

Clinch River Nuclear Site

Early Site Permit Application

PART 3

Environmental Report

Revision 1

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/L	micrograms per liter
AADT	Annual Average Daily Traffic
ac	acres
ACS	American Community Survey
ADEM	Alabama Department of Environmental Management
AEDC	Arnold Engineering Development Center
AFB	Air Force Base
ALARA	as low as reasonably achievable
ALDOT	Alabama Department of Transportation
ALS	Advanced Life Support
AMEC	Amec Foster Wheeler plc
ANA	aquatic natural area
APE	area of potential effect
ARA	aquatic reference area
ASCE	American Society of Civil Engineers
ASOS	Automated Surface Observing System
ATSDR	Agency for Toxic Substances and Disease Registry
B/CTP	Bicide/Corrosion Treatment Plant
bgs	below ground surface
BMP	best management practices
BOD	Biological Oxygen Demand
BP	Containment Bypass
BRAC	Base Realignment and Closure Program
Btu	British thermal units
BWRs	boiling water reactors
CAA	Clean Air Act
CDC	Center for Disease Control and Prevention
CDF	core damage frequency
CEQ	Council on Environmental Quality
CFD	Computational Fluid Dynamics
CFE	Early Containment Failure
CFI	Intermediate Containment Failure
CFL	Late Containment Failure
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH ₄	methane
Ci	curies
Cl	chloride
cm	centimeter

ACRONYMS AND ABBREVIATIONS (CONTINUED)

CO	carbon monoxide
CO ₂	carbon dioxide
COC	Cycles of Concentration
COD	Chemical Oxygen Demand
COL	Combined License
COLA	Combined License Application
CR	Clinch River
CRBRP	Clinch River Breeder Reactor Project
CRM	Clinch River Mile
CRN	Clinch River Nuclear
CRUD	corrosion related unidentified deposits
CWA	Clean Water Act
CWS	circulating water system
DAR	Daughters of the American Revolution
DASU	Data Acquisition Switch Unit
dB	decibel
dBA	a-weighted decibels
DBAs	Design basis Accidents
DBT	Design Basis Tornado
DNL	Day-Night Average Sound Level
DO	dissolved oxygen
DoD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DRH	Division of Radiological Health
EAB	exclusion area boundary
EDS	Environmental Data Station
EIA	U.S. Energy Information Administration
EIS	Environmental Impact Statement
EMA	Environmental Monitoring and Analysis
EMF	electromagnetic field
EMS	Emergency Medical Services
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPFS	Emergency Preparedness Field Support
EPRI	Electric Power Research Institute
EPZ	emergency planning zone
ER	Environmental Report
ERB	Effluent Release Boundaries
ESE	east-southeast
ESP	Early Site Permit

ACRONYMS AND ABBREVIATIONS (CONTINUED)

ESPA	Early Site Permit Application
ETHRA	East Tennessee Human Resource Agency
ETTP	East Tennessee Technology Park
FBI	Federal Bureau of Investigations
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FIRMS	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
fps	feet per second
ft	feet
ft/ft	feet per foot
ft/s	feet per second
ft ² /d	feet squared per day
ft ³	cubic feet
FWPCA	Federal Water Pollution Control Act
FY	Fiscal Year
g/kWh	grams of CO ₂ per kilowatt hour
GEIS	Generic Environmental Impact Statement
GHG	greenhouse gas
gm/cm ³	grams per cubic centimeter
gpd	gallons per day
gpm	gallons per minute
ha	Hectare
HABs	harmful algal blooms
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HFIR	high flux isotope reactor
HLW	high-level waste
HPA	Habitat Protection Area
hr	hour
HRCQ	highway route controlled quantity
HSP	Health and Safety Plan
HSV	Huntsville International Airport
HUC	Hydrologic Unit Code
HVAC	heating, ventilation, and air conditioning
HWEL	Headwater Elevation
I-	Interstate
IC	Intact Containment
in.	inches
IPPP	Integrated Pollution Prevention Plans
ISFSI	independent spent fuel storage installation

ACRONYMS AND ABBREVIATIONS (CONTINUED)

ISL	in-situ leaching
IUs	Industrial Users
JFD	Joint Frequency Distributions
KAT	Knoxville Area Transit
Kg	kilograms
kg/ha/mo	kilograms per hectare per month
kg/km ² -mo	kilograms per square kilometer per month
km	kilometer
KOP	Key Observation Points
kV	kilovolt
kWh	kilowatt-hour
LCD	Local Climatological Data
LiDAR	Light Detection and Ranging
LLRW	low level radioactive waste
LLW	low-level waste
LMDCT	Linear mechanical draft cooling towers
LOCA	loss of coolant accidents
LOS	Level of Service
LPZ	low-population zone
LWR	light water reactor
ly/min	Langley's per minute
m	meter
m/s	meters per second
m ³	Meters cubed
mA	milliamperes
MBtu	Million British Thermal Units
MCL	maximum contaminant levels
MEI	maximally exposed individual
mg/L	milligrams per liter
mgd	million gallons per day
mi	mile
MMT	million metric tons
mph	miles per hour
mrads	millirads
mrem	millirem
MSA	Metropolitan Statistical Area
msl	above mean Sea Level
MT	metric ton
MTU	metric ton of uranium
mVolts	millivolts
MW	megawatts

ACRONYMS AND ABBREVIATIONS (CONTINUED)

MWd	megawatt-days
MWe	megawatt electric
MWh	megawatt hours
MWt	megawatt thermal
N ₂ O	nitrous oxide
Na	Sodium
NAA	nonattainment area
NAAQS	National Ambient Air Quality Standards
NaCl	sodium chloride
NASA	National Aeronautics and Space Administration
NAVD88	North American Vertical Datum of 1988
NAWQA	National Water-Quality Assessment Program
NCA	National Climate Assessment
NCDC	National Climatic Data Center
NEI	Nuclear Energy Institute
NEPA	National Environment Policy Act
NERP	National Environmental Research Park
NESC	National Electrical Safety Code
NGVD29	National Geodetic Vertical Datum of 1929
NLCD	National Land Cover Database
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NO _x	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRC	U.S. Nuclear Regulatory Commission
NRHD	National Register Historic District
NRHP	National Register of Historic Places
NSA	Naval Support Activity
NSR	New Source Review
NSSS	nuclear steam supply system
NTU	nephelometric turbidity units
NWI	National Wetland Inventory
NWR	National Wildlife Refuge
NWS	National Weather Service
O&G	Oil and Grease
O&M	Operating and Maintenance
O ₃	ozone
ODCM	Offsite Does Calculation
ORFD	Oak Ridge Fire Department
ORNL	Oak Ridge National Laboratory

ACRONYMS AND ABBREVIATIONS (CONTINUED)

ORR	Oak Ridge Reservation
OSCS	Oriented Spray Cooling System
PA	Programmatic Agreement
Pb	Lead
PBA	power block area
PCB	polychlorinated biphenyls
Percent g	acceleration due to gravity
PGA	peak ground acceleration
PM	particulate matter
PM ₁₀	particulate matter with a diameter of less than 10 microns
PM _{2.5}	particulate matter with a diameter less than 2.5 microns
PMF	Probable Maximum flood
PPD	presidential policy directive
PPE	plant parameter envelope
ppm	parts per million
PRA	probabilistic risk assessment
PSAR	Preliminary Safety Analysis Report
PSD	Prevention of Significant Deterioration
psi	Pounds Per Square Inch
PWR	pressurized water reactors
Qc	Colluvium
Qha	Holocene alluvium
RAC	Remote Access Computer
RCRA	Resource Conservation and Recovery Act
REMP	Radiological Environmental Monitoring Program
RG	Regulatory Guide
RIMS II	Regional Input-Output Modeling System
RM	Road Miles
Rn-222	Radon-222
ROS	Reservoir Operations Study
ROW	Right of Way
RTDs	Resistance temperature detectors
RV	Recreational Vehicle
Ryr	reactor year
s	second
SACTI	Seasonal and Annual Cooling Tower Impact
SCRAM	Support Center for Regulatory Atmosphere Modeling
SDWIS	Safe Drinking Water Information System
SHPO	State Historic Preservation Officer
SI	subsurface investigation
SMR	Small Modular Reactor

ACRONYMS AND ABBREVIATIONS (CONTINUED)

SMZ	Streamside management zones
SNA	State Natural Area
SO ₂	sulfur dioxide
SO _x	sulfur oxide
SPCC	Spill Prevention, Control and Countermeasures
sq	square
SSAR	Site Safety Analysis Report
SSC	structures, systems, and components
SSE	south-southeast
Sv	person sievert
SVOC	semivolatile organic compound
SWPPP	Stormwater Pollution Prevention Plan
TAC	Texas Administrative Code
Tc-99	Technetium-99
TCA	Tennessee Code Annotated
TDEC	Tennessee Department of Environment and Conservation
TDOH	Tennessee Department of Health
TDOT	Tennessee Department of Transportation
TEDE	Total Effective Dose Equivalent
TLD	thermoluminescent dosimeters
TN	Tennessee State Highway
TRM	Tennessee River Mile
TROC	temperature rate of change
TRU	transuranic
TSS	Total Suspended Solids
TVA	Tennessee Valley Authority
TWPC	TRU waste processing center
TWRA	Tennessee Wildlife Resources Agency
U-235	Uranium -235
U-238	Uranium-238
U ₃ O ₈	Uranium Oxide
U ₃ O ₈ e	Uranium Oxide equivalent
UF ₆	Uranium Hexafluoride
UFC	Uranium fuel cycle
UHS	Ultimate Heat Sink
UNFCCC	United Nations Framework Convention on Climate Change
UO ₂	Uranium Dioxide
UPF	Uranium Processing Facility
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USDA	U.S. Department of Agriculture

ACRONYMS AND ABBREVIATIONS (CONTINUED)

USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VES	visual and aural encounter surveys
VOCs	volatile organic compounds
WMA	Wildlife Management Area
WSEL	Water Surface Elevation
WWC	wet-weather conveyances
X/Q	atmospheric dispersion factors
yr	year