

ACRONYMS AND ABBREVIATIONS

ACRONYMS AND ABBREVIATIONS

°	Degrees
'	minutes
”	seconds
>	Greater than
<	Less than
11e(2)	byproduct material as defined in section 11e(2) of the Atomic Energy Act of 1954
μCi	microcurie
μg/m ³	micrograms per cubic meter
μR/hr	Microroentgen per hour
μSiemens/cm	microsiemens per centimeter

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACL	Administrative Control Levels
ADA	Americans with Disabilities Act
AEA	Atomic Energy Act of 1954
AIF	Andrews Industrial Foundation
AL	Action Limit
ALARA	As low as reasonably achievable
ALI	Annual Limit on Intake
ALR	Action leakage rate
AMC	Antecedent Moisture Condition
AME	AM Environmental, Inc.
ANL-East	Argonne National Laboratory (Chicago, IL)
ANL-West	Argonne National Laboratory (Idaho Falls, ID)
ANOC	Administrative Notice of Completeness
ANOD	Administrative Notice of Deficiency
APF	Assigned protection factor
API	American Petroleum Institute
ARA	Airborne Radioactivity Area
ARF	Airborne Release Fraction; atmospheric release fraction
ARM	Airborne radiation monitor
ASL	Approved Suppliers List
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials, International
AT	Ambient Temperature

BC	Bolt hole center
BIB	Biointrusion barrier
BM	Benchmark
BNL	Brookhaven National Laboratory
Bone Surf	Bone surface
BOD ₅	Five Day Biological Oxygen Demand

**APPLICATION FOR LICENSE TO AUTHORIZE NEAR-SURFACE
LAND DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE
Acronyms and Abbreviations**

BP	Barometric Pressure
Bq	Becquerel
BR	Breathing rate
BRC	Texas Department of Health Bureau of Radiation Control
BWR	Boiling water reactor

C	Degrees Celsius
CA	Custodial agency; contamination area
CAA	Clean Air Act
CAM	Continuous air monitor
CAS	Chemical Abstracts Service
CBT	Computer-based training
CCTV	Closed circuit television
CDE	Committed dose equivalent
CDU	Canister Disposal Unit
CEDE	committed effective dose equivalent
CEMP	Columbus Environmental Management Project
CEO	Chief executive officer
CERCLA	Comprehensive Environmental Response, Compensation Liability Act
cf	Cubic feet
CFO	Chief financial officer
CFR	Code of Federal Regulation
cfs	Cubic feet per second
CH	Contact handled
CHP	Certified health physicist
Ci	Curies
CJI	Cook-Joyce Inc.
CL	Center line
CLSM	Controlled low-strength material (grout)
cm	Centimeters
cm ²	square centimeters
COO	Chief operating officer
CORPS	U.S. Army Corps of Engineers
CONEX	Container Express
CP	Comanche Peak Reactor
CPR	Cardiopulmonary resuscitation
CQA/QC	Construction quality assurance/quality control
CRCC	Cylindrical reinforced concrete canister
CSA	Containment Storage Area
CST	Central Standard Time
CSW	College of the Southwest
cu	Cubic
CW	Central supply well
CWA	Clean Water Act

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CWF	Compact Waste Facility
cy	Cubic yards
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D class	Clearance time of less than 10 days
D&D	Decontamination and decommissioning
DAC	Derived air concentration
DAC-hour	Derived air concentration-hour
DAW	Dry active waste
DCF	Dose conversion factor
DCF-inh	Dose conversion factor-inhalation
DCF-rn	Dose conversion factor-radon
DDC	Disaster district committee
DDE	Deep dose equivalent
DE	Dose equivalent
DEM	Division of emergency management
DIA	Diameter
DL	Double layer; double liner
DO	Dissolved oxygen
DOE	U.S. Department of Energy
DOP	Diocetylphthalate
DOT	U.S. Department of Transportation
dpm	disintegrations per minute
DR	Dimension ratio; Direct read
DRD	Direct reading dosimeter
DSHS	Texas Department of State Health Services
DTG	Depth to groundwater
DU	Depleted uranium
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E	Efficiency
ea	Each
EAL	Emergency action level
EC	Emergency coordinator
EcoMP	Ecological monitoring plan
ED	Executive director, TCEQ
EDE	Effective dose equivalent
edays	Elapsed days
EDCLC	Economic Development Corporation of Lea County
EMP	Emergency management plan
EOC	Emergency operations center
EPA	Environmental Protection Agency
ER	Environmental Report; environmental restoration; environmental cleanup from waste sites (see also WM)
ERCM	Environmental and Regulatory Compliance Manager
ERPG	Emergency response planning guide(lines)
ERO	Emergency response organization

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ERT	Emergency response team
ES&H	Environmental safety and health
ESO	Emergency shut down system
ET	Evapotranspiration; Evapotranspiration cover
ETEC	Energy Technology Engineering Center
EVdif	Evaporation difference
EVlev	Evaporation level

F	Degree Fahrenheit
FEMA	Federal Emergency Management Agency
FEMP	Fernald Environmental Management Project
FML	Flexible membrane liner
fmsl	Feet above mean sea level
fps	Feet per second
FQ	Flow totalizer
FR	Federal Register
FS	Factor of safety
ft	Feet
ft/ft	Feet per foot
FWF	Federal Waste Facility
FWF-CDU	Federal Waste Facility-Canister Disposal Unit
FWF-NCDU	Federal Waste Facility-Non-Canister Disposal Unit
FWS	U.S. Fish and Wildlife Service

g	Gram; gravitational acceleration
gal	Gallons
GED	General education diploma
GERT	General Employee Radiological Training
GET	General employee training
GM	General manager; Geiger-Mueller
GMR	Groundwater monitoring report
gpd	Gallons per day
gpm	Gallons per minute
GRT	Gross receipts tax
Gy	Gray (SI unit of absorbed dose)

H&S	Health and Safety
H&SC	Texas Health and Safety Code
HAI	Hughs Associates Inc.
HAZWOPER	Hazardous waste operations
HCA	High contamination area
HDPE	High-density polyethylene
HEA	Habitat equivalency analysis
HEC-HMS	Hydrologic Engineering Center's Hydrologic Modeling System
HEC-RAS	Hydrologic Engineering Center's River Analysis System

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HELP	Hydrologic Evaluation of Landfill Performance
HEPA	High-efficiency particulate air (filter)
HIC	High-integrity container
HOTSPOT	Health Physics Code System for Evaluating Accidents Involving Radioactive Materials
HP	Health physics
HR	Human resources
HS	Hand switch
HSWA	Hazardous and Solid Waste Act
HTO	Tritiated Water, Tritium Oxide
HV	High voltage
HVAC	Heating, ventilation and air conditioning

IATA	International Air Transportation Association
IBC	International Building Code
IC/CF	Interim Cover/Clay Fill
ICC	International Code Council
ICRP	International Commission on Radiological Protection
ID	Inside diameter
IDLH	immediately dangerous to life or health
IL	Investigation limit
IMC	International Mechanical Code
in	Inches
INEEL	Idaho National Engineering and Environmental Laboratory
IPC	International Plumbing Code

JAST	Job (activity) specific training
JPM	Job performance measures

K	Hydraulic Conductivity; degree Kelvin
K _d	Partition coefficient
km	Kilometers
kt	Knots

LA	License Application
LAHH	Level Alarm High High
LAMC	Los Alamos Medical Center
LANDSAT	Land satellite
LANL	Los Alamos National Laboratory
lb	Pound
LBNL	Lawrence Berkeley National Laboratory
LC	Leachate collection
LCF	Latent cancer fatalities
LCRS	Leachate collection and removal system
LDE	Lens of eye dose equivalent

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Acronyms and Abbreviations**

LDL	Lateral drainage layer
LDR	Land disposal restrictions
LDS	Leak detection system
LES	Louisiana Energy Services
lf	Linear feet
LFL	Leveling fill layer
LLD	Lower limit of detection
LLI	Lower Large Intestine
LLNL	Lawrence Livermore National Laboratory
LLRW	Low-level radioactive waste
LLW	Low-level waste
LRRI	Lovelace Respiratory Research Institute
LSC	Liquid scintillation counter
LT	Long term
LTS	Leachate treatment system

m	Meters
M	Million
m/s	Meters per second
MAR	Material at risk
MARV	Minimum average roll value
MAX	Maximum
MBq	million Becquerels
MCA	Multi-channel analyzer
MCC	Modular concrete canisters
mCi	Millicurie
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
meas	measured
meq	milliequivalents
MeV	Million Electron Volts
mg	milligram
mg/L	Milligrams per liter
mgt	Management
mi	Mile
mil	1/1000 th of an inch
MIN	Minimum
ml/g	Milliliters per gram
mL	milliliter
MLLW	Mixed low-level waste
mm	Millimeter
mo	Month
MPC	maximum permissible concentration
mR/hr	Milliroentgen per hour
mrem	Millirem
MSHA	U.S. Department of Labor Mine Safety and Health Administration

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msl	Mean sea level
MW	Megawatt; mixed waste

NARM	Naturally-occurring and accelerator-produced radioactive material
NC	Not calculated
NCES	National Center for Educational Statistics
NCDU	Non-Canister Disposal Unit
NEC	National Electrical Code
NEF	National Enrichment Facility
NESHAP	National Emission Standards for Hazardous Pollutants
NFPA	National Fire Protection Association
NHAP	National High Altitude Photography
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
NM	Not measured
NMEDD	New Mexico Economic Development Division
NMJC	New Mexico Junior College
NNSA	National Nuclear Security Administration
NO	Number
NOAA	National Oceanic and Atmospheric Administration
NOAC	Notice of Administrative Completeness
NOAD	Notice of Administrative Deficiency
NORM	Naturally occurring radioactive material
NOV	Notice of violation
NPDES	National Pollutant Discharge Elimination System
NPSH	Net positive suction head
NPH	Natural Phenomenon Hazards
NQA	Nuclear Quality Assurance
NR	Not run
NRC	Nuclear Regulatory Commission
NRCS	National Resources Conservation Service
NREMP	Nonradiological environmental monitoring plan
NTS	Nevada Test Site; not to scale
NVLAP	National Voluntary Laboratory Accreditation Program
NWS	National Weather Service

OAG	Ogallala, Antlers, Gatuna formation (Caliche Caprock)
OC	On center
OD	Outside diameter
OJT	On the job training
ORNL	Oak Ridge National Laboratory
OSHA	Occupational Safety & Health Administration
OSL	Optically Stimulated Luminescence Dosimeter
oz	Ounce

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PAG	Protective action guides
PAPR	Powered air-purifying respirator
PBC	Permit boundary corner
PBX	Private branch exchange
PC	Performance criteria; protective clothing
PCB	Polychlorinated biphenyl
pcf	Pounds per cubic foot
pCi/g	Picocuries per gram
pCi/L	Picocuries per liter
PCL	Performance cover layer
PD	Puff duration
PE	Professional Engineer
PGA	Peak ground acceleration
PGDP	Paducah Gaseous Diffusion Plant
PI	Pressure indicator
PMP	Probable maximum precipitation
PORTS	Portsmouth Gaseous Diffusion Plant
PPE	Personal protective equipment
ppm	Parts per million; planned preventive maintenance
PQL	Practical quantitation limit
PSD	Prevention of significant deterioration
PSE	Planned special exposure
psf	Pounds per square foot
psi	Pounds per square inch
psig	Pounds per square inch gauge
PV	Present value
PWR	Pressurized water reactor

Q	Quality Factor
QA	Quality assurance
QAM	Quality Assurance Manager
QAP	Quality Assurance Program
QC	Quality control
QL	Quality level
QLFT	Qualitative fit test
QNFT	Quantitative fit test

R	Resuspension factor; roentgen
RAD	Radiation; 100 ergs per gram of irradiated material
RADTRAN	Transportation Risk Assessment Computer Code
RAP	Response action plan
RCA	Radiation control area; Radiological control area
RCH	Reinforced concrete header
RCRA	Resource Conservation and Recovery Act
RCT	Radiological Control Technician; Railroad Commission of Texas

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REM	Roentgen equivalent man
REMP	Radiological environmental monitoring program
RESRAD	Residual Radiation Risk Assessment Computer Code
RF	Respirable fraction; reliability factor
RFETS	Rocky Flats Environmental Technology Site
RH	Relative Humidity
RL	Rule log
RN	Rain
ROI	Regions of influence
RQ	Reportable quantity
RRCC	Rectangular reinforced concrete container
RSAC	Radiological Safety Analysis Code
RSC	Radiation safety committee
RSO	Radiation Safety Officer
RSP	Radiation Safety Program
RST	Radiological Safety Technicians
RWP	Radiation work permit

SA	Specific Activity
SAR	Supplied air respirator
SARA	Superfund Amendment and Reauthorization Act
SCBA	Self-contained breathing apparatus
SCS	Soil Conservation Service
SDE	Shallow dose equivalent
SDR	Standard dimension ratio
sec	Second
sf	Square feet
SI	International System of Units; Small intestine
SIC	Standard Industrial Code
SIP	Stay in place
SME	Subject matter expert
SNL	Sandia National Laboratory
SNM	Special nuclear material
SOAH	State Office of Administrative Hearings
SOP	Standard operating procedure; step off pad
SPCC	Spill prevention, control and countermeasure
SPRU	Separations Process Research Unit
sq ft	Square feet
SR	Solar irradiation
SRD	Self reading dosimeter
SRS	Savannah River Site
SSC	Structures, systems and components
St. Wall	Stomach Wall
STP	South Texas Project Reactor
STR	Straight

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Sv	Sievert
SVOC	Semi-volatile organic compound
SW-846	Test Methods for Evaluating Solid Wastes Physical/Chemical Methods
SWAT	Soil and Water Assessment Tool
SWRI	Southwest Research Institute
sy	Square yards

T	Tissue
T ₂	Tritium gas
TAC	Texas Administrative Code
TAMU	Texas A&M University
TAP	Training action plan
TBD	To be determined
TBWE	Texas Board of Water Engineers
TCAA	Texas Clean Air Act
TCEQ	Texas Commission on Environmental Quality
TCLP	Toxicity Characteristic Leaching Procedure
TCPA	Texas Comptroller of Public Accounts
TDA	Texas Department of Agriculture
TDH	Texas Department of Health
TDPS	Texas Department of Public Safety
TDS	Total dissolved solids
TEDE	Total effective dose equivalent
TGLO	Texas General Land Office
THC	Texas Historical Commission
THSC	Texas Health and Safety Code
TLD	Thermoluminescent dosimeter
TNOD	Technical notice of deficiency
TNRCC	Texas Natural Resources Conservation Commission
TOC	Total organic carbon
TODE	Total organ dose equivalent
TOUGH2	general-purpose numerical simulator for multiphase fluid and heat flow in fractured-porous media
TOX	Total organic halogen
TPWD	Texas Parks and Wildlife Department
TRAGIS	Transportation Routing Analysis Geographic Information System
TRB	Transportation Research Board
TRCA	Texas Radiation Control Act
TRU	Transuranic waste
TSCA	Toxic Substances Control Act
TSD	Treatment, storage and disposal
TSS	Total suspended solids
TSWDA	Texas Solid Waste Disposal Act
TWC	Texas Water Commission
TWDB	Texas Water Development Board

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TYP	Typical
U	Inhalation rate
ULI	Upper Large Intestine
UPS	Uninterruptible power supply
USACOE	U.S. Army Corps of Engineers
USCB	U.S. Census Bureau
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
USLE	Universal soil loss equation
UTM	Universal Transverse Mercator
UV	Ultraviolet
VOC	Volatile organic compound
VSP	Verification sampling Permacon®
VY	Vermont Yankee Reactor
W class	Clearance Time of 10 to 100 days
WAC	Waste Acceptance Criteria
WAP	Waste Analysis Plan; Waste Acceptance Plan
WAS	Waste Acceptance Specialist
WBS	Work breakdown structure
WCS	Waste Control Specialists LLC
WD	Wind direction
WIPP	Waste Isolation Pilot Plant
WL	Working level
WLM	Working level month
WM	Waste management; cleanup from on-going operations such as nuclear power plants or medial/research facilities (see also ER)
WRIA	Waste receipt inspection area
WRSB	Waste receiving/sampling building
WS	Wind speed
WSEL	Water surface elevation
WVDP	West Valley Demonstration Project
Y class	Clearance Time of greater than 100 days
yd	Yard
yr	Year