, the quality assurance record shall be submitted to the Manager, Document Control for population of the index and storage.

17.4 Classification

Records shall be classified as permanent or non-permanent by the owner or his agent when authorized.

17.5 Receipt, Control and Retention of Records

Records shall be retained in accordance operating procedure 2206-01-20-OP-0002, Control of QA Records.

Documented procedures shall be established for the receipt, transmittal, authentication and documenting of quality records submitted to the BLN Project by external organizations.

Radiographs shall not be reproduced.

17.6 Storage

The Manager, Document Control shall establish records storage facilities in compliance with requirements of this section of the QAP, at the earliest practical time. The operating procedure 2206-01-20-0002, Control of QA Records shall include the following requirements:

- A description of the storage area
- The filing system to be used
- A method for verifying that records received are in agreement with the transmittal document and that record received are legible
- Verifying that the records are those designated
- Records access
- Process for tracking records removed from the records storage facility
- Methodology for filing supplemental information and identifying and disposing of superseded records
- Protocol for records disposal

Records shall be stored in facilities, container, or a combination thereof, constructed and maintained in a manner which protects them from loss, deterioration, destruction or damage from the following:

- natural disasters such as winds, floods, or fires,
- environmental conditions such as high and low temperatures including humidity,
- infestation of insects, mold, or rodents.

The Manager, Document Control shall implement dual facilities. Records shall be maintained in a hard copy format and an electronic format as identified in 2206-01-20-OP-0002, Control of QA Records remote from each other to eliminate the chance exposure to a simultaneous hazard.

17.7 Retention

At the end of the retention period, non-permanent records exceeding their retention period may be destroyed as authorized by the Senior Vice-President, Operations, and the Director, Quality Assurance.

17.8 Maintenance of Records

Records shall be complete, remain legible, readily identifiable, retrievable, and traceable to the item or activity to which they refer. Records shall be protected against loss, theft or deterioration by one or more of the following means:

- fire resistant file cabinets;
- environmental controls applied to records storage areas;
- offsite storage of duplicate files;
- back-up of electronic files.

Changes to records shall be controlled by documented procedures. Additional controls will be applied to records from special processes such as radiographs, photographs, negatives, microfilm, and magnetic and optical media, to prevent damage from excessive light, stacking, electromagnetic fields, temperature, and humidity.

17.9 Records Turnover

SLN shall maintain all permanent and non-permanent records while in their possession.

All permanent records resulting from procurement activities are compiled in HD/HF and provided to Operations for acceptance prior releasing items for site installation.

All Design Engineering Changes (EDC) have been processed as per agreement with ND.

18 Audits

18.1 General Requirements

The BLN project conducts internal audit and supplier audits at planned intervals to verify whether the Quality Assurance Program:

- conforms to the documented requirements,
- conforms to the requirements of applicable standard and codes,
- for internal audit and independent assessments,
  - i) conforms to the requirement of this QAP and supporting Quality Assurance Manuals
  - ii) is effectively implemented and maintained, and
- for external audit, conforms to the Quality Assurance Program requirements established by a supplier.

In addition to the above requirements, internal and external audits will also consider assessment of objective evidence that final item meets specified requirement

Operating procedure 2206-01-40-OP-0004, Performance of Audits, defines the responsibilities and requirements for planning and conducting audits, independent assessments, establishing records, and reporting results.

All personnel shall be qualified in accordance with BLN Project's Quality Assurance Program.

The BLN Project will not utilize third party audits provided by an external organization, as a basis for supplier qualification.

For each adverse audit finding, the Lead Auditor shall fill out section I of the Controlled Form 2206-01-40-CF-0009, Supplier Corrective Action Request and issue to the Supplier for a response in accordance with 2206-01-40-OP-0004, Performance of Audits.

19 Bellefonte Deferred Construction Permit

19.1 General Requirements

The SNC-Lavalin Bellefonte Quality Assurance Plan describes the top level policy that assigns major functional responsibilities for activities conducted by or for Nuclear Development's Bellefonte Units 1 and 2 (BLN) while the construction permits for the units remain in deferred status. The QAP describes the methods and establishes the administrative control requirements that meet applicable 10 CFR 50, Appendix B requirements, NRC Generic Letter 87-15, "Policy Statement on Deferred Plants," and the BLN 1 & 2 construction permits as reinstated in accordance with the terms of the NRC order reinstating the BLN Units 1 & 2 construction permits, dated March 9, 2009.

This section is developed to take into account the unique requirements and commitments necessary to ensure effective quality assurance program implementation and oversight of BLN 1 & 2.

The execution and accountability for quality assurance for the BLN 1 & 2 units remains with SNC-Lavalin, but may be delegated to support contractors for specific tasks and activities. Contracted activities are implemented through a SNC-Lavalin approved contractor Nuclear Quality Assurance Manual (NQAM) or may be implemented through direct implementation of the SNC-Lavalin QA program through SNC-Lavalin procedures. SNC-Lavalin's review and approval of a contractor NQAM, and any changes thereto, ensures that regulatory requirements and SNC-Lavalin specific commitments of this QAP are met. SNC-Lavalin retains and exercises the overall responsibility for the establishment and execution of an effective QA program for BLN 1 & 2.

Procedures and instructions that implement the requirements of the QAP are developed prior to commencement of those activities and are reviewed and approved by SNC-Lavalin.

19.2 Scope/Applicability for Current Activities Deferred Plant Status

This section applies to BLN 1& 2 plant activities while ND Development, LLC evaluates, maintains and preserves the units for the consideration of possible reactivation of construction and completion activities. SNC-Lavalin will take the actions necessary to maintain and preserve the units in order to maintain the option of plant reactivation in accordance with Generic Letter 87-15, "Policy Statement on Deferred Plants" and the terms of the NRC order reinstating the BLN Units 1 & 2 construction permits, dated March 9, 2009.

Basic guidelines for activities conducted at Bellefonte during this period are listed below:

- No physical work which advances construction status will be performed and no completion credit will be taken for any asset preservation activities performed.
- Physical work on permanent plant SSCs will be limited to work necessary for maintenance and preservation of plant assets.

- The construction configuration management tool, Engineering/Construction Monitoring and Documentation system (ECM&D) will not be modified to reflect advancement of construction status.

- The ECM&D will be modified to reflect correct status of equipment , e.g., ECM&D status will be changed to remove completion status that is not consistent with current plant construction status (examples: where a component was previously installed , but subsequently removed by investment recovery(IR) activities; or lifting of a previously landed lead during maintenance related activities).

- The BLN ASME Section III “N” stamp has been surrendered, and the ASME QAM is not active.. If active construction is resumed, the ASME Section III program will be re-established, most likely by an Engineering, Procurement and Construction (EPC) contractor. Should an ASME code system require maintenance or modification to support operation or PM activities required while in deferred status, configuration control records will be modified to reflect work done where existing QA records are invalidated. Additionally, work performed on ASME systems will be identified for future use and evaluation in re-establishing the ASME Section III QA program.

- Most material purchased to perform maintenance and PM program activities while in deferred status will be procured to commercial standards and will be installed using procedure, Control of Temporary Installation or Omission (TIO) process. Some material may be procured to applicable quality requirements for future use in permanent plant applications should active construction be resumed.

- No activities which will require NDE are expected to be performed during deferred plant status however informational NDE for the purpose of Detailed Scoping Estimating Planning (DSEP) may be performed.

19.3 Organization

The following sections describe the reporting relationships, functional responsibilities, and authorities for organizations implementing and supporting the Nuclear Quality Assurance Program as it applies to BLN Units 1 & 2 in a terminated or deferred plant status.

19.3.1 Bellefonte Owner, Nuclear Development

The Bellefonte Owner is responsible for ensuring all requirements associated with the Bellefonte Deferred Construction permit are met. The Owner may delegate the specific responsibilities to the SNC-Lavalin Engineering, Procurement and Construction Management (EPCM) organization provided they maintain a 10CFR Appendix B QA program with attendant independent oversight performed by the SNC-Lavalin Quality Assurance organization.

19.3.2 Chief Nuclear Officer, SNC-Lavalin Nuclear (CNO)

The CNO is responsible for SNC-Lavalin's programs and projects which include all aspects of design, construction and operation of the Bellefonte nuclear plants. The CNO is also responsible for all technical and administrative support activities provided by SNC-Lavalin and contractors.

19.3.3 Project Director, BLN Project

The SNC-Lavalin Bellefonte Project Director responsible for the BLN Project, reports to the SNC-Lavalin CNO, and is responsible for the overall implementation of the project, ensuring the quality assurance requirements in the areas specified by this QAP for BLN 1 and 2 plant activities are met.

19.3.4 Director, Quality Assurance SNC-Lavalin Nuclear

The Director, Quality Assurance, is responsible for ensuring that the SNC-Lavalin BLN QA organization is sized commensurate with assigned duties and responsibilities. This is accomplished through the use of a dedicated and experienced QA organization performing oversight activities both onsite and offsite.

The SNC-Lavalin Nuclear Quality Assurance organization is responsible for independently planning and performing audit activities to verify the effective implementation of the QAP described in this document for BLN 1 and 2 activities including, but not limited to engineering, QA/QC, licensing, document control, corrective action program, and procurement that support retention of the deferred construction permit for BLN-1 and 2.

The Director, Quality Assurance shall review results of all completed audits, ensure findings are properly documented and shall review results of the audit with the Bellefonte Owner, ND.

19.4 Deferred Permit Procedures

During the period that BLN units 1 & 2 remain in terminated or deferred status as described in Generic Letter 87-15, "Policy Statement on Deferred Plants" the Quality Assurance elements described in this section and the body of the QAP will be accomplished through written, reviewed and approved procedures. At minimum, procedures shall be in place for the following activities;

19.4.1 Organization

Roles and Responsibilities of the organization shall be defined.

19.4.2 QA Program

QA Plan shall contain the QA organizational roles and responsibilities, equipment covered by the QA plan shall be identified and personnel performing work and audits shall be trained and qualified.

19.4.3 Document and QA Record Control

Documents shall be retained with processes in place for configuration control, including any procurement related documents.

19.4.4 Corrective Action Program

Any corrective actions adverse to quality shall be maintained in Corrective Action program.

19.4.5 Material Storage and Handling

Procedures shall be in place to ensure material, parts and equipment is procured, stored and handled correctly with provisions for non-conformance also contained in procedures.

19.4.6 Equipment Maintenance

Procedures, instructions and drawings shall be in place to ensure that any maintenance performed on plant equipment is conducted properly, measuring and test equipment properly maintained and calibrated, and equipment is properly identified and controlled. Records associated with maintenance shall be retained including any test or inspection reports or results.

Site procedures that were not used in the period of deferral before the construction permits were withdrawn and placed in inactive status. As activities necessary to consider the viability of construction completion are required, the applicable procedures will be reactivated, reviewed and reissued prior to the conduct of the activity.

19.4.7 Site Security

Program providing controls for general access to site.

19.5 Audits

Periodic audits to ensure all required for maintaining the deferred construction permit shall be conducted on a frequency of at least annually. The audits shall be performed by qualified and appropriately trained QA personnel. Problems including conditions adverse to quality are documented through the corrective action program.

The results of assessments are documented and reported to appropriate levels of management in the ND and SNC-Lavalin organizations.

Records maintain sufficient detail to provide adequate documentation of assessed activities. Follow up verifications or additional assessments may be conducted as necessary to ensure that required corrective action has been taken.

The audit will evaluate the following:

- Construction Permit and Deferred Status Activities – evaluate for reasonable assurance that activities authorized by the permit are in compliance
- Quality Assurance Program Requirements – evaluate the QA plan requirements for implementation and adequacy of records, documents and procedures. Verify the implementation and overall effectiveness of the QA plan.
- Maintenance and Equipment Preservation Activities – verify the established measure to control maintenance and equipment preservation in plant deferred status
- Corrective Action - verify established measures in place to control non-conformances, deficiencies and conditions adverse to quality

19.6 Plant Equipment Policy

An important factor in considering the viability of construction reactivation and completion includes the impact of equipment age on its continued suitability for use. Considerations regarding age degradation due to design life, outdated or obsolete equipment, design improvements, any impact associated with resource recovery activities, and economic feasibility to replace rather than preserve equipment indefinitely under a lay-up program must be taken into account given the age of certain existing equipment. For these reasons, in August 2003, the Tennessee Valley Authority (TVA) submitted, and in May 2004 the NRC approved a change to the QAP that allowed preventive maintenance to be terminated on selected equipment and to allow that equipment to be entered into the corrective action program as “deferred equipment”. SNC-Lavalin procedure controls prohibit and will continue to prohibit “deferred equipment” from being used in nuclear safety related applications without further evaluation and having been fully restored or replaced.

Structures, systems or components that have been affected in the course of resource recovery activities will likewise be entered in to the corrective action program and prohibited from being returned to service without evaluation and having been restored or replaced.

APPLICATION FOR ORDER APPROVING CONSTRUCTION PERMIT TRANSFERS AND CONFORMING CONSTRUCTION PERMIT AMENDMENTS

ATTACHMENT 2

CONSTRUCTION PERMIT (CHANGES)

Bellefonte Nuclear Plant, Unit 1

NRC CONSTRUCTION PERMIT NO. CPPR-122
DOCKET NO. 50-438

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

~~TENNESSEE VALLEY AUTHORITY~~ NUCLEAR DEVELOPMENT, LLC
DOCKET NO. 50-438
BELLEFONTE NUCLEAR PLANT, UNIT 1
CONSTRUCTION PERMIT

Construction Permit No. CPPR-122

1. The Atomic Energy Commission (the Commission) having found that:

A. The application for construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission, there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made:

B. The ~~Tennessee Valley Authority~~ Nuclear Development, LLC (the applicant) has described the proposed design of the Bellefonte Nuclear Plant, Unit 1 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;

C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

D. Safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

E. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

F. The applicant is technically qualified to design and construct the proposed facility;

G. The applicant is financially qualified to design and construct the proposed facility;

H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and

I. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 50, Appendix D of the Commission's regulations and all applicable requirements have been satisfied.

2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the Initial Decision of the Atomic Safety and Licensing Board, dated December 23, 1974, the Atomic Energy Commission (the Commission) hereby issues a construction permit to the applicant for a utilization facility designed to operate at 3600 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the applicant and as more fully described in the evidence received at the public hearing upon the application. The facility, known as the Bellefonte Nuclear Plant, Unit 1 will be located on the applicant's site in Jackson County, Alabama.

3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the conditions specified or incorporated below:

A. The earliest date for the completion of the facility is June 1, 1979, and the latest date for completion is October 1, ~~2011~~ 2029.

B. The facility shall be constructed and located at the site as described in the application, in Jackson County, Alabama.

C. This construction permit authorizes the applicant to construct the facility described in the application and the hearing record, in accordance with the principal architectural and

APPLICATION FOR ORDER APPROVING CONSTRUCTION PERMIT TRANSFERS AND CONFORMING CONSTRUCTION PERMIT AMENDMENTS

ATTACHMENT 3

CONSTRUCTION PERMIT (CLEAN)

Bellefonte Nuclear Plant, Unit 1

NRC CONSTRUCTION PERMIT NO. CPPR-122
DOCKET NO. 50-438

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NUCLEAR DEVELOPMENT, LLC
DOCKET NO. 50-438
BELLEFONTE NUCLEAR PLANT, UNIT 1
CONSTRUCTION PERMIT

Construction Permit No. CPPR-122

1. The Atomic Energy Commission (the Commission) having found that:

A. The application for construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission, there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made:

B. The Nuclear Development, LLC (the applicant) has described the proposed design of the Bellefonte Nuclear Plant, Unit 1 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;

C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

D. Safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

E. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

F. The applicant is technically qualified to design and construct the proposed facility;

G. The applicant is financially qualified to design and construct the proposed facility;

H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and

I. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 50, Appendix D of the Commission's regulations and all applicable requirements have been satisfied.

2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the Initial Decision of the Atomic Safety and Licensing Board, dated December 23, 1974, the Atomic Energy Commission (the Commission) hereby issues a construction permit to the applicant for a utilization facility designed to operate at 3600 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the applicant and as more fully described in the evidence received at the public hearing upon the application. The facility, known as the Bellefonte Nuclear Plant, Unit 1 will be located on the applicant's site in Jackson County, Alabama.

3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the conditions specified or incorporated below:

A. The earliest date for the completion of the facility is June 1, 1979, and the latest date for completion is October 1, 2029.

B. The facility shall be constructed and located at the site as described in the application, in Jackson County, Alabama.

C. This construction permit authorizes the applicant to construct the facility described in the application and the hearing record, in accordance with the principal architectural and

APPLICATION FOR ORDER APPROVING CONSTRUCTION PERMIT TRANSFERS AND CONFORMING CONSTRUCTION PERMIT AMENDMENTS

ATTACHMENT 4

CONSTRUCTION PERMIT (CHANGES)

Bellefonte Nuclear Plant, Unit 2

NRC CONSTRUCTION PERMIT NO. CPPR-123
DOCKET NO. 50-439

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

~~TENNESSEE VALLEY AUTHORITY~~ NUCLEAR DEVELOPMENT, LLC
DOCKET NO. 50-439
BELLEFONTE NUCLEAR PLANT, UNIT 2
CONSTRUCTION PERMIT

Construction Permit No. CPPR-123

1. The Atomic Energy Commission (the Commission) having found that:

A. The application for construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission, there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made:

B. The ~~Tennessee Valley Authority~~ Nuclear Development, LLC (the applicant) has described the proposed design of the Bellefonte Nuclear Plant, Unit 2 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;

C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

D. Safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

E. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will he satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

F. The applicant is technically qualified to design and construct the proposed facility;

G. The applicant is financially qualified to design and construct the proposed facility;

H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and

I. After weighing the environmental, economic, technical and other benefits of the facility against, environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 50, Appendix D of the Commission's regulations and all applicable requirements have been satisfied.

2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the Initial Decision of the Atomic Safety and Licensing Board, dated December 23, 1974, the Atomic Energy Commission (the Commission) hereby issues a construction permit to the applicant for a utilization facility designed to operate at 3600 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the applicant and as more fully described in the evidence received at the public hearing upon the application. The facility, known as the Bellefonte Nuclear Plant, Unit 2 will be located on the applicant's site in Jackson County, Alabama.

3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the conditions specified or incorporated below:

A. The earliest date for the completion of the facility is March 1_ 1980 and the latest date for completion is October 1, ~~2014~~ 2029.

B. The facility shall be constructed and located at the site as described in the application, in Jackson County, Alabama.

C. This construction permit authorizes the applicant to construct the facility described in the application and the hearing record, in accordance with the principal architectural and

APPLICATION FOR ORDER APPROVING CONSTRUCTION PERMIT TRANSFERS AND CONFORMING CONSTRUCTION PERMIT AMENDMENTS

ATTACHMENT 5

CONSTRUCTION PERMIT (CLEAN)

Bellefonte Nuclear Plant, Unit 2

NRC CONSTRUCTION PERMIT NO. CPPR-123
DOCKET NO. 50-439

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NUCLEAR DEVELOPMENT, LLC
DOCKET NO. 50-439
BELLEFONTE NUCLEAR PLANT, UNIT 2
CONSTRUCTION PERMIT

Construction Permit No. CPPR-123

1. The Atomic Energy Commission (the Commission) having found that:

A. The application for construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission, there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made:

B. The Nuclear Development, LLC (the applicant) has described the proposed design of the Bellefonte Nuclear Plant, Unit 2 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;

C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

D. Safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

E. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will he satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

F. The applicant is technically qualified to design and construct the proposed facility;

G. The applicant is financially qualified to design and construct the proposed facility;

H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and

I. After weighing the environmental, economic, technical and other benefits of the facility against, environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 50, Appendix D of the Commission's regulations and all applicable requirements have been satisfied.

2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the Initial Decision of the Atomic Safety and Licensing Board, dated December 23, 1974, the Atomic Energy Commission (the Commission) hereby issues a construction permit to the applicant for a utilization facility designed to operate at 3600 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the applicant and as more fully described in the evidence received at the public hearing upon the application. The facility, known as the Bellefonte Nuclear Plant, Unit 2 will be located on the applicant's site in Jackson County, Alabama.

3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the conditions specified or incorporated below:

A. The earliest date for the completion of the facility is March 1_ 1980 and the latest date for completion is October 1, 2029.

B. The facility shall be constructed and located at the site as described in the application, in Jackson County, Alabama.

C. This construction permit authorizes the applicant to construct the facility described in the application and the hearing record, in accordance with the principal architectural and