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List of Acronyms

AEA	Atomic Energy Act of 1954
AECL	Atomic Energy of Canada Limited
AED	aerodynamic equivalent diameter
AIRFA	American Indian Religious Freedom Act
ALARA	as low as is reasonably achievable
AMWTP	Advanced Mixed Waste Treatment Project
ANL–W	Argonne National Laboratory–West
APSF	Actinide Packaging and Storage Facility
AQCR	Air Quality Control Region
ARF	airborne release fraction
ARIES	Advanced Recovery Integrated Extraction System
AVLIS	Atomic Vapor Laser Isotope Separation
BEA	Bureau of Economic Analysis
BEIR V	Report V of the Committee on the Biological Effects of Ionizing Radiations
BIO	Basis for Interim Operation
BLM	Bureau of Land Management
BNFL	British Nuclear Fuels
BWR	boiling water reactor
CAA	Clean Air Act
CAB	Citizens Advisory Board
CANDU	Canadian Deuterium Uranium (reactors)
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFA	Central Facilities Area
CFR	Code of Federal Regulations
CPP	Chemical Processing Plant
CWA	Clean Water Act of 1972, 1987
D&D	decontamination and decommissioning
DBA	design basis accident
DCS	Duke Engineering & Services, COGEMA Inc., and Stone & Webster
DNFSB	Defense Nuclear Facilities Safety Board
DOC	U.S. Department of Commerce
DoD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOL	U.S. Department of Labor
DOT	U.S. Department of Transportation
DR	damage ratio
DU PEIS	*Final Programmatic Environmental Impact Statement for Alternative Strategies for Long-Term Management and Use of Depleted Uranium Hexafluoride*
DWPF	Defense Waste Processing Facility
EA	environmental assessment
EBR	Experimental Breeder Reactor (I or II)
EIS	environmental impact statement
EPA	Environmental Protection Agency

ES&H	environment, safety, and health
ESTEEM	Education in Science, Technology, Energy, Engineering, and Math
ETB	Engineering Test Bay
ETTP	East Tennessee Technology Park
FAA	Federal Aviation Administration
FDP	fluorinel dissolution process
FEMA	Federal Emergency Management Agency
FFCA	Federal Facility Compliance Agreement
FFF	Uranium Fuel Fabrication Facility
FFTF	Fast Flux Test Facility
FI	field investigation
FM	Farm-to-Market (road)
FMF	Fuel Manufacturing Facility
FMEA	failure modes and effects analysis
FMEF	Fuels and Materials Examination Facility
FONSI	finding of no significant impact
FPF	Fuel Processing Facility
FPPA	Farmland Protection Policy Act
FR	Federal Register
GAO	General Accounting Office
GDP	gaseous diffusion plant
GE	General Electric Company
GENII	Generation II, Hanford environmental radiation dosimetry software system
GPS	global positioning satellite
HE	high explosive
HEPA	high-efficiency particulate air (filter)
HEU	highly enriched uranium
HFEF	Hot Fuel Examination Facility
HHS	Department of Health and Human Services
HIGHWAY	(computer code for distances and populations along U.S. highways)
HLW	high-level waste
HLWVF	high-level-waste vitrification facility
HMIS	Hazardous Materials Information System
HWTPF	Hazardous Waste Treatment and Processing Facility
HYDOX	hydride oxidation
IAEA	International Atomic Energy Agency
ICPP	Idaho Chemical Processing Plant
ICRP	International Commission on Radiological Protection
ID DHW	Idaho Department of Health and Welfare
INEEL	Idaho National Engineering and Environmental Laboratory
INRAD	Intrinsic Radiation
INTEC	Idaho Nuclear Technology and Engineering Center
IPE	Individual Plant Examination
ISC	Industrial Source Complex Model
ISC3	Industrial Source Complex Model, Version 3
ISCST3	Industrial Source Complex Model, Short-Term, Version 3
ISLOCA	interfacing systems loss-of-coolant accident
ITP	In-Tank Precipitation Process

LANL	Los Alamos National Laboratory
LCF	latent cancer fatality
LDR	Land Disposal Restrictions
LEU	low-enriched uranium
LLNL	Lawrence Livermore National Laboratory
LLW	low-level waste
LOCA	loss-of-coolant accident
LPF	leak path factor
LWR	light water reactor
M&H	Mason & Hanger Corporation
MACCS2	Melcor Accident Consequence Code System (computer code)
MAR	material at risk
MD	Office of Fissile Materials Disposition
MEI	maximally exposed individual
MIMAS	Micronized Master
MMI	Modified Mercalli Intensity
MOX	mixed oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAS	National Academy of Science
NCRP	National Council on Radiation Protection and Measurements
NDA	nondestructive analysis
NEPA	National Environmental Policy Act of 1969
NESHAPs	National Emissions Standards for Hazardous Air Pollutants
NIOSH	National Institute of Occupational Safety and Health
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPH	natural phenomena hazard
NPS	National Park Service
NRC	U.S. Nuclear Regulatory Commission
NRU	National Research Universal
NTS	Nevada Test Site
NWCF	New Waste Calcining Facility
NWPA	Nuclear Waste Policy Act
NWS	National Weather Service
ORIGEN	ORNL Isotope Generation and Depletion Code
ORNL	Oak Ridge National Laboratory
ORR	Oak Ridge Reservation
OSHA	Occupational Safety and Health Administration
PBF	Power Burst Facility
PEIS	programmatic environmental impact statement
PFP	Plutonium Finishing Plant
PIE	postirradiation examination
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
PNNL	Pacific Northwest National Laboratory
PRA	probabilistic risk assessment
PSD	prevention of significant deterioration
PUREX	Plutonium-Uranium Extraction (Facility)
PWR	pressurized water reactor
R&D	research and development

RADTRAN 4	(computer code: risks and consequences of radiological materials transport)
RANT	Radioactive Assay and Nondestructive Test
RAMROD	Radioactive Materials Research, Operations and Demonstration
RCRA	Resource Conservation and Recovery Act, as amended
REA	regional economic area
RF	respirable fraction
RfC	reference concentration
RfD	reference dose
RFETS	Rocky Flats Environmental Technology Site
RFP	Request for Proposal
RIA	Reactivity Insertion Accidents
RIMS II	Regional Input-Output Modeling System II (computer code)
RISKIND	(computer code: risks and consequences of radiological materials transport)
ROD	Record of Decision
ROI	region of influence
RMF	Radiation Measurements Facility
RWMC	Radioactive Waste Management Complex
S/A	Similarity of Appearance (provision of Endangered Species Act)
SAR	safety analysis report
SARA	Superfund Amendments and Reauthorization Act of 1986
SCDHEC	South Carolina Department of Health and Environmental Control
SCE&G	South Carolina Electric & Gas Company
SCSHPO	South Carolina State Historic Preservation Officer
SDWA	Safe Drinking Water Act, as amended
SEIS	supplemental environmental impact statement
SHPO	State Historic Preservation Officer
SI	sealed insert
SMC	Specific Manufacturing Complex
SNF	spent nuclear fuel
SNM	special nuclear material
SPD	surplus plutonium disposition
SPD EIS	*Surplus Plutonium Disposition Environmental Impact Statement*
SPERT	Special Power Excursion Reactor Test
SRS	Savannah River Site
SSM PEIS	*Final Programmatic Environmental Impact Statement for Stockpile Stewardship and Management*
SST/SGT	safe, secure trailer/SafeGuards Transport
SWMU	solid waste management unit
SWP 1	Service Waste Percolation Pond 1
TA	Technical Area
TCE	trichloroethylene
TNRCC	Texas Natural Resource Conservation Commission
TPBAR-LTA	tritium-producing burnable absorber rod lead test assembly
TRA	technical risk assessment
TRANSCOM	transportation tracking and communications system
TRU	transuranic
TRUPACT	TRU waste package transporter
TSCA	Toxic Substances Control Act
TSP	total suspended particulates

TVA	Tennessee Valley Authority
TWRS	tank waste remediation system
TWRS EIS	*Tank Waste Remediation System Final Environmental Impact Statement*
UC	Regents of the University of California
UFSAR	updated final safety analysis report
USACE	U.S. Army Corps of Engineers
USC	United States Code
USEC	United States Enrichment Corporation
USFWS	U.S. Fish and Wildlife Service
UV	ultraviolet
VOC	volatile organic compounds
VORTAC	very high frequency omnidirectional range/tactical air navigation (facility)
VRM	Visual Resource Management
WAG 3	Waste Area Grouping 3
WERF	Waste Experimental Reduction Facility
WIPP	Waste Isolation Pilot Plant
WM PEIS	*Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste*
WNP–1	Washington Nuclear Plant–1
WNP–2	Washington Nuclear Plant–2
WPPSS	Washington Public Power Supply System
WROC	Waste Reduction Operations Complex
WSRC	Westinghouse Savannah River Company
ZPPR	Zero Power Physics Reactor

Chemicals and Units of Measure

°C	degrees Celsius (Centigrade)
°F	degrees Fahrenheit
μCi	microcurie
μg	microgram
μm	micrometer (micron)
46°26'07"	46 degrees, 26 minutes, 7 seconds
Ci	curie
cm	centimeter
CO	carbon monoxide
CO_2	carbon dioxide
dB	decibel
dBA	decibel, A-weighted
DUF_6	depleted uranium hexafluoride
eH	oxidation reduction potential
ft	foot
ft^2	square foot
ft^3	cubic foot
g	gram
g	gravitational acceleration
gal	gallon
GWD	gigawatt days (per ton)
ha	hectare
hr	hour (in compound units)
in	inch
kg	kilogram
km	kilometer
km^2	square kilometers
kV	kilovolt
l	liter
lb	pound
m	meter
m^2	square meter
m^3	cubic meter
mg	milligram
mi	mile
min	minute
mph	miles per hour
mrem	millirem
MTHM	metric tons of heavy metal
MVA	megavolt-ampere
MW	megawatt
MWe	megawatt electric
MWh	megawatt-hour
N_2	nitrogen
nCi	nanocurie
NO_2	nitrogen dioxide
pCi	picocurie
pcm/F	percent mille/Farenheit
pH	hydrogen ion concentration
$PM_{2.5}$	particulate matter less than or equal to 2.5 μm in diameter
PM_{10}	particulate matter less than or equal to 10 μm in diameter
ppm	parts per million
PuO_2	plutonium dioxide
rad	radiation absorbed dose
rem	roentgen equivalent man
s	second
SO_2	sulfur dioxide
t	metric ton
ton	short ton
UF_6	uranium hexafluoride
UO_2	uranium dioxide
yd	yard
yd^3	cubic yard
yr	year (in compound units)
wt %	weight percent

Metric Conversion Chart

To Convert Into Metric			To Convert Out of Metric		
If You Know	**Multiply By**	**To Get**	**If You Know**	**Multiply By**	**To Get**
Length					
inches	2.54	centimeters	centimeters	0.3937	inches
feet	30.48	centimeters	centimeters	0.0328	feet
feet	0.3048	meters	meters	3.281	feet
yards	0.9144	meters	meters	1.0936	yards
miles	1.60934	kilometers	kilometers	0.6214	miles
Area					
sq. inches	6.4516	sq. centimeters	sq. centimeters	0.155	sq. inches
sq. feet	0.092903	sq. meters	sq. meters	10.7639	sq. feet
sq. yards	0.8361	sq. meters	sq. meters	1.196	sq. yards
acres	0.40469	hectares	hectares	2.471	acres
sq. miles	2.58999	sq. kilometers	sq. kilometers	0.3861	sq. miles
Volume					
fluid ounces	29.574	milliliters	milliliters	0.0338	fluid ounces
gallons	3.7854	liters	liters	0.26417	gallons
cubic feet	0.028317	cubic meters	cubic meters	35.315	cubic feet
cubic yards	0.76455	cubic meters	cubic meters	1.308	cubic yards
Weight					
ounces	28.3495	grams	grams	0.03527	ounces
pounds	0.45360	kilograms	kilograms	2.2046	pounds
short tons	0.90718	metric tons	metric tons	1.1023	short tons
Temperature					
Fahrenheit	Subtract 32 then multiply by 5/9ths	Celsius	Celsius	Multiply by 9/5ths, then add 32	Fahrenheit

Metric Prefixes

Prefix	Symbol	Multiplication Factor
exa-	E	1 000 000 000 000 000 000 = 10^{18}
peta-	P	1 000 000 000 000 000 = 10^{15}
tera-	T	1 000 000 000 000 = 10^{12}
giga-	G	1 000 000 000 = 10^{9}
mega-	M	1 000 000 = 10^{6}
kilo-	k	1 000 = 10^{3}
hecto-	h	100 = 10^{2}
deka-	da	10 = 10^{1}
deci-	d	0.1 = 10^{-1}
centi-	c	0.01 = 10^{-2}
milli-	m	0.001 = 10^{-3}
micro-	μ	0.000 001 = 10^{-6}
nano-	n	0.000 000 001 = 10^{-9}
pico-	p	0.000 000 000 001= 10^{-12}
femto-	f	0.000 000 000 000 001 = 10^{-15}
atto-	a	0.000 000 000 000 000 001= 10^{-18}