

# Appendix A: Acronyms and Abbreviations and Common Metric/British System Equivalent

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AA	Associate administrator
ACHP	Advisory Council on Historic Preservation
ACM	Asbestos-containing material
ADCNR	Alabama Department of Conservation and Natural Resources
ADEM	Alabama Department of Environmental Management
AETF	Advanced Engine Test Facility
AFB	Air Force Base
AFFTC	Air Force Flight Test Center
AFP	Air Force Plant
AIAA	American Institute of Aeronautics and Astronautics
AM&SM	Aircraft Maintenance and Safety Manual
AMCOM	Army Aviation Missile Command
ANHP	Alabama Natural Heritage Program
ANSI	American National Standards Institute
AOC	Area of concern
APU	Auxiliary power unit
APZ	Accident Potential Zones
ARF	Assembly and Refurbishment Facility
AST	Aboveground storage tank
ASTM	American Society for Testing and Materials
ATK	ATK Launch Systems
AVEK	Antelope Valley-East Kern Water Agency
BAHEP	Bay Area Houston Economic Partnership
bhp	Brake horsepower
BLM	Bureau of Land Management
BLS	U.S. Bureau of Labor Statistics
BMP	Best management practice
BNSF	Burlington Northern Santa Fe
BOD	Biochemical oxygen demand
BSB	Building setback
BTEX	Benzene, toluene, ethylbenzene, and xylenes
CAA	Clean Air Act
Cal-EPA	California Environmental Protection Agency
CAP	Corrective Action Program
CARB	California Air Resources Board
CBER	Center for Business and Economic Research
CCAFS	Cape Canaveral Air Force Station

CCMP	Comprehensive Conservation and Management Plan
CCS	Cape Canaveral Spaceport
CCSMP	Cape Canaveral Spaceport Master Plan
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFC	Chlorofluorocarbon
CFR	<i>Code of Federal Regulations</i>
cm	Centimeter
CMS	Corrective Measures Study
CNS	Canaveral National Seashore
CO	Carbon monoxide
COD	Chemical oxygen demand
CWA	Clean Water Act
Cx PEIS	Constellation Programmatic Environmental Impact Statement
CZM	Coastal Zone Management
DA	Department of Army
dB	Decibel
dBA	decibel A-rated
DFRC	Dryden Flight Research Center
DNAPL	Dense non-aqueous phase liquid
DO	Dissolved oxygen
DoD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOT	Department of Transportation
DPD	Dryden Policy Directive
DTSC	Department of Toxic Substances Control
EA	Environmental Assessment
EAFB	Edwards Air Force Base
ECHO	Environmental and compliance History Online (EPA)
EDR	Economic and Demographic Research
EDS	Earth Departure Stage
eFlorida	Enterprise Florida, Inc.
EF	Ellington Field
ELS	Emergency Landing Site
ELV	Expendable Launch Vehicle
EMD	Environmental Management Division
EMO	Emergency Management Office
EMS	Environmental management system
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPB	Environmental Program Branch
EPCRA	Emergency Planning and Community Right-to-Know Act

EPFOL	El Paso Forward Operation Location
EPIA	El Paso International Airport
ERD	Environmental Resources Document
ERP	Environmental Restoration Program
ESE	Environmentally sensitive electronics
ESO	Environmental Services Office
ET	External Tank
ETU	Evaporation Tank Unit
°F	Degrees Fahrenheit
F.A.C.	Florida Administrative Code
FAA	Federal Aviation Administration
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FIRM	Floodplain Insurance Rate Map
FOS	Facility Operating Services
FPO	Federal Preservation Officer
FR	<i>Federal Register</i>
ft	Feet
ft <sup>2</sup>	Square feet
FTE	Full-time equivalent
FTU	Fuel treatment unit
FY	Fiscal year
GH <sub>2</sub>	Gaseous hydrogen
GIWW	Gulf Intracoastal Waterway
GNOCDC	Greater New Orleans Community Data Center
GO/CO	Government owned/contractor operated
GO/GO	Government owned/government-operated
gpd	Gallons per day
gpm	Gallons per minute
GSA	General Services Administration
GSE	Ground support equipment
GSFC	Goddard Space Flight Center
ha	Hectare
HAP	Hazardous Air Pollutant
HAZMAT	Hazardous material
HAZWOPER	Hazardous Waste Operations and Emergency Response Standards
HB	High bay
HCFC	Hydrochlorofluorocarbon
HD	Historic District
HEBF	High-energy Blast Facility
HMCA	Hypergol Maintenance and Checkout Area
HOSC	Huntsville Operations Support Center

hp	Horsepower
HPIW	High-pressure industrial water
HPO	Historic Preservation Officer
HPWG	Historic Preservation Working Group
HQ	Headquarters
HSL	Hardware Simulation Laboratory
HSWA	Hazardous and Solid Waste Amendments of 1984
HVAC	Heating, ventilating, and air conditioning
I	Interstate
ILS	Instrument Landing System
IRLS	Indian River Lagoon System
IRP	Installation Remediation Program
ISS	International Space Station
IWTF	Industrial water treatment facility
JBOSC	Joint Base Operations Support Contract
JER	Joranada Experimental Range
JP	Jet propellant
JPC	Jet Propellants Contractor
JPTS	Jet Propulsion Thermally Stable
JSC	Lyndon B. Johnson Space Center
KARS	Kennedy Athletic, Recreational and Social Organization
kg	Kilogram
km	Kilometer
km/h	Kilometer per hour
km <sup>2</sup>	Square kilometer
km <sup>3</sup> /d	Cubic kilometers per day
KMnO <sub>4</sub>	Potassium permanganate
KNPR	Kennedy NASA Procedural Requirements
KSC	Kennedy Space Center
kV	Kilovolt
kVA	Kilovolt ampere
kW	Kilowatt
L	Liter
LBP	Lead-based paint
LC	Launch Complex
LCC	Launch Control Center
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
LDWF	Louisiana Department of Wildlife and Fisheries
LH <sub>2</sub>	Liquid hydrogen
LHe	Liquid helium
LN <sub>2</sub>	Liquid nitrogen
LNHP	Louisiana Natural Heritage Program

LOX	Liquid oxygen
LPDES	Louisiana Pollutant Discharge Elimination System
LQG	Large-quantity generator
LTM	Long-term monitoring
m	Meter
m <sup>2</sup>	Square meter
MACT	Maximum achievable control technology
MAF	Michoud Assembly Facility
MMBtu/hr	Million British thermal units per hour
MDAB	Mojave Desert Air Basin
MDAH	Mississippi Department of Archives and History
MDEQ	Mississippi Department of Environmental Quality
MDWFP	Mississippi Department of Wildlife, Fisheries and Parks
mgd	Million gallons per day
mg/y	Million gallons per year
µg/L	Micrograms per liter
MINWR	Merritt Island National Wildlife Refuge
MLP	Mobile launch platform
MNHP	Mississippi National Heritage Program
MOA	Memorandum of Agreement
MOM	Maintenance and Base Operations Management
MOU	Memorandum of Understanding
mph	Miles per hour
MPR	Marshall Procedural Requirement
MRGO	Mississippi River Gulf Outlet
MSA	Metropolitan Statistical Area
MSAAP	Mississippi Army Ammunition Plant
MSFC	Marshall Space Flight Center
msl	Mean sea level
MVA	Mega volt amps
MW	Megawatt
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NASA	National Aeronautics and Space Administration
NAVSCIATTS	Naval Small Craft Instruction and Technical Training School
NBL	Neutral Buoyancy Laboratory
NBS	Neutral Buoyancy Simulator
NEP	National Estuary Program
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutant
NFA	No further action
NHL	National Historic Landmark

NHPA	National Historic Preservation Act
NMAC	New Mexico Administrative Code
NMED	New Mexico Environmental Department
NOFD	New Orleans Fire Department
NOI	Notice of Intent
NO <sub>x</sub>	Nitrogen oxide
NPD	NASA Policy Directive
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPR	NASA Procedural Requirements
NPS	National Park Service
NRHP	National Register of Historic Places
NRI	Nationwide Rivers Inventory
NSPS	National Stationary Performance Standards
NSR	New Source Review
NSSC	NASA Shared Services Center
NWI	National Wetland Inventory
O&M	Operations and maintenance
ODS	Ozone depleting substance
OMB	U.S. Office of Management and Budget
OPF	Orbiter Processing Facility
OSB	Operations Support Building
OSHA	Occupational Health and Safety Administration
OU	Operable unit
OV	Orbiter Vehicle
P.L.	Public Law
P2	Pollution prevention
PAFB	Patrick Air Force Base
PAH	Polycyclic aromatic hydrocarbon
PBR	Permit-by-Rule
PCB	Polychlorinated biphenyl
PES	Preliminary Environmental Survey
PM	Particulate matter
POTW	Publicly owned treatment work
ppb	Parts per billion
PPE	Personal protective equipment
ppm	Parts per million
PSD	Prevention of Significant Deterioration
psi	Pounds per square inch
psig	Pounds per square inch gauge
QD arc	Quantity-separation distance
R&D	Research and Development
RR	Rural route

RACM	Regulated Asbestos Containing Materials
RASA	RSA Support Agency
RAW	Removal Action Work
RCM	Refrigerant Compliance Manager
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
ROI	Region of influence
ROW	Right-of-way
RP	Rocket propellant
RSA FESD	Redstone Arsenal Fire and Emergency Services Department
RSA	Redstone Arsenal
RSRM	Reusable Solid Rocket Motor
S&MA	Safety and Mission Assurance
S&WB	Sewerage and Water Board
SAIL	Avionic Systems Laboratory
SANWR	San Andres National Wildlife Refuge
SCS	Soil Conservation Service
SCTF	Sonny Carter Training Facility
SDWA	Safe Drinking Water Act
SESL	Space Environmental Simulation Laboratory
SHPO	State Historical Preservation Officer
SID	State Indirect Discharge
SJRWMD	St. John's River Watershed Management Division
SLA	Superlight Ablator
SLF	Shuttle Landing Facility
SMR	Self-monitoring report
SOFI	Spray-on foam insulation
SOMD	Space Operations Mission Directorate
SOP	Standard operating procedure
SPL	Sound pressure level
SPR	SSC Procedural Requirement
SQG	Small-quantity generator
SR	State Route
SRB	Solid Rocket Booster
SRM	Solid Rocket Motor
SSC	Stennis Space Center
SSFL	Santa Susana Field Laboratory
SSME	Space Shuttle Main Engine
SSP	Space Shuttle Program
STA	Shuttle Training Aircraft
STP	Sewage treatment plant
STS	Space Transportation System

SWMU	Solid waste management unit
SWP3	Storm Water Pollution Prevention Plan
T&R	Transition and retirement
TAC	Texas Administrative Code
TAL	Transoceanic Abort Landing
TCE	Trichloroethylene
TCEQ	Texas Council on Environmental Quality
TCS	Thermal Control System
TDS	Total dissolved solids
TEAL	Triethylaluminum
TEB	Triethylborane
TF	Test facility
TOC	Total organic carbon
TPDES	Texas Pollutant Discharge Elimination system
TPS	Thermal protection system
TRI	Toxic Release Inventory
TS	Test stand
TSCA	Toxic Substances Control Act
TSDF	Treatment Storage and Disposal Facility
TSS	Total suspended solids
TVA	Tennessee Valley Authority
TWA	Time-weighted average
TWC	The Weather Channel
TxANG	Texas Air National Guard
U.S.	United States
U.S.C.	United States Code
UAV	Unmanned Aerial Vehicle
UIC	Underground Injection Control
USA	United States Alliance
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
USFWS	U.S. Fish and Wildlife Services
USGS	U.S. Geological Survey
UST	Underground storage tank
VAB	Vehicle Assembly Building
VAFB	Vandenberg Air Force Base
VPP	Voluntary Protection Program
WNWR	Wheeler National Wildlife Refuge
WRPA	Waste Reduction Policy Act
WSMR	White Sands Missile Range
WSSH	White Sands Space Harbor

WSTF	White Sands Test Facility
WTP	Water treatment plant
WWTP	Wastewater treatment plant

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# Common Metric/British System Equivalents

## Linear

1 centimeter (cm) = 0.3937 inch	1 inch = 2.54 cm
1 centimeter = 0.0328 foot (ft)	1 foot = 30.48 cm
1 meter (m) = 3.2808 feet	1 ft = 0.3048 m
1 meter = 0.0006 mile (mi)	1 mi = 1609.3440 m
1 kilometer (km) = 0.6214 mile	1 mi = 1.6093 km
1 kilometer = 0.53996 nautical mile (nmi)	1 nmi = 1.8520 km
	1 mi = 0.87 nmi
	1 nmi = 1.15 mi

## Area

1 square centimeter (cm <sup>2</sup> ) = 0.1550 square inch (in <sup>2</sup> )	1 in <sup>2</sup> = 6.4516 cm <sup>2</sup>
1 square meter (m <sup>2</sup> ) = 10.7639 square feet (ft <sup>2</sup> )	1 ft <sup>2</sup> = 0.09290 m <sup>2</sup>
1 square kilometer (km <sup>2</sup> ) = 0.3861 square mile (mi <sup>2</sup> )	1 mi <sup>2</sup> = 2.5900 km <sup>2</sup>
1 hectare (ha) = 2.4710 acres (ac)	1 ac = 0.4047 ha
1 hectare (ha) = 10,000 square meters (m <sup>2</sup> )	1 ft <sup>2</sup> = 0.000022957 ac

## Volume

1 cubic centimeter (cm <sup>3</sup> ) = 0.0610 cubic inch (in <sup>3</sup> )	1 in <sup>3</sup> = 16.3871 cm <sup>3</sup>
1 cubic meter (m <sup>3</sup> ) = 35.3147 cubic feet (ft <sup>3</sup> )	1 ft <sup>3</sup> = 0.0283 m <sup>3</sup>
1 cubic meter (m <sup>3</sup> ) = 1.308 cubic yards (yd <sup>3</sup> )	1 yd <sup>3</sup> = 0.76455 m <sup>3</sup>
1 liter (l) = 1.0567 quarts (qt)	1 qt = 0.9463264 l
1 liter = 0.2642 gallon (gal.)	1 gal. = 3.7845 l
1 kiloliter (kl) = 264.2 gal.	1 gal. = 0.0038 kl

## Weight

1 gram (g) = 0.0353 ounce (oz)	1 oz = 28.3495 g
1 kilogram (kg) = 2.2046 pounds (lb)	1 lb = 0.4536 kg
1 metric ton (mt) = 1.1023 tons	1 ton = 0.9072 metric ton

## Energy

1 joule = 0.0009 British thermal unit (BTU)	1 BTU = 1054.18 joule
1 joule = 0.2392 gram-calorie (g-cal)	1 g-cal = 4.1819 joule

**Pressure**

1 newton/square meter (N/m<sup>2</sup>) = 0.0208 pound/square foot (psf)

1 psf = 48 N/m<sup>2</sup>

**Force**

1 newton (N) = 0.2248 pound-force (lbf)

1 lbf = 4.4478 N

**Radiation**

1 becquerel (Bq) = 2.703 x 10<sup>-11</sup> curies (Ci)

1 Ci = 3.70 x 10<sup>10</sup> Bq

1 sievert (Sv) = 100 rem

1 rem = 0.01 Sv