Owner's Dam Safety Program

Saluda Hydro, FERC Project No. 516

Parr Shoals Hydro & Fairfield Pumped Storage, FERC Project No. 1894

Roanoke Rapids and Gaston, FERC Project No. 2009

Neal Shoals Hydro, FERC Project No. 2315

Stevens Creek Hydro, FERC Project No. 2535

Bath County Pumped Storage Station, FERC Project No. 2716

North Anna Hydro, FERC Project No. 6335

Revision 1
November 2024

Virginia Electric and Power Company, d/b/a Dominion Energy Virginia, Dominion Energy North Carolina, Dominion Energy South Carolina

OWNER'S DAM SAFETY PROGRAM

SALUDA HYDRO, FERC PROJECT No. 516

PARR SHOALS HYDRO & FAIRFIELD PUMPED STORAGE
FERC PROJECT No. 1894

ROANOKE RAPIDS AND GASTON
FERC PROJECT No. 2009

NEAL SHOALS HYDRO, FERC PROJECT No. 2315

STEVENS CREEK HYDRO, FERC PROJECT No. 2535

BATH COUNTY PUMPED STORAGE STATION
FERC PROJECT No. 2716

NORTH ANNA HYDRO
FERC PROJECT No. 6335

VIRGINIA ELECTRIC AND POWER COMPANY
d/b/a DOMINION ENERGY VIRGINIA,
DOMINION ENERGY NORTH CAROLINA, DOMINION ENERGY SOUTH CAROLINA

TABLE OF CONTENTS

DISTRIBUTION

Vice President System Operations (DEVA); Vice President Power Generation (DESC)

Director Power Generation Operations Support (DEVA); Director Power Generation Engineering (DESC); Director Power Generation Stations (DESC)

Chief Dam Safety Engineers – DEVA/DENC, DESC, North Anna NS

Regulatory Compliance Coordinators - DEVA/DENC, North Anna NS

Bath County
- **Station Director**
- **Station Operations Manager**
- **Supervisor Technical Support**
- **Emergency Action Plan Coordinator**

Roanoke Rapids/Gaston
- **Station Director**
- **Station Manager**
- **Station Service Coordinator**
- **Emergency Action Plan Coordinator**
- **Supervisor Operations**

Saluda Hydroelectric
- **Plant Manager**
- **Plant Supervisor**
- **Plant Engineer**

Parr Shoals & Fairfield Pumped Storage
- **Plant Manager**
- **Plant Supervisors**
- **Plant Engineer**

Stevens Creek
- **Plant Manager**
- **Plant Supervisor**
- **Plant Engineer**

North Anna Hydroelectric Project
- **Site Vice President**
- **Vice President Nuclear Engineering**
- **North Anna Plant Manager**
- **Director Nuclear Station Engineering**
- **Director Corporate Nuclear Engineering & Fuel**
- **Operations Manager**
- **Director of Nuclear Safety and Licensing**
- **Manager Station Training**

REVISION RECORD

Revision*	Date
0	November 2023
1	November 2024
2	_____
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* Program to be reviewed annually and updated when significant changes are required.

1.0 PURPOSE AND SCOPE

1.1 Purpose

The purpose of Dominion Energy Owner's Dam Safety Program (ODSP, Program) is to ensure that Dominion Energy dams are operated and maintained in a manner that is safe, protects the public and are managed in a manner consistent with the highest industry standards.

1.1.1 The Program is intended to ensure all Dominion Energy employees, consultants and contractors with responsibilities related to its FERC licensed hydropower projects (Projects) understand dam safety standards and requirements and that they have a responsibility to fully comply with all said standards and requirements.

- The Program is intended to ensure that communication on dam safety matters includes key Dominion Energy leadership, including the Dominion Energy officers who are tasked with dam safety:
    - Roanoke Rapids & Gaston, and Bath County Pumped Storage: DEVA/DENC Vice President Power Generation Operations
    - Saluda, Parr Shoals & Fairfield Pumped Storage, Neal Shoals, and Stevens Creek: DESC Vice President Power Generation
    - North Anna: Site Vice President, North Anna Nuclear Station.
- The Program is intended to clearly state dam safety policies and expectations for the management and employees at the Projects and management and employees that provide support to the Projects.

1.1.2 This Program is intended to clearly state the processes, procedures and regulations in place prescribing the following for all employees involved with dam safety, maintenance, operations and compliance:

- Required dam safety related training and refresher training intervals in order to prevent and respond to dam safety issues
- Protocols for communication by and among individuals and with FERC on dam safety related matters
- Define responsibilities of key personnel related to dam safety
- Define and establish record keeping requirements; and
- Define the plan for audits and assessments.

1.2 Scope

The requirements of Dominion Energy's Owner's Dam Safety Program apply to:

- Saluda Hydro, FERC Project No. 516 (P-516)
- Parr Shoals & Fairfield Pumped Storage, FERC Project No. 1894 (P-1894)
- Roanoke Rapids and Gaston Hydropower Stations, FERC Project No. 2009 (P-2009)
- Neal Shoals, FERC Project No. 2315 (P-2315)
- Steven Creek Hydro, FERC Project No. 2535 (P-2535)
- Bath County Pumped Storage Station, FERC Project No. 2716 (P-2716)
- North Anna Hydroelectric Project, FERC Project No. 6335 (P-6335)

1.2.1 This Program defines Dominion Energy's commitment to ensure that the Projects are operated in a manner that protects the public, are operated in a manner that does not compromise dam safety or integrity and that inspection programs are in place and are properly managed.

2.0 TERMS AND DEFINITIONS

2.1. Abutment - That part of the natural valley side against which the dam is constructed. The left and right abutments of dams are defined with the observer viewing the dam looking in the downstream direction.

2.2. Audit – An objective examination and evaluation of safety, compliance and industry practices in accordance with an audit plan.

2.3. BCPSS – Bath County Pumped Storage Station.

2.4. Chief Dam Safety Engineer (CDSE) – Dominion Energy's designated point of contact for each FERC project outside of the Nuclear Business Unit for non-emergency regulatory/technical communications from Dominion Energy's to the Commission. The CDSE is a licensed civil engineer or geologist with the requisite background and expertise in dam safety matters.

2.5. Commission and FERC – Federal Energy Regulatory Commission.

2.6. Commission's Atlanta Regional Office – The Commission's Division of Dam Safety and Inspections' Regional office responsible for dam safety oversight of the Projects referenced in this Program.

2.7. Dam Safety Inspection – The methodical and regularly scheduled process of reviewing parameters that are incorporated in evaluating the safety of a dam and visually observing the dam to evaluate if the dam is performing as designed.

2.8. Dike – A subsidiary dam intended to contain or segregate portions of a reservoir or other water body.

2.9. DomEnO – A Dominion Energy online system for tracking regulatory requirements and reporting safety and environmental incidents.

2.10. Dominion Energy – Virginia Electric and Power Company, doing business as Dominion Energy Virginia, Dominion Energy North Carolina, Dominion Energy South Carolina, and Dominion Energy Generation.

2.11. DSSMP and STID - Dam Safety Surveillance and Monitoring Program and Supporting Technical Information Document. These are FERC required components of a licensee's dam safety program.

2.12. EAP – Emergency Action Plan

2.13. FFPS or FPS, Fairfield – Fairfield Pumped Storage Station.

2.14. Foundation, Dam – The naturally occurring bedrock or soil materials upon which the dam is constructed. A properly designed dam and foundation ensure that the dam is stable, will not move downstream, will not experience erosive uncontrolled seepage and will not experience damaging uplift under all load conditions.

2.15. Gate – A movable barrier used for a controlled release of floodwater through a dam. In the high hazard dams covered by this Program, the gates referenced are either Radial (Tainter) gates, or vertical slide gates.

2.16. Geotechnology (geotechnical) - The application of scientific methods and engineering techniques used to evaluate natural geological materials and their interaction is civil engineering design and performance.

2.17. Instrumentation – Electronic and physical devices used to determine various physical characteristics and changes to those characteristics in a dam. These include such devices as "V-notched" weirs, reservoir level indicators, inclinometers, etc. Each dam is equipped with instrumentation appropriate for measuring dam performance characteristics including leakage, stability, settlement, etc.

2.18. Low Level Outlet Works – The valves and control system on some dams that allows relatively small amounts of water to be released from the reservoir without operating the turbines.

2.19. ODSP – Owner's Dam Safety Program.

2.20. Operations – The portion of the project that involves water conveyance (spillway gate operation), generation of electricity or in the case of pumped storage, pump operation. Although generally separate from typical dam safety analyses, evaluation of generation/pumping methods and procedures have the potential to affect dam safety and must be part of a good dam safety program.

2.21. Part 12 Guidelines – FERC guidelines for implementing the requirements of Periodic Inspections and Comprehensive Assessments required per 18 CFR Part 12, Subpart D.

2.22. Part 12 Inspections – Periodic Inspection or Comprehensive Assessment of a licensed project by an independent consultant per 18 CFR Part 12, Subpart D, occurring on an alternating 5-year cycle.

2.23. Penstock: A pressurized pipeline, shaft, or tunnel between the reservoir and hydraulic machinery.

2.24. PFMA – Potential Failure Modes Analysis

2.25. Piezometer: Instrumentation designed to measure ground water levels or pore water pressures in embankments or foundations.

2.26. Power Generation. The departments within Dominion responsible for operations related to non-nuclear electric generation.

2.27. Program – Dominion Energy's Owner's Dam Safety Program (ODSP)

2.28. Projects – Dominion Energy's FERC licensed, and license exempted projects covered by this consolidated Owner's Dam Safety Program: Saluda Hydro, P-516; Parr Shoals & Fairfield Pumped Storage, P-1894; Neal Shoals, P-2315; Roanoke Rapids and Gaston hydropower project, P-2009; Bath County Pumped Storage Station, P-2716; Steven Creek Hydro, P-2535; and North Anna Hydroelectric Project, P-6335.

2.29. Radial Gate: (Tainter gate) - A gate with a curved upstream plate and radial arms hinged to piers or other supporting structure.

2.30. Relief Wells - Vertical wells typically in an interior drainage gallery or in the downstream toe area of a dam to collect and control seepage through and under the dam.

2.31. Survey Monuments (Settlement Markers) - Metal discs or markers permanently installed that are used during surveys to determine earthen dam and spillway structure movement.

2.32. Spillway – A gated or ungated channel or weir for excess water to move past or over a dam; may be associated with the structures downstream of a gate or emergency flood channel in excess of gate capacity.

2.33. Spillway Emergency Diesel Generator (SEDG) - Back-up emergency power supply for spillway gates or other safety devices.

2.34. Stop Logs or Caissons - Metal or concrete barriers placed in front of gates to allow full height opening without discharging water, used during maintenance of the gates.

2.35. Surveillance and Monitoring – The methodical process of inspecting dams and observing, recording and evaluating key dam performance monitoring instrumentation.

2.36. Weir - A device for measuring the rate of flow of water. It generally consists of a rectangular, trapezoidal, triangular, or other shaped notch, located in a vertical, thin plate over which water flows. The height of water above the weir crest is used to determine the rate of flow.

3.0 DOMINION ENERGY DAM SAFETY POLICIES

3.1 Dominion Energy Corporate Dam Safety Policy

The Purpose of Dominion Energy's Owner's Dam Safety Program is ultimately to protect the public downstream of Dominion Energy's dams. In addition, it is to ensure employee safety

and protect critical energy infrastructure in accordance with the Commission's May 3, 2012 directive. This is accomplished by setting internal policies and procedures to ensure that all applicable affected employees and leadership are committed and trained in the technical, administrative, communications and safety aspects of owning and operating Dominion Energy's dams.

3.2 Dominion Energy Dam Safety Mission Statement

The mission of the Dominion Dam Safety organization is to assure the integrity, safety, and routine inspection of the dams (impounding structures) associated with all applicable Dominion Energy Hydropower Facilities. All dams will be inspected on a regular basis by a Professional Engineer (P.E.) with the assistance of station or corporate engineering staff. Routine maintenance of the dams covered by this strategy is the responsibility of the individual generating station at which the dam is located. The goal of Dominion Energy is:

3.2.1 To prioritize dam safety as a fundamental value as part of the Dam Safety Surveillance Monitoring and Maintenance program. Promoting principles of dam safety awareness and providing appropriate training to all personnel that are expected to have access to dam sites.

3.2.2 To have adequate documentation of all existing dams including but not limited to foundation condition, construction materials, hydrologic and hydraulic calculations, structural calculations, and stability calculations.

3.2.3 To have a P.E., experienced in dam safety, regularly inspect dams, and provide proactive guidance to the power stations.

3.2.4 To ensure adequate maintenance of dams by the power stations.

3.2.5 To have outstanding critical issues at any company owned dam evaluated by qualified professionals and have an approved plan and schedule for correcting the issue in place.

3.3 Objectives of Specific Dam Safety Program Components

Protection of Dominion Energy's employees, the public and Dominion Energy's assets through the Program is of utmost importance and is integral with Dominion Energy's safety culture. The Program incorporates the following existing dam safety programs, and components:

3.3.1 Emergency Action Plans

Dominion Energy shall maintain Emergency Action Plans for each Project in accordance with Code of Federal Regulations 18 CFR Part 12 (Part 12), Subpart C and with Commission Engineering Guidelines, Chapter 6, "Emergency Action Plans", most current revision (Guidelines).

3.3.2 Part 12 Dam Safety Inspections

Dominion Energy shall perform Periodic Inspections and Comprehensive Assessments in accordance with 18 CFR Part 12, Subpart D, and Chapter 14 of the Guidelines "Dam Safety Performance Monitoring Program", most current revision.

3.3.3 Security Program

The goal of Dominion Energy's security plan is to ensure the dams are protected from acts of vandalism or sabotage, including cyber-attacks. Dominion Energy ensures this through strict adherence with the Commission's security requirements per the Commission's *Security Program for Hydropower Projects,* most current revision, and the most updated and applicable National Electric Reliability Council standards.

3.3.4 Potential Failure Modes Analysis (PFMA)

Dominion Energy conducted the initial PFMA (Chapter 14 of the Guidelines "Dam Safety Performance Monitoring Program") for the high hazard Projects covered by this Program on the following dates:

Saluda (P-516): 2005
Parr Shoals/FFPS (P-1894): 2006
Roanoke Rapids/Gaston (P-2009): 2007
Stevens Creek (P-2535): 2006
Bath County (P-2716): 2005
North Anna (P-6335): 2006

Dominion Energy may review the PFMA with the Commission's Atlanta Regional Office dam safety engineer upon request and will review the PFMA with the independent consultant during the 5-year Part 12 Periodic Inspection (PI) or Comprehensive Assessment (CA).

3.3.5 Dam Safety Surveillance and Monitoring Plan

Dominion Energy shall ensure all projects are inspected and instrumented in a manner that ensures overall project safety. The instruments shall be maintained by qualified technicians and engineers. An annual report shall be provided to the Commission's Atlanta Regional Engineer reviewing key instrumentation data and trends.

Each project will have in place schedules and procedures to ensure inspections are performed and appropriate data is gathered to monitor project safety performance and maintenance of instrumentation.

3.4 Key Leadership and Employee Expectations

3.4.1 All applicable employees, consultants and contractors responsible for operating, maintaining, overseeing or supporting the Projects will fully comply with all the Commission's dam safety related requirements.

3.4.2 Dominion Energy will communicate these expectations through training sessions (to employees assigned to the Projects) or by providing a copy of this Program. It will be a requirement of the Dam Safety Program for each project to determine the proper level of training required for Dominion Energy employees and contractors based on relevant factors, including experience, prior training and level of expected services to be performed for Dominion Energy.

3.5 Organization and Communication Flow Charts

3.5.1 Key Dominion Energy officers including but not limited to those listed below are responsible for developing, implementing and enforcing key policies including general policies involving regulatory compliance and public safety.

<u>Dominion Energy</u>
Dominion Energy Chairman of the Board and Chief Executive Officer (CEO).
Executive Vice President and COO.

<u>DEVA/DENC</u>
Senior Vice President Power Generation
Vice President Power Generation System Operations*
Vice President Power Generation Technical Services

<u>North Anna Hydroelectric Project</u>
Site Vice President North Anna Nuclear Station*
Vice President Nuclear Engineering and Fleet Support
Director – Nuclear Station, Safety and Licensing

<u>DESC</u>
President, Dominion Energy South Carolina

Vice President DESC Power Generation*

*Dominion Energy officers with primary responsibility for ensuring dam safety and regulatory compliance at each project

Dominion Energy's internal communication is established to ensure the Chief Dam Safety Engineer for each project has a direct line of communication with the applicable Dominion Energy officers and Station Directors or Managers. The Organizational Flow Charts related to dam safety for DEVA/DENC, North Anna Power Station, and DESC are included in Appendices A, B, and C, respectively.

4.0 RESPONSIBILITIES FOR DAM SAFETY

4.1 Chief Executive Officer and Board of Directors

The responsibilities of the Dominion Energy Chief Executive Officer and Board of Directors include the following: establishing the corporate safety philosophy; providing policies, directives and sufficient resources; understanding the company's Responsibilities and Liabilities including those associated with ownership of a dam; and understanding life safety and financial risks including those associated with dam ownership.

4.2 Dominion Energy Virginia & Dominion Energy North Carolina

4.2.1 Vice President System Operations, DEVA &DENC Power Generation

The Vice President System Operations is DEVA's and DENC's Officer with responsibility for ensuring safe operation and regulatory compliance for the DEVA & DENC hydroelectric projects and dams. This vice president is the designated primary point of contact for notification by the Commission's Southeast Regional Office for matters of dam safety and security.

4.2.1.1. The Vice President System Operations shall ensure the Project directors have sufficient resources to assure safe and compliant operation of the Commission's licensed facilities.

4.2.1.2 The Vice President System Operations shall be responsible for reporting to Dominion Energy's Chairman of the Board and Chief Executive Officer matters of dam safety significance that require the CEO's attention.

4.2.1.3 The Vice President System Operations shall annually issue a signed copy of Power Generation's dam safety policy to all employees responsible for any facet of safe dam operations or regulatory compliance.

4.2.2 Director, Power Generation Stations

The Directors of Power Generation Stations are tasked with providing daily guidance and operating program support to the Projects. These directors supply direct operations support to the Plant Managers or Supervisors during any emergency and assists the station managers/supervisors in planning for dam safety and regulatory compliance needs.

4.2.3 **Vice President, Power Generation Technical Services**

The Vice President Power Generation Engineering is tasked with supplying technical guidance and expertise to ensure safe and compliant operation of the Projects in general and specifically engineering support for capital projects and maintenance related to dam safety issues

4.3 North Anna Hydroelectric Project

4.3.1 North Anna Power Station Site Vice President

The Site Vice President (SVP) is the North Anna Dam Safety Officer with responsibility for ensuring safe operation and regulatory compliance for the Project in accordance with the ODSP. The SVP is the primary point of contact for notification by the Commission's Southeast Regional Office for matters of safety and security. The SVP understands the risks associated with dam ownership.

The SVP ensures the Project has sufficient resources to assure safe and compliant operation. The SVP is responsible for reporting to Dominion Energy's senior management including the Chairman of the Board and Chief Executive Officer on matters of dam safety. The SVP is responsible for overseeing day-to-day implementation of the dam safety program.

4.3.2 Vice President Nuclear Engineering

The Vice President Nuclear Engineering is responsible for engineering and technical functions within the Engineering Department. The Chief Dam Safety Engineer is part of the Engineering organization.

4.3.3 Plant Manager

Responsible for ensuring operations and maintenance activities at the Project are performed in accordance with established procedures and communicating project issues to the Site Vice President.

4.3.4 Director Nuclear Station - Safety and Licensing

The Director Station – Safety and Licensing is tasked with leading the licensing organization, ensuring FERC regulatory compliance regarding dam safety, public safety as it relates to Project operation, Project operation and performance, regulatory reporting, and ensuring effective communication of dam safety related issues between the station and the FERC organization. Emergency preparedness personnel also work for the director.

4.3.5 Director Nuclear Station Engineering

The Director Engineering is tasked with supplying technical guidance and expertise to ensure safe and compliant operation of the Project in general and specifically engineering support for periodic testing, inspections, and design modifications related to the dam.

4.3.6 Director Corporate Nuclear Engineering & Fuel

The Director Corporate Nuclear Engineering is tasked with supporting safe and compliant operation of the Project. The Chief Dam Safety Engineer works for the Director.

4.3.7 Operations Manager

Responsible for the safe and efficient operation of the Project. Main Dam Operators report to the Manager.

4.3.8 Maintenance Manager

Responsible for maintaining the physical condition of Project equipment to optimize safety, reliability, and availability.

4.3.9 Manager Station Training

Responsible for implementing policies, procedures, instructional systems, and staffing plans that establish and maintain effective training services to station personnel associated with the operation and maintenance of the Project.

4.3.10 Manager Nuclear Emergency Preparedness/Licensing

Responsible for FERC regulatory compliance regarding dam safety, regulatory reporting, and organizing dam safety related correspondence issues between the station and the FERC. Reports to the Director Nuclear Station - Safety and Licensing.

4.3.11 Main Dam Operators

Operators are responsible for day-to-day monitoring of the Project including but not limited to lake levels, visual inspections, spillway gate operations and testing, emergency generator operation and testing, and hydro unit operations. Operators communicate concerns to the Station Operations Shift Manager. The Project is manned seven (7) days a week by station Operators.

4.3.12 Maintenance Personnel

Responsible for maintaining mechanical, electrical, instrument and control equipment at the Project.

4.3.13 Design Engineering

Responsible for ensuring modifications to the Project are developed in accordance with the Design Change Program and ensure continued dam safety.

4.3.14 Chief Dam Safety Engineer (CDSE)

The North Anna Power Station CDSE is a Registered Professional Engineer reporting to corporate Engineering and is responsible for the following North Anna Hydroelectric ODSP activities:

- Review of ODSP revisions for areas within his/her expertise
- Review of the periodic Project instrumentation test results and assembling the Annual Instrumentation Report (DSSMR)
- Review of relevant periodic test data performed at the Project submitted to the Corporate Nuclear Engineering Civil Design Supervisor
- Review of dam safety related regulatory correspondence concerning technical matters within his/her expertise
- Review of Project EAP with respect to technical matters within his/her expertise
- Maintaining the DSSMP and STID documents
- Assisting with the 5 Year Independent Consultant Inspection including audit of the ODSP
- Reviewing and accepting the Independent Consultant Inspection and audit of the ODSP with respect to matters within his/her expertise
- Reviewing project modification documentation
- Assisting with the annual FERC inspections when notified by Station Licensing
- Acting as the primary point of contact with FERC for technical issues
- Communicating known technical concerns to corporate and station

management
- Conducting periodic inspections of the Project
- Cognizance of new dam safety issues and relevant industry operating experience
- Ensures the Vice President Engineering and Site Vice President are aware of any dam safety concerns
- CDSE Resumé in Section 12.4 Attachment B

4.3.15 Station Engineering

Station Engineers are responsible for the following day-to-day Project activities:

- Performing Project instrumentation testing
- Visual inspections at the Project
- Project Surveys
- Initial point of contact for Project engineering issues
- Assisting with the 5 Year Independent Consultant Inspection
- Assisting with the 5 Year audit of the Project
- Assisting with the annual FERC inspections of the Project
- Ensures appropriate surveillance and monitoring is performed
- Ensures Site Vice President is notified of any dam safety concerns

4.3.16 Regulatory Compliance Coordinator

The Regulatory Compliance Coordinator is a part of and reports to the Station Safety and Licensing organization and is responsible for the following FERC activities:

- Annual inspection coordination
- First point of contact for non-emergency communications and licensing correspondence with the FERC Project Engineer
- Preparing FERC licensing correspondence and commitments
- Assists Operations personnel with reportability
- Providing regulatory compliance information to other departments in Dominion in support of FERC regulations and requirements
- Ensures the Chief Dam Safety Engineer, Station Engineers and the SVP are aware of dam safety issues, FERC safety concerns or issues potentially affecting compliance with regulations
- Assists the station EAP Coordinator
- Assists with the Independent Consultant 5 Year Inspection as necessary
- Assists with the 5 Year audit of the Project

4.3.17 Emergency Action Plan (EAP) Coordinator

The EAP Coordinator is tasked with ensuring effective execution of the Project EAP. The EAP coordinator's duties are defined in Emergency Preparedness procedures. This responsibility resides in the Corporate Emergency Planning organization.

(Appendix B - Ref. 11.10, 11.24)

4.4 Dominion Energy South Carolina (DESC)

4.4.1 Vice President, DESC Power Generation

The Vice President Power Generation is DESC's Officer with responsibility for ensuring safe operation and regulatory compliance for the DESC hydroelectric projects and dams. This vice president is the designated primary point of contact for notification by the Commission's Southeast Regional Office for matters of dam safety and security.

4.4.1.1 The DESC Vice President Power Generation shall ensure the Project directors have sufficient resources to assure safe and compliant operation of the Commission's licensed facilities.

4.4.1.2 The DESC Vice President Power Generation shall be responsible for reporting to Dominion's Chairman of the Board and Chief Executive Officer matters of dam safety significance that require the CEO's attention.

4.4.1.3 The DESC Vice President Power Generation shall annually issue a signed copy of Power Generation's dam safety policy to all employees responsible for any facet of safe dam operations or regulatory compliance.

4.4.2 General Manager, Power Generation Stations

The General Manager, DESC Power Generation Stations is tasked with providing daily guidance and operating program support to the Projects. This director supplies direct operations support to the Plant Managers during any emergency and assists the station directors in planning for dam safety and regulatory compliance needs.

4.4.3 Director, DESC Power Generation Engineering

The Director DESC Power Generation Engineering is tasked with supplying technical guidance and expertise to ensure safe and compliant operation of the

Projects in general and specifically engineering support for capital projects and maintenance related to dam safety issues

5.0 DAM SAFETY TRAINING PROGRAM

5.1 General

Due to organizational differences, Dam Safety Training programs are implemented independently for the Dominion Energy Virginia and North Carolina projects, North Anna Hydroelectric Project, and for the Dominion Energy South Carolina projects as described below.

5.2 Dominion Energy Virginia & Dominion Energy North Carolina

5.2.1 The purpose of the training program is to ensure all applicable Project and Corporate support personnel are aware of FERC dam safety regulations, understand the importance of exercising diligence in performing specific dam safety duties, and are competent in specific dam safety job requirements.

5.2.2 Dam safety training is updated yearly or on an as needed basis.

5.2.3 Effectiveness of Training

The training program will be assessed on a 5-year cycle during the Part 12 process by the Independent Consultant.

5.2.4 Bath County Pumped Storage Station Training Program

5.2.4.1 The Bath County Pumped Storage Station has a general, site-specific training program in place. Dam safety elements included in the program are:

- Dam safety awareness
- Regulatory compliance, including Power Generation policies regarding dam safety and regulatory compliance
- Recognition of potential dam safety deficiencies
- Review of daily/weekly/monthly/quarterly inspection requirements and techniques
- Emergency Action Plan for appropriate Project personnel annually; as part of the annual training, each operating crew is subjected to an annual in-house EAP drill.

5.2.4.2 The station also has specific pumped storage operator training modules. As part of this formal operator development program, each operator trainee is required to successfully complete training module PSODP-17, *Dams, Gates, and Hydraulic Coordination*. This module contains four lessons: Dams: General Information, Upper Reservoir Equipment, Low Level Outlet Works, and Lower Reservoir Spillway.

5.2.4.3 The training is completed in the following manner:

- PSODP-17 is delivered either in printed form or electronically during the operator trainees' development program
- The annual EAP training is delivered electronically through Dominion's Learning Management System (LMS)
- The annual EAP drills are administered by the Project EAP coordinator.

5.2.5 Roanoke Rapids and Gaston Training Program

5.2.5.1 The station has a general, site-specific training program in place. Dam safety elements included in the program are:

- Dam safety awareness
- Regulatory compliance, including Power Generation policies regarding dam safety and regulatory compliance
- Recognition of potential dam safety deficiencies
- Review of daily/weekly/monthly/quarterly inspection requirements and techniques
- Emergency Action Plan for appropriate Project personnel annually; as part of the annual training, each operating crew is subjected to an annual in-house EAP drill.

5.2.5.2 The Operations and Maintenance Supervisor maintains a checklist, tailored to both Roanoke Rapids and Gaston, that spells out specific qualifications necessary to obtain Hydro Operator status. Candidates begin as a Hydro Auxiliary Operator, before being considered for an operator position. To do so, each candidate must demonstrate aptitude in three main areas:

- License Understanding and Application
- Outside Operations and Procedures
- Control Room Board.

Candidates are paired with a senior relief operator for a minimum of (8) months and a shift operator for a minimum of (4) months. After the 12-month period, the candidate is eligible for an oral board, with a panel containing the site O&M Supervisor, Maintenance Coordinator, and Site Manager. Upon passing, candidates will qualify as Hydro Operator and be assigned a rotating shift.

5.3 North Anna Hydroelectric Project

5.3.1 The purpose of the North Anna Dam Safety training program is to ensure applicable

station personnel are aware of the significance of dam safety, FERC dam safety regulations, understand the importance of exercising diligence in performing specific dam safety duties, and are competent in specific dam safety job requirements.

5.3.2 Training programs exist for station personnel that perform aspects of project operation, maintenance, testing and inspection.

5.3.3 Training for Dominion nuclear facility personnel, including supplemental personnel, is established as required by 10 CFR 50 Appendix B, 10 CFR 50.120, 10 CFR 55, ANSI/ANS 3.1, or ANSI N18.1-1971. Training programs are developed and implemented to provide personnel with the skills and knowledge necessary for Nuclear Plant operation and maintenance including the Project. Training programs include:

- Shift Manager Initial and Continuing Training Program
- Senior Reactor Operator Initial and Continuing Training Program
- Reactor Operator Initial and Continuing Training Program
- Non-Licensed Operator Initial and Continuing Training Program
- Shift Technical Advisor Initial and Continuing Training Program
- Engineering Support Initial and Continuing Training Program
- Instrument and Control Technician Initial and Continuing Training Program
- Electrician Initial and Continuing Training Program
- Mechanic Initial and Continuing Training Program
- Maintenance Supervisor Initial and Continuing Training Program

5.3.4 Dam Safety Significance training has been developed and is being implemented through the station's Training Department. New hire employees permanently assigned to work at the North Anna Power Station receive this training. Employees will receive continuing/refresher Dam Safety Significance training on a triennial basis. As with the ODSP, the training will be enhanced and/or updated as necessary to include new issues in dam safety and industry operating experience. The North Anna Dam Safety training objectives include:

- Ensuring Dominion Energy's employees, consultants and contractors understand the safety significance of the Lake Anna Dam
- Describing Federal Energy Regulatory Commission (FERC) requirements applicable to the Lake Anna Dam
- Providing information on the major features of the dam
- Describing causes and consequences of dam failures including Operating Experience (OE)
- Describing the CDSE functions and reporting structure
- The CDSE stays abreast of ongoing and new issues in dam safety

(Appendix B - Ref. 11.36, 11.37, 11.38, 11.43)

5.4 Dominion Energy South Carolina (DESC)

5.4.1 A training program shall be implemented for personnel involved in the operation or modification of hydroelectric facilities on a level appropriate to the assigned responsibilities. The Dam Safety Training Program shall include training for management, operations, maintenance, engineering, consultants, and contractors, as appropriate.

5.4.2 The dam safety training program shall include the following features:

- General and site-specific training focused on dam safety awareness and regulatory compliance.
- Presentation of the DESC corporate policies regarding dam safety and dam safety regulatory compliance.
- Recognition of potential dam safety deficiencies, including, but not limited to, design basis events for each facility.
- Inspection and monitoring techniques.
- Qualification standards for personnel conducting inspections, consistent with the nature and complexity of assigned duties.
- Maintenance of personnel training records.
- Modules for needed initial training and modules for continuing and/or refresher training as training needs are identified.
- Review of Emergency Action Plans.

5.4.3 Hydroelectric operations and maintenance personnel and other employees involved in the dam safety program will receive annual dam safety awareness training which will cover the features listed above in Section 0.

5.4.4 In establishing and maintaining training programs, the Manager, Dam Safety and Emergency Preparedness shall consider, and make use of, all appropriate materials, such as FERC's 18 CFR Part 12 regulations and FERC Engineering Guidelines for the Evaluation of Hydropower Projects, as well as opportunities to attend seminars, conferences and FERC training programs.

6.0 COMMUNICATION, COORDINATION AND REPORTS

6.1 General

Due to organizational differences, Dam Safety Communications and Reporting are implemented independently for the Dominion Energy Virginia and North Carolina projects,

North Anna Hydroelectric, and for the Dominion Energy South Carolina projects as described below.

6.2 Dominion Energy Virginia & Dominion Energy North Carolina

6.2.1 Vice President Power Generation System Operations

- The Vice President Power Generation System Operations is the Dominion Energy officer responsible for the operation, maintenance, safety and security of the Roanoke Rapids and Gaston Hydropower Project, P-2009 and Bath County Pumped Storage Station, P-2716.
- Any communication with the Commission's Secretary, policy or compliance issues, emergencies or security notifications occurs directly from Vice President, Power Generation System Operations to either the Commission's Secretary or the Commission's Atlanta Regional Engineer.
- No later than December 31 of each year, the Vice President Power Generation System Operations will verify to the Commission's Atlanta Regional Engineer that Dominion Energy has complied with dam safety regulations and all required inspections have been performed to ensure the project's safety.

6.2.2 Chief Dam Safety Engineer

Responsibilities of the Chief Dam Safety Engineer include the following:

- Perform annual dam safety inspections, review geotechnical instrumentation data and submit to the Commission's Atlanta Regional Office a report on the safety status and safety regulatory compliance of the Projects.
- Ensure that the Part 12 inspection occurs on the Commission's required schedule, review the inspection report and address any concerns with a proposed plan and schedule for the Commission's Atlanta Regional Engineer's review; and
- Ensure the ODSP audit is performed in accordance with the Commission's specified schedule and guidelines.

6.2.3 Regulatory Compliance Coordinator

Responsibilities of the Regulatory Compliance Coordinator include the following:

- Assist the Vice President Power Generation System Operations and the Chief Dam Safety Engineer in ensuring inspection and reporting schedules are met; and
- Serve as an additional point of contact with FERC in communicating Project safety information, whether requested by the Commission or submitted by Dominion Energy.

- Assist the Chief Dam Safety Engineer in annual reviews of the ODSP and Public Safety Plans.
- Assist the Emergency Action Plan Coordinator with ensuring that Emergency Action Plans at each project are drilled and updated.

6.3 North Anna Hydroelectric Project

6.3.1 The North Anna Hydroelectric Project Regulatory Compliance Coordinator is the station point of contact with the FERC Project Engineer for non-emergency communications.

6.3.2 Verbal emergency notifications to FERC are performed by Operations personnel as outlined in station Notification and Report procedures. The Regulatory Compliance Coordinator assists Operations personnel with reportability and notifies the North Anna Power Station CDSE.

6.3.3 The North Anna Hydroelectric CDSE can communicate to the Chief Nuclear Officer (CNO), Vice President Engineering, Site Vice President, and Station Management any dam safety concern as the need arises. This is typically done via communications made though the Regulatory Compliance Coordinator; however, the CDSE has the freedom and authority to communicate dam safety concerns to all levels of management via any means.

6.3.4 Initial verbal notifications of Project concerns are made by the Main Dam Operators to the Operations Shift Manager. The Operations Shift Manager notifies the Operations Manager, Plant Manager and Site Vice President.

6.3.5 The SVP is responsible for reporting to the Senior Vice President & Chief Nuclear Officer and ultimately Dominion's Chairman of the Board and Chief Executive Officer on matters of dam safety.

6.3.6 Written reports required by FERC regulations and directives are developed and submitted by the Regulatory Compliance Coordinator. The Site Vice President approves FERC correspondence. The CDSE receives copies of FERC reports.

6.3.7 Deviating conditions identified at the Project are documented in Condition Reports (CRs) as part of the station Corrective Action Program. The CRs are written upon discovery of a deviating condition. The Regulatory Compliance Coordinator reviews CRs on a regular basis to determine if FERC reporting requirements are applicable.

6.3.8 The North Anna Hydroelectric Project CDSE exercises authority and organizational freedom to report dam safety issues via the Corrective Action Program (CAP), dam safety related or otherwise, when they are encountered.

The CDSE periodically reviews these CRs to determine which of them are germane to spillway/embankment stability and downstream public safety; and evaluates the need for the condition to be elevated for appropriate action should a potential problem be detected.

6.3.9 When a potential issue is detected during Periodic Test (PT) evolutions, the North Anna Hydroelectric Project CDSE is consulted to determine the next course of action. Once a solution is developed, the CDSE coordinates with the station Engineering and the Regulatory Compliance Coordinator, as appropriate, and notifies FERC when such action requires FERC involvement.

6.3.10 In the case of emergent conditions, such as those related to potential flood events, the North Anna Hydroelectric Project CDSE is assigned to the Lake Anna Advisory Team along with the Chief Nuclear Officer, Vice President of Nuclear Engineering, and Senior Vice President of Nuclear Operations. This team evaluates the emergency and classification, notifies the Virginia Department of Emergency Management, notifies the FERC regional office, the Virginia Department of Conservation - Division of Dam Safety, and provides advice, coordination, and assistance as necessary to mitigate the emergency.

6.3.11 Information from the corrective action program is periodically analyzed in the aggregate to identify adverse trends or conditions.

(Appendix B - Ref. 11.18, 11.32)

6.4 Dominion Energy South Carolina (DESC)

6.4.1 Vice President DESC Power Generation

Any formal correspondence from the Commission's Secretary or the Commission's Southeast Regional Engineer are addressed to the Vice President, DESC Power Generation.

6.4.2 Manager, Dam Safety and Emergency Preparedness/Chief Dam Safety Engineer

Communication responsibilities of the Manager, Dam Safety and Emergency Preparedness/Chief Dam Safety Engineer include the following:

- This position at DESC signs most submittals to the Commission's Atlanta Regional Office (ARO) and most license compliance filings to the FERC Secretary.

- The Manager, Dam Safety and Emergency Preparedness shall act as DESC's technical point of contact for dam safety compliance issues, except for immediate notifications required by Emergency Action Plans (EAPs) and Contact Lists (CL).

- Perform annual dam safety inspections, review instrumentation data and submit to the Commission's Atlanta Regional Office a report on the safety status and safety regulatory compliance of the Projects.

- Ensure that the Part 12D inspections occur on the Commission's required schedule, review the inspection reports and address any concerns with a proposed plan and schedule for the Commission's Southeast Regional Engineer's review; and

Ensure the ODSP audit occurs on the Commission's required schedule and develop a report to address findings and any issues raised by the audit.

7.0 RECORD KEEPING AND DATABASES

7.1 General

Due to organizational differences, record keeping procedures are implemented independently for the Dominion Energy Virginia and North Carolina projects, North Anna Power Station, and for the Dominion Energy South Carolina projects as described below.

7.2 Dominion Energy Virginia & Dominion Energy North Carolina

7.2.1 Procedures

- Station operating and compliance procedures are stored electronically on each station's server. The procedures are readily available to station personnel electronically.
- Procedures shall be retained as long as they are applicable.
- It is the responsibility of the Station Director to ensure required recordkeeping.

7.2.2 Training

- Training records are kept electronically and administered by the Power Generation Technical Training Center.
- Training records are retained as long as an employee is employed by Dominion Energy.
- It is the responsibility of the Manager, Training to ensure required recordkeeping.

7.2.3 FERC Inspection Reports

- FERC inspection reports are stored electronically on the station servers or in paper archives
- FERC inspection reports are retained for the life of the project.
- It is the responsibility of the station director to ensure required recordkeeping.

7.2.4. Dominion Energy Inspection Reports

- Dominion Energy inspection reports are stored electronically on the Power Generation Engineering servers.
- Dominion Energy inspection reports are retained for the life of the project.
- It is the responsibility of the station director to ensure required recordkeeping.

7.2.5 Incident Reports

- All incident and compliance reports are stored on the station servers or in paper archives.

- Incident reports are retained for the life of the project.
- It is the responsibility of the station director to ensure required recordkeeping.

7.2.6 Safety Requirement Tracking

- Safety requirement tracking start, completion and due dates are stored on Dominion Energy's DomEnO database. In addition, any preventative maintenance procedures are stored on the maintenance section of SAP.
- Regulatory compliance (dam safety requirements) is retained for the life of the project.
- Maintenance records are retained for a minimum of three years.
- It is the responsibility of the Regulatory Compliance Coordinator and the Station Director to ensure required recordkeeping.

7.2.7 Exhibit Drawings

- Exhibit drawings are stored on the station servers.
- Exhibit drawings are retained for the life of the project.
- It is the responsibility of the Station Director to ensure required recordkeeping.

7.2.8 Part 12 Reports

- Recent Part 12 reports are stored on station servers. Older Part 12 reports are stored on station files in the Technical Information Centers and centrally in the Power Generation Engineering files.
- Part 12 Reports are retained for the life of the project.
- It is the responsibility of the Station Director to ensure required recordkeeping.

7.2.9 PFMA and STID

- Potential Failure Modes Analysis and the Station Technical Information Documents are stored electronically on the PG Engineering server.
- PFMA and STID documents are retained for the life of the project.

7.3 North Anna Hydroelectric Project

7.3.1 Procedures that control Project operation, maintenance, testing, inspection, and training are developed and maintained in accordance with station standards. These procedures outline purpose, scope, responsibilities, instructions, records, and administrative information.

7.3.2 Records and reports generated as a result of Project operation, maintenance, testing, inspection, and training are maintained in accordance with station records procedures. These procedures outline creation, transmittal, receipt, retrieval, and retention and comply with 18 CFR 12.12 Maintenance of Records. Records are maintained at the Power Station and/or the corporate office. The Records Department has supervisors at both locations that are responsible for the program.

7.3.3 The North Anna Hydroelectric Project maintains a Central Reporting System (CRS) database designed to capture and track resolution of items at the station and Project. Condition Reports are submitted to identify conditions adverse to quality, operating experience both internal and external that are applicable to the station and Project, initiation of the work orders for maintenance activities, tracking of FERC licensing activities and self-assessments.

7.3.4 The North Anna Hydroelectric Project maintains an Equipment Reliability database designed to aid in achieving excellence in equipment reliability. Inherent in the goal of attaining excellence in equipment reliability and performance is a culture of intolerance for unanticipated equipment failures and a low threshold for problem identification.

(Appendix B - Ref. 11.10, 11.13, 11.14, 11.15, 11.16, 11.22, 11.26, 11.27, 11.31, 11.32, 11.34, 11.35)

7.4 Dominion Energy South Carolina (DESC)

	Record Type	Responsible Group	Retention Period	Location
7.1	Internal and external audits and assessments.	Manager, Dam Safety, Emergency Preparedness, and Engineering	Life of the facility plus 10 years	Hardcopy filed in Power Generation Engineering, Corporate Records or digital record retention
7.2	Records generated by inspection procedures, training programs, and other support activities.	Plant Manager, Hydroelectric facility and Manager, Dam Safety, Emergency Preparedness, and Engineering	Life of the facility plus 10 years	Retention may be at hydroelectric plants, digital, or in Power Generation Engineering files
7.3	All correspondence between DESC and FERC related to hydro projects, and dams.	Manager, Dam Safety, Emergency Preparedness, and Engineering	Life of the facility plus 10 years	Hardcopy filed in Power Generation Engineering, Corporate Records or digital record retention
7.4	Design reports, drawings, specifications, construction reports, photographs, etc.	Manager, Dam Safety, Emergency Preparedness, and Engineering	Life of the facility plus 10 years	Hardcopy filed in Power Generation Engineering, Corporate Records or digital record retention

8.0 SUCCESSION PLANNING

8.1 General

Due to organizational differences, succession planning is implemented independently for the Dominion Energy Virginia and North Carolina projects, North Anna Hydroelectric Project, and for the Dominion Energy South Carolina projects as described below.

8.2 Dominion Energy Virginia & Dominion Energy North Carolina

8.2.1 Dominion Energy reviews its Power Generation succession plan periodically to assess leadership and targeted individual contributor positions.

8.2.2 In the event the Chief Dam Safety Engineer is unavailable for any reason and has not designated an alternate, the Manager, Power Generation Engineering or qualified designee will assume the duties of the Chief Dam Safety Engineer until his or her return or replacement.

8.2.3 The Station Directors and Managers are responsible for succession planning for hydroelectric plant management and staff.

8.2.4 The Director, Power Generation Engineering is responsible for succession planning for the engineering and support group staff, including the Chief Dam Safety Engineer.

8.3 North Anna Hydroelectric Project

8.3.1 The Regulatory Compliance Coordinator (RCC) and the Chief Dam Safety Engineer (CDSE) are the critical Owner's Dam Safety Program (ODSP) roles currently assigned to persons in the station licensing and corporate engineering organizations, respectively. Since these are roles and not specific personnel positions in the Dominion Energy Nuclear Business Unit organization, ODSP related succession planning at the North Anna Hydroelectric Project is more appropriately addressed in the context of business continuity. In this case, effective business continuity ensures that personnel in the respective organizations have a means or aid to collectively administer the ODSP should these critical roles become vacant and during the time period required to acquire personnel to fill those roles. One example of such an aid is a file directory outline that indicates where important FERC related dam safety correspondence and documentation is stored, and where the supporting data and related analyses are located. This is in addition to the nuclear document management system where official correspondences are stored electronically. Furthermore, Dominion Energy has processes that can be used to develop change management and knowledge transfer plans to ensure continuity.

8.4 Dominion Energy South Carolina (DESC)

8.4.1 DESC reviews its Power Generation succession plan periodically to assess leadership and targeted individual contributor positions.

8.4.2 In the event the Manager, Dam Safety and Emergency Preparedness is unavailable for any reason and has not designated an alternate, the Director, DESC Power Generation Engineering will assume the duties of the Manager, Dam Safety and Emergency Preparedness until his or her return or replacement.

8.4.3 In the event the Director, DESC Power Generation Engineering is unavailable for any reason, a qualified Engineer on the Dam Safety or Civil Engineering staff will assume the duties of interim Manager, Dam Safety, Emergency Preparedness until his or her return or replacement.

8.4.4 The General Manager, DESC Power Generation Stations is responsible for succession planning for hydroelectric plant management.

8.4.5 The Director, DESC Power Generation Engineering is responsible for succession planning for the engineering and support group staff, including the Manager of Dam Safety and Emergency Preparedness and Chief Dam Safety Engineer.

9.0 CONTINUOUS IMPROVEMENT

9.1 General

Due to organizational differences, continuous improvement procedures are implemented independently for the Dominion Energy Virginia and North Carolina projects, North Anna Hydroelectric Project, and for the Dominion Energy South Carolina projects as described below.

9.2 Dominion Energy Virginia & Dominion Energy North Carolina

9.2.1 General

The Chief Dam Safety Engineer and Regulatory Compliance Coordinator are responsible for ensuring that the dam safety program is periodically reviewed and updated so that it reflects the current staffing and organizational structure and incorporates the lessons learned from the ongoing implementation of the program, information gathered from dam safety inspections and operating history, changes in the state-of practice in dam safety, knowledge gained from training and the study of case histories of incidents and failures and findings from audits of the dam safety program.

9.2.2 Bath County Pumped Storage Station

BCPSS has a process in place to identify, evaluate, resolve, and provide follow-up documentation to each recommendation resulting from a Dominion Energy, FERC, and/or independent consultant inspection. This process is administered by the Technical Support team and is reviewed as needed with the Chief Dam Safety Engineer and site director. The procedure is designated as Dam Safety Recommendation Tracking Procedure ADM-88.

BCPSS participates in the Pumped Storage Users Committee, an international consortium of pumped-storage project operators. This committee shares operating experiences, lessons learned, etc., and BCPSS considers implementation of improved processes/practices, as appropriate.

Prior to implementing any change that would affect the geotechnical features of the Project, BCPSS consults with the Chief Dam Safety Engineer.

9.2.3 Roanoke Rapids and Gaston

Roanoke Rapids and Gaston has a process in place to identify, evaluate, resolve, and provide follow-up documentation to each recommendation resulting from a Dominion Energy, FERC, and/or independent consultant inspection. This process is administered by the Technical Support team and is reviewed as needed with the Chief Dam Safety Engineer and site director. The procedure is

designated as Gaston and Roanoke Rapids Recommendation Tracking RR-OP-ODSP-1.

Prior to implementing any change that would affect the geotechnical features of the Project, Roanoke Rapids and Gaston consults with the Chief Dam Safety Engineer.

9.3 North Anna Hydroelectric Project

9.3.1 Several processes are available for use to ensure aspects of Project operation are reviewed and assessed for effectiveness and improved performance of personnel and equipment. These include but are not limited to:

9.3.1.1 Continuing training programs for North Anna Hydroelectric Project Operations, Maintenance, and Engineering personnel.

9.3.1.2 Evaluation of North Anna Hydroelectric Project Training Programs to ensure ongoing review and evaluation of training effectiveness, training program evaluations, and comprehensive self-evaluation.

9.3.1.3 Effectiveness Reviews promote the comprehensive review of completed corrective actions and improvement actions for the purpose of determining whether those actions were effective in preventing the recurrence of significant events or created expected improvement to performance or processes.

9.3.1.4 Audits and Assessments provide recommendations beyond regulatory compliance to enhance processes and programs.

9.3.1.5 North Anna Hydroelectric Project Operating Experience Program is used to ensure lessons learned from both industry (external) and Dominion Energy (internal) sources are used efficiently and effectively to improve safety and reliability and prevent or mitigate the consequences of similar events. The effective use of OE information is an integral and vital part of minimizing events and subsequent corrective actions.

9.3.1.6 The Equipment Reliability (ER) Process is a continuous improvement program at North Anna Hydroelectric Project that provides optimum equipment reliability through effective system monitoring, predictive maintenance, preventive maintenance, corrective action, and long-term planning. Effectively addressing these areas will result in a focus on failure prevention and self-improvement. Also critical for success is each employee's intolerance for unanticipated equipment failures.

(Appendix B - Ref. 11.22, 11.26, 11.27, , 11.31, 11.32, 11.33)

9.4 Dominion Energy South Carolina (DESC)

9.4.1 The Manager, Dam Safety and Emergency Preparedness is responsible for ensuring that the Dam Safety Program is periodically reviewed and updated so that it reflects the current staffing and organizational structure and incorporates the lessons learned from the ongoing implementation of the program, information gathered from dam safety inspections and operating history, changes in the state-of practice in dam safety, knowledge gained from training and the study of case histories of incidents and failures and findings from audits of the dam safety program.

9.4.2 If available, findings from external audits, assessments, and Part 12D inspections regarding this dam safety program will be incorporated in the updated Program.

10.0 AUDITS AND ASSESSMENTS

10.1 Internal Program Reviews

Internal annual review of the ODSP and the site-specific appendices are implemented independently for the Dominion Energy Virginia and North Carolina projects, North Anna Hydroelectric Project, and for the Dominion Energy South Carolina projects as described below.

10.1.1 Dominion Energy Virginia & Dominion Energy North Carolina

10.1.1.1 The Chief Dam Safety Engineer performs an annual inspection of the Projects. During this inspection meetings are held with key station personnel to ensure appropriate dam safety practices are occurring.

10.1.1.2 The Chief Dam Safety Engineer reviews, on a monthly basis, the Roanoke Rapids and Gaston instrumentation data. During this review, an examination is completed of key dam safety parameters to ensure instrumentation is operating properly and any manual instrumentation data are within expected ranges.

10.1.1.3 The Bath County Pumped Storage Station employs geotechnical specialists who reviews daily, monthly and quarterly key dam safety performance indicators. In addition, the geotechnical specialists regularly inspect the dams, drainage tunnels and ensure key Project features are performing properly.

10.1.1.4 The Chief Dam Safety Engineer annually reviews the Bath County Pumped Storage Station comprehensive geotechnical instrumentation report and performs an independent safety inspection.

10.1.2 North Anna Hydroelectric Project

10.1.2.1 The North Anna Hydroelectric Project Chief Dam Safety Engineer (CDSE) reviews annual inspections performed at the Project and meets with key station personnel on matters within his/her expertise concerning dam safety as appropriate. Every year the station CDSE and Regulatory Compliance Coordinator will complete an internal annual review and update of the North Anna Hydroelectric Project site specific ODSP elements in general accordance with article 12.64 of 18 CFR Part 12, Subpart F, report the findings to senior station management as appropriate, and revise this Appendix and/or the Dominion Energy ODSP when necessary. Senior management is made aware of organizational compliance with the overall ODSP, the North Anna site specific program elements, and FERC regulations via Station Licensing submittals to FERC routed through senior management for signature.

10.1.2.2 The North Anna Hydroelectric Project CDSE and Civil Engineers review, on a periodic basis, the Project geotechnical data. During this review key dam safety parameters are examined to ensure instrumentation is operating properly and any manual instrumentation data are within expected ranges.

(Appendix B - Ref. 11.1, 11.8, 11.13, 11.14, 11.37

10.1.3 Dominion Energy South Carolina (DESC)

10.1.3.1 Internal Annual Review

10.1.3.1.1 The Manager, Dam Safety and Emergency Preparedness is responsible for reviewing this Appendix annually and updating as required due to organizational or regulatory changes. In addition, the annual review will include verification that the component elements and programs of the ODSP are being implemented in accordance with the Plan.

10.1.3.1.2 The Chief Dam Safety Engineer reviews monthly the Projects' inspection results and instrumentation data. During this review, he examines key dam safety parameters to ensure instrumentation is operating properly and that instrumentation data are within expected ranges.

10.2 External Audits and Program Reviews

10.2.1 Scope and Schedule

External audits of the Dominion Energy Owners Dam Safety Program will be conducted on a 5-year schedule common to the Dominion Energy Virginia and North Carolina projects, North Anna Hydroelectric Project, and the Dominion Energy South Carolina projects. External audits will be conducted by a FERC approved audit consultant. External Audits will conform to the FERC "Guidance for ODSP External Audits" issued January 16, 2018, or the most recent revision to that guidance and will include the following:

- Review reports and information related to the ODSP prior to performing the actual audit
- Review operating and maintenance records for each facility to determine if proper procedures are being followed
- Review adequacy of the Dam Safety Surveillance and Monitoring Plan (DSSMP) at each facility and its reporting requirements toward the goal of understanding and verifying the expected performance of the dam

- Review personnel training records to ensure that dam safety training is being conducted in accordance with the latest training plan defined in the ODSP, and that all relevant personnel have taken appropriate training
- Conduct interviews, examinations, or utilize other methods to evaluate the effectiveness, completeness, and familiarity with dam safety training
- Attend and participate in project site visits or inspections with field personnel at each project
- Interview the Chief Dam Safety Engineer and all dam safety staff; including but not necessarily limited to: facility managers, staff engineers, and hydro plant technicians to determine their understanding of the DSP and the implementation of their respective responsibilities
- Obtain independent views from staff personnel of the effectiveness and completeness of the ODSP
- Evaluate the licensee's commitment and its priorities with respect to dam safety, including senior executives. This includes meeting directly with senior management to discuss the ODSP
- Provide the auditor's opinion as to whether the licensee's dams are being adequately operated, inspected and maintained, i.e. determine if the ODSP is accomplishing what is intended
- Assess how proactive the licensee is in implementing their dam safety program. Determine if they take initiative to address dam safety issues on their own without waiting for FERC to require action
- Provide conclusions, and if appropriate, recommendations for the Licensee to further improve their dam safety program.

10.2.2 Audit Consultant Qualifications

The auditor's qualifications are subject to review and approval by the FERC Regional Engineer. Qualifications for auditors include the following:

- An Engineer experienced in dam safety design, operation, and maintenance of the types of dams being evaluated
- An Engineering with expertise in dam and hydro safety management.
- A current/former Chief Dam Safety Engineer (CDSE as defined by FERC) who has worked in a dam owning organization with a strong dam safety program
- An individual with a regulatory dam safety background (e.g. current or former state or federal dam safety regulatory employee).

10.2.3 Audit Report Requirements

Audit reports will follow the outline as shown in the FERC "Guidance for ODSP External Audits" issued January 16, 2018, or the most recent revision to that guidance.

11.0 REFERENCES

11.1 Title 18 Code of Federal Regulations, Chapter 1, Subchapter B, Part 12 Safety of Water Power Projects and Project Works

11.2 Dominion Energy Corporate Safety Policy

11.3 Dominion Energy Power Generation Business Unit Safety Mission and Vision

11.4 Dominion Energy Corporate Code of Ethics

11.5 Federal Energy Regulatory Commission Engineering Guidelines for Hydro Projects

11.6 Federal Energy Regulatory Commission Guidelines for ODSP Audits

12.0 ATTACHMENTS AND APPENDICES

12.1 Dominion Energy Board of Directors

12.2 Dominion Energy Dam Safety Policy Statement

12.3 Appendix A: Dam Safety Organization and Personnel for Roanoke Rapids & Gaston, and Bath County Pumped Storage and CDSE resume.

12.4 Appendix B: Dam Safety Organization and Personnel for North Anna Hydroelectric Project

12.5 Appendix C: Dam Safety Organization and Personnel for Dominion Energy South Carolina Hydro Projects: Saluda, Parr & Fairfield, Neal Shoals, and Stevens Creek