ABBREVIATIONS

A&NS alert and notification system

A2LA American Association for Laboratory Accreditation

alternating current ac

ACES Automated Coastal Engineering System

American Concrete Institute ACI

ACP access control point

ACRS Advisory Committee on Reactor Safeguards

Agencywide Documents Access and Management System ADAMS

ADB ancillary diesel building **ADG** ancillary diesel generator

ADS automatic depressurization system

AEA Atomic Energy Act **AEOF** Alternate EOF ΑF amplitude function AFT as-found tolerance AFU air filtration unit AHEX

ALARA as low as reasonably achievable ANI American Nuclear Insurers **ANS** American Nuclear Society

American National Standards Institute ANSI ANSS Advanced National Seismic System AOO anticipated operational occurrence

AOV air-operated valve

API American Petroleum Institute

Annual Radiological Environmental Operating Report AREOR

American Society of Heating, Refrigerating, and Air-Conditioning ASHRAE

Engineers

ASME American Society of Mechanical Engineers

ASCE American Society of Civil Engineers

ASCE/SEI American Society of Civil Engineers/Structural Engineering Institute

alkali-silica reactivity ASR

American Society of Testing and Materials ASTM

ATWS anticipated transient without scram

B&V Black & Veatch

BDBE beyond-design-basis event

BE best estimate BL bulletin

BPV

Boiler and Pressure Vessel **BPVC** Boiler and Pressure Vessel Code

BRE bullet resisting enclosure BTP branch technical position Btu British thermal unit

BWR boiling-water reactor

С Celsius

Cubic-centimeters CC

CAM continuous air monitor
CAV cumulative absolute velocity

CB control building

CD-144 card deck-144 (format used in NCDC meteorological data)

CDA critical digital asset
CDF core damage frequency
CDI conceptual design information
CEM Coastal Engineering Manual
CENA central and eastern North America
CEUS central and eastern United States

CEUSSSC Central and Eastern United States Seismic Source Characterization

CF chemistry factor cubic feet per minute

CFR Code of Federal Regulations

CHS Charleston CHV Charlevoix

CIRC circulating water system

CLSM controlled low-strength material

cm centimeter(s)

CMZ Commerce fault zone

COCORP Consortium for Continental Reflection Profiling

COL combined license

COLA combined license application
COOP Cooperative Observation Program

CP construction permit

CPS condensate purification system

CPTs cone penetrometer tests

CR Coefficient Ratio-(SER Chapter 2)

CR control room CRD control rod drive

CRHA control room habitability area

CSTS condensate storage and transfer system

CSAT Cyber Security Assessment Team
CSDRS certified seismic design response spectra

CSF condensate storage facility

CSIRT Cyber Security Incident Response Team

CSP cyber security plan CST condensate storage tank

CVAP Comprehensive Vibration Assessment Program

CVSZ Central Virginia Seismic Zone

CWS circulating water system

DAC design acceptance criteria

DAW dry active waste

DB dry bulb

DBA design-basis accident
DBE design-basis event
DBT design-basis threat
DBT design basis tornado

DC design certification dc direct current

DCA Design certification application
DCD design control document
DCF damping correction factor

DCIS distributed control and information system

DCR design certification rule

DCRA Design Centered Review Approach

DEM digital elevation model DG diesel generator DM direct method

DMME Virginia Department of Mines, Minerals and Energy

DOE Department of Energy
Dominion Dominion Virginia Power
DOT Department of Transportation
depressurization valve

D-RAP design reliability assurance program

DTE Detroit Edison Company
DTPG defined test plan group
DZO depleted zinc oxide

EAB exclusion area boundary
EAC emergency alternating current

EAL emergency action level EAS emergency alert system

ECC-AM Extended Continental Crust – Atlantic Margin

ECCS emergency core cooling system
ECGH East Continent Gravity High
ECL effluent concentration limit
ECRS east continent rift system
ED emergency director

EERI Earthquake Engineering Research Institute

EDG emergency diesel generator

EF Enrico Fermi

ELAP extended loss of alternating current power

EMD emergency management division EMDG extensive damage mitigation guideline

EMI electromagnetic interference
EMS emergency medical service
ENS emergency notification system
EOC emergency operations center
EOF emergency operations facility

EOL end of life

EOP emergency operating procedure

EP emergency planning
EP Emergency Preparedness

EPA Environmental Protection Agency

EPAct Energy Policy Act of 2005

EPG emergency procedure guideline

EPIP Emergency Plan Implementing Procedure

EPRI Electric Power Research Institute

EPZ emergency planning zone EQ environmental qualification

EQD environmental qualification document

EQMEL Environmental Qualification Master Equipment List

ER environmental report

ERDS emergency response data system
ERF emergency response facility
ERO emergency response organization

ESBWR economic simplified boiling-water reactor

ESF engineered safety feature

ESP early site permit

ESP-003 North Anna 3 Early Site Permit evacuation time estimate

ETS emergency telecommunications system

ETSZ Giles County Seismic Zone and Eastern Tennessee Seismic Zone

F Fahrenheit

FAC flow-accelerated corrosion

FAPCS fuel and auxiliary pools cooling system
FATT fracture appearance transition temperatures

FB fuel building

FDA Final Design Approval

FE finite element

FEA finite element analysis

FEIS Final Environmental Impact Statement

FEM finite element model

FEMA Federal Emergency Management Agency FERC Federal Energy Regulatory Commission

FFD fitness for duty
FFS free flow speed
FHA fire hazards analysis
FHA fuel handling accident

FIRS foundation input response spectra

FIV flow-induced vibration

FLEX diverse and flexible coping strategy

FNPP Fermi Nuclear Power Plant FPS fire protection system FPWS fire protection water system

FR Federal Register

FRMAC Federal Radiological Monitoring and Assessment Center

FRPP fiberglass reinforced polyester pipe

FRS floor response spectra

FS factor of safety

FSAR final safety analysis report FSER final safety evaluation report

ft feet/foot

FTS Federal Technology Services

FWSC fire water service complex

g acceleration of gravity

Ga billion years ago

GALL generic aging lessons learned
GCRP Global Change Research Program
GDC general design criterion/criteria
GDCS gravity-driven cooling system

GE General Electric

GEER Geotechnical Extreme Events Reconnaissance
GEH General Electric – Hitachi (Nuclear Energy)

GFTZ Grenville Front Tectonic Zone

GI generic issue

GIA glacial isostatic adjustment

GL generic letter

GLERL Great Lakes Environmental Research Laboratory

GLIMPCE Great Lakes International Multidisciplinary Program on Crustal Evolution

GMH Great Meteor Hotspot GMM ground motion model

GMPE ground motion prediction equation GMRS ground motion response spectrum

gpm gallons per minute
GPS global positioning system
GSI generic safety issue
GSI geological strength index
GTG generic technical guidance
GTS generic technical specification

GWMS gaseous waste management system

hr hour

HAB hostile action based

HCLPF high confidence of low probability of failure

HCU hydraulic control unit

HEC Hydrological Engineering Centers

HEC-HMS Hydrological Engineering Centers-Hydrological Modeling System

HEPA high-efficiency particulate air

HF high frequency

HFE human factors engineering

HFI human factor issue

HMR Hydrometeorological Report
HMS Hydrological Modeling System
HPM human performance monitoring

HPN Health Physics Network
HPS Health Physics Society
HRA human reliability analysis

HUSWO Hourly U.S. Weather Observations HVAC heating, ventilation, and air conditioning

HWCS hydrogen water chemistry system

Hz Hertz

I&C instrumentation and control

IAS International Accreditation Service

IBC International Building Code

IBEB Illinois Basin Extended Basement

IC isolation condenser

IC/PCCS isolation condenser/passive containment cooling system

ICS isolation condenser system

IDLH immediate danger to life and health

IE inspection and enforcement

IEC International Electrotechnical Commission
IEEE Institute of Electrical and Electronic Engineers

IFR Interim finding report

IGLD International Great Lakes Datum

ILAC International Laboratory Accreditation Cooperation

IN information notice

in. inch(es)

INPO Institute of Nuclear Power Operations IPCS integrated plant computer system

IR intermediate range

ISFSI independent spent fuel storage installation

ISG interim staff guidance

ISHD Integrated Surface Hourly Data

ISI inservice inspection

ISRS in-structure response spectra

IST inservice testing

ITAAC Inspections, tests, analyses, and acceptance criteria

ITC International Transmission Company

ITP initial test program

ITS International Transmission Company

JFD joint frequency distribution JIC joint public information center

JLD Japan lesson-learned project directorate

JPIC joint information center

ka thousand years ago Kd Distribution Coefficients

KI potassium iodide km kilometer(s) kPa kilopascals kV kilovolt

L-A-B Laboratory Accreditation Bureau

LAN local area network
LB lower-bound
LBF Long Branch fault
lb/ft2 pounds per square-foot
LCO limiting condition for operation

LF low frequency

LiDAR light detection and ranging

LLNL Lawrence Livermore National Laboratory

LLRW low-level radioactive waste
LOA Letters of Agreement
LOCA loss-of-coolant accident
LOLA loss of large area
LOOP loss-of-offsite power
LOPP loss of preferred power

LPZ low population zone

LR lower-range

LSS low strategic significance

LTOP low temperature overpressure protection

LTR licensing topical report LTSP limiting trip setpoint

LWMS liquid waste management system

LWR light water reactor

Mmagnitude (earthquake)Mmaxmaximum magnitude

m meter(s)

M&TE measuring and test equipment

Ma million years ago

MASR minimum alternating stress ratio

MBtu one million BTU

MC&A material control and accounting MCL management counterpart link MCPR minimum critical power ratio

MCR main control room

MCWB mean coincident wet-bulb

MDCH Michigan Department of Community Health

MDCT mechanical draft cooling tower

MDEQ Michigan Department of Environmental Quality

MEB modified energy balance
MEI maximally exposed individual

mi material index

mi mile(s)

MIDC Midcontinent-Craton MIS marine isotope stage

MJ megajoules

MMIS man-machine interface system
MMP Meteorological Monitoring Program

MOA Memorandum of Agreement MOU Memorandum of Understanding

MOV motor-operated valve

MPa megapascals

MPaG megapascals gauge mph miles per hour

MPSC Michigan Public Service Commission

MR maintenance rule

MRA Mutual Recognition Arrangement

MRCSP Midwest Regional Carbon Sequestration Partnership

Mrem millirem

MRS midcontinent rift system
MSM modified subtraction method
MST mitigative strategies table

MW megawatt

NA3 North Anna 3

NAAQS National Ambient Air Quality Standards
NACE National Association of Corrosion Engineers

NAP Northern Appalachian

NAPS North Anna Nuclear Power Station (North Anna 3)

NAPS CDI NA3 FSAR site specific info that replaces Conceptual Design information in DCD

NAPS COL NA3 FSAR site specific info addressing a DCD COL Item NAPS DEP NA3 FSAR site specific info that departs from the DCD

NAPS ESP COL ESP COL Action items identify an ESP COL Action Item

NAPS ESP COR Corrections to ESP Information in FSAR.

NAPS ESP PC ESP Permit Conditions that are addressed in FSAR.

NAPS ESP VAR ESP Variance from design or terms of the ESP

NAPS SUP Supplemental FSAR information that is plant-specific

NAVD North American Vertical Datum
NCDC National Climatic Data Center
NCS nuclear criticality safety
ND Nuclear Development

ND QAPD Nuclear Development Quality Assurance Program document N-DCIS nonsafety-related distributed control and information system

NDCT natural draft cooling tower
NDE nondestructive examination
NDT nil ductility temperature

NEDB National Earthquake Database

NEHRP National Earthquake Hazards Reduction Program

NEI Nuclear Energy Institute

NEIC National Earthquake Information Center NERC National Electric Reliability Council NESC National Electrical Safety Code

NFEMP Nuclear Facilities Emergency Management Plan

NFPA National Fire Protection Association

NGA Next Generation Attenuation NGVD National Geodetic Vertical Datum

NIRMA Nuclear Information and Records Management Association

NIST National Institute of Standards and Technology

NMF New Madrid fault

NMFS New Madrid fault system NMSZ New Madrid Seismic Zone

NNE north-northeast

NOAA National Oceanic and Atmospheric Administration

NOC Nuclear Operations Center NPHS normal power heat sink NQA nuclear quality assurance

NRC Nuclear Regulatory Commission

NRCS Natural Resources Conservation Service

NRO Office of New Reactors

NS non-seismic

NTTF Near-Term Task Force

NUMARC Nuclear Utilities Management and Resources Council

NWS National Weather Service

OBE operating-basis earthquake OCA owner controlled area

OCANS owner controlled area notification system

ODCM offsite dose calculation manual

OE Owner's Engineer

OEM original equipment manufacturer

OGS offgas system

OIS oxygen injection system

OM Operation and Maintenance Code
ORE occupational radiation exposure
ORO offsite response organization
OSC operational support center

OTV optical televiewer

P&ID piping and instrumentation diagram

P/T pressure/temperature

PA protected area

PA/PL plant announcement (page)/party-line

PAA protective action area

PABX private automatic branch exchange

PAG Protective Action Guide PAM post-accident monitoring

PAR protective action recommendation

PAS post-accident sampling

PASS post-accident sampling system

PAT power ascension test

PBSRS performance-based surface response spectra

PCC passive containment cooling

PCCS passive containment cooling system

PCP process control program

PCTMS plant cooling tower makeup system

PEER Pacific Earthquake Engineering Research

PERMS process effluent radiation monitoring and sampling

PEZ Paleozoic Extended Zone
PGA peak ground acceleration
PGD peak ground displacement
PGP procedures generation package

PGV peak ground velocity

PIP plant investment protection

PMCL protective measures counterpart link

PMF probable maximum flood
PMH probable maximum hurricane
PMP probable maximum precipitation
PMT probable maximum tsunami

PMWP probable maximum winter precipitation

PMWS probable maximum windstorm

PO Purchase Orders

PORV power-operated relief valve power-operated valve

ppb parts per billion

PPS preferred power supply
PRA probabilistic risk assessment

PRMS process radiation monitoring system

PSD power spectral density psf pounds per square-foot

PSHA probabilistic seismic hazard analysis

PSI preservice inspection psi pounds per square inch

psia pounds per square-inch absolute psig pound per square inch gauge

PSP Physical Security Plan process sampling system

PST preservice testing

PSWS plant service water system

PTLR pressure and temperature limits report plant-specific technical specifications

PWS potable water system

PWSS pretreated water supply system

QA quality assurance

QAP quality assurance program

QAPD quality assurance program description

Q-DCIS safety-related distributed control and information system

RAI request for additional information reliability assurance program RAS River Analysis System

RAT reserve auxiliary transformer RB reactor building

RB/FB reactor building & fuel building

RC Recession Ratio

RCC roller compacted concrete

RCCV reinforced concrete containment vessel

RCCW reactor closed-cooling water

RCCWS reactor component cooling water system

R-COL reference-COL reference-COLA

RCPB reactor coolant pressure boundary

RCS reactor coolant system

RCTS resonant column torsional shear

rem roentgen equivalent man (a unit of radiation dose)
REMP radiological environmental monitoring program

REP radiological emergency preparedness

RERP radiological emergency response preparedness

RET radiological emergency team RFI radio frequency interference

RG regulatory guide

RIS regulatory issue summary

RLME repeated large magnitude earthquake

RM resolution method

RMS radiation monitoring system

RO reverse osmosis
RP radiation protection

RPP Radiation Protection Program RQD rock quality designations RSCL reactor safety counterpart link

RSW reactor shield wall

RT radiographic testing (or technique)

RTNDT reference temperature nil ductility temperature RTNSS regulatory treatment of non-safety systems

RV reactor vessel

RVSP reactor vessel (materials) surveillance program

RWB radwaste building RWCU reactor water cleanup

RWMS radioactive waste management systems

RW-VS radwaste building vent stack

s second

SACTI Seasonal/Annual Cooling Tower Impact

SAM startup administrative manual sAS secondary alarm station

SASW spectral analysis of surface wave SAT systems approach to training

SB service building SBO station blackout

SCC stress corrosion cracking SCOR soil column outcrop response SCP Safeguards Contingency Plan

SCRs global study of earthquakes in stable continental regions

SDC shutdown cooling

SDG standby diesel generator

SDM shutdown margin SE safety evaluation

SEC Securities and Exchange Commission

SER safety evaluation report

SFP spent fuel pool

SFPC spent fuel pool cooling SGI safeguards information

SL stream gradient SLC standby liquid control

SLCS standby liquid control system

SM subtraction method SNM Special Nuclear Material

SNMPPP Special Nuclear Material Physical Protection Plan

SOG Seismic Owners Group

SPDS safety parameter display system

SPT standard penetration test SR surveillance requirement

SRI select rod insert

SRM staff requirements memorandum

SRO senior reactor operator SRP Standard Review Plan

SRV/SV safety relief valve/safety valve
SSAR ESP site safety analysis report
SSC structure, system, and component
structures, systems and components

SSE safe-shutdown earthquake

SSEMP Safety, Security and Emergency Planning
SSEP safety, security, and emergency preparedness
SSHAC Senior Seismic Hazard Analysis Committee

SSI soil-structure interaction

SSSI structure-soil-structure interaction

SSW south-southwest

Std Standard

STS standard technical specifications

SUNSI Sensitive Unclassified Non-Safeguards Information

Sv Sievert

SWMS solid waste management system

SWS station water system SWST station water storage tank

T&QP Training and Qualification Plan

TAF top of active fuel TB turbine building

TBS turbine bypass system

TCCWS turbine component cooling water system

TCP traffic control point

TEDE total effective dose equivalent

TG Technical Guide

TGCS turbine generator control system

TGSS turbine gland seal system
THA time-history accelerograph
TLD thermoluminescent dosimeter

TMI Three Mile Island

TMSS turbine main steam system

TR technical report

TS technical specifications
TSC technical support center

TSCR truncated soil column response
TSTF Technical Specifications Task Force

UAT unit auxiliary transformer

UB upper-bound

UC unconfined compression UHF ultra-high frequency

UHRS uniform hazard response spectra

UHS ultimate heat sink

UPS uninterruptible power supply

UR upper-range US United States

USACE U.S. Army Corps of Engineers

US-APWR U.S. Advanced Pressurized Water Reactor

USCG United Sates Coast Guard

USGS United States Geological Survey

USI unresolved safety issue

USNRC United States Nuclear Regulatory Commission

UT ultrasonic technique

UTM Universal Transverse Mercator

V&V verification and validation

V volt

V/H vertical-to-horizontal
Vac volt alternating current
VBS vehicle barrier system
Vdc volt direct current

VEPCO Virginia Electric and Power Company

VHRA very high radiation area
Vp compression wave velocity

Vpc volt per cell

Vs shear wave velocity

WB wet bulb

WHTF waste heat treatment facitlity

ZIS zinc injection system