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## **APPENDIX E. TERMS, ACRONYMS, AND ABBREVIATIONS**

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This appendix contains a glossary of terms, a list of acronyms and abbreviations (including organizational designations), and the phonetic alphabet, which is used in some documents to designate missile flights.

### **E.1 GLOSSARY OF TERMS**

**Aquifer.** The water-bearing portion of subsurface earth material that yields or is capable of yielding useful quantities of water to wells.

**Air Force Space Command (AFSPC).** The U.S. Air Force command that controls (among other things) the former missile deployment area at Grand Forks AFB, ND.

**American Society for Testing and Materials (ASTM).** Organized in 1898, ASTM is one of the largest voluntary standards development organizations in the world. ASTM develops standard test methods, specifications, practices, guides, classifications, and terminology in 130 subject areas. An ASTM standard is a document that has been developed and established within the consensus principles of the Society and that meets the approval requirements of ASTM procedures and regulations.

**CAS [Chemical Abstracts Service] Number.** A unique number assigned to every chemical.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).** A law passed in 1980, and amended by the *Superfund Amendments and Reauthorization Act* (SARA) to authorize investigation and cleanup of contamination resulting from previous releases of hazardous substances, pollutants, or contaminants.

**Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS).** Created by Congress in 1986, this system is the official repository for site and non-site specific Superfund data in support of CERCLA. It contains information on hazardous waste site assessment and remediation from 1983 to the present. The system tracks information of all Superfund sites — both the most hazardous (the NPL) and those where cleanup is easier or less urgent. CERCLIS contains the names of all sites that USEPA is currently investigating or has investigated for a release of potential hazardous substances and possible inclusion on the NPL. A listing in the CERCLIS means that USEPA will examine the site and determine if there is cause for a Superfund cleanup or for further investigation; it does not mean that the site has been marked for cleanup by the Superfund program or that a hazardous substance has in fact been released there.

**Deployment Area.** The area within which missiles are placed in launch facilities.

**Diesel Range Organics (DRO).** The range of hydrocarbons comprising diesel fuel. Diesel fuel can evaporate or leach into groundwater. Inhalation or ingestion of diesel fuel can cause nausea, dizziness, headaches, eye irritation, difficulty in concentrating, and increased blood pressure. The NDDH has established a cleanup level of 100 ppm for soil.

**Dismantlement.** The irreversible process of demolishing the headworks and destroying the launch facility support building.

**Environmental Baseline Survey (EBS).** A document prepared for a property to be transferred, purchased, or leased. An EBS is based on all available environmental information

related to storage, release, treatment or disposal of hazardous substances or petroleum products on the property to determine the presence or likely presence of a release or threatened release of any hazardous substance or petroleum product.

**Environmental Response Notification System (ERNS).** USEPA's emergency response notification system list of reported CERCLA hazardous substance releases or spills in reportable quantities, as maintained at the National Response Center.

**Erosion.** The wearing away of soil and rock by the action of wind and water.

**Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).** A 1947 law regulating the distribution, use and sale of pesticides within the United States. The 1972 *Federal Pesticide Control Act* amended FIFRA.

**Gasoline Range Organics (GRO).** The range of hydrocarbons comprising gasoline. Gasoline can evaporate or leach into groundwater. Inhalation or ingestion of gasoline can cause irritation to lungs, dizziness, headaches, difficulty in concentrating, and increased blood pressure. Gasoline commonly contains other toxic substances, such as benzene. The NDDH has established a cleanup level of 100 ppm for soil.

**Groundwater.** Subsurface water that saturates pore spaces of rock, sediment, or soil, and that may supply wells and springs.

**Hardened Intersite Cable System (HICS).** A network of hardened cables between LFs and MAFs that enabled the launch control centers to control the launch of missiles.

**Hazardous Substance.** A substance defined as hazardous pursuant to CERCLA 42 U.S.C. Sec. 9601(14), as interpreted by USEPA regulations and the courts.

**Hazardous Waste.** Any hazardous waste having the characteristics identified under or listed pursuant to Section 3001 of the *Solid Waste Disposal Act* (SWDA) (42 U.S.C. Sec. 6921) (but excluding any waste whose regulation under SWDA has been suspended by Act of Congress). The *Solid Waste Act* of 1980 amended RCRA. RCRA defines a hazardous waste in 42 U.S.C. Sec. 6903 as "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (a) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitation reversible, illness; or (b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."

**Launch Facility (LF).** A fenced and secured facility composed of a missile launcher and launch support building.

**Leaking Underground Storage Tank (LUST).** A UST that has had a confirmed release of a petroleum product or hazardous substance. Section 9003(h) of Subtitle I of RCRA gives USEPA, and states having cooperative agreements with USEPA, authority to clean up releases from a UST system or require owners and operators to do so.

**Maximum Contaminant Level (MCL).** Legally enforceable limits of chemical contamination regulated by the National Primary Drinking Water Standards (40 CFR 141 *et seq*) for public water supplies.

**Missile Alert Facility (MAF).** A fenced and secured site composed of a launch control center, launch control support building, and communications equipment. Formerly known as launch control center (LCC).

**National Priorities List (NPL).** USEPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under Superfund. The list is based primarily on the score a site receives from the Hazard Ranking System. USEPA is required to update the NPL at least once a year. A site must be on the NPL to receive money from the Trust Fund for remedial action.

**Pesticides.** Substances intended for preventing, destroying, repelling, or mitigating any pest, or for use as a plant regulator, defoliant, or desiccant. Pests are defined as insects, rodents, worms, fungus, weeds, plants, viruses, bacteria, microorganisms and other animal life. Pesticides include herbicides, insecticides, fungicides, and rodenticides, and their application is regulated under FIFRA.

**Polychlorinated Biphenyls (PCB).** Mixtures of synthetic organic chemicals with the same basic chemical structure and similar physical properties, ranging from oily liquids to waxy solids. Due to their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics and rubber products; in pigments and dyes; and in many other applications. PCBs were used in the United States from 1929 to 1979 and are regulated by the *Toxic Substances Control Act* (15 U.S.C. Sec. 2601, *et seq.*).

- **PCB items.** Equipment containing a PCB concentration of up to 49 parts per million, as regulated by the USEPA.
- **PCB-contaminated equipment.** Equipment containing a PCB concentration of 50 to 499 parts per million, as regulated by the USEPA.
- **PCB equipment.** Equipment containing a PCB concentration of 500 parts per million or greater, as regulated by the USEPA.

**pH.** A measurement of the acidity or alkalinity of a solution. A value of 7 indicates neutral, while lower values indicate higher acidity, and values above 7 indicate alkalinity.

**Resource Conservation and Recovery Act (RCRA).** A law passed in 1976 establishing a regulatory system to track hazardous substances from their generation to disposal. The law requires safe and secure procedures to be used for treating, transporting, storing, and disposing of hazardous substances. The law also requires federal agencies to comply with all federal, state, interstate, and local regulations respecting control and abatement of solid waste or hazardous waste disposal.

**Resource Conservation and Recovery Information System (RCRIS).** The system used by the EPA to support its implementation of RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA). The system is primarily used to track handler permit or closure status, compliance with Federal and State regulations, and cleanup activities. Other uses of the data include program management, regulation development, waste handler inventory, corrective action tracking, regulation enforcement, facility management planning, and environmental program progress assessment.

**RCRA Treatment, Storage, and Disposal (TSD) Facilities.** Facilities where treatment, storage, or disposal of hazardous wastes take place, as defined and regulated by RCRA.

***Superfund Amendments and Reauthorization Act (SARA).*** A 1986 law to reauthorize and enhance CERCLA and the Superfund program. Among other provisions, it increased State involvement, increased the focus on human health problems posed by hazardous waste sites, and encouraged greater citizen participation in decisionmaking on site cleanup.

**Soil series.** A group of soils having similar parent materials, genetic horizons, and arrangement in the soil profile.

**Target Analyte List (TAL).** A USEPA list of chemical compounds (metals, pesticides, volatile and semi-volatile compounds, and PCBs and other chlorinated compounds) targeted for analysis in soil, water, and air. This list was originally derived from the USEPA Priority Pollutant List, with additions based on the needs of the Superfund program. Most of these substances are toxic. Water quality standards (maximum contaminant levels) have been established for most of these chemicals, but standards have not been set for soil levels.

**Total Dissolved Solids (TDS).** The amount of dissolved mineral constituents in water, measured in milligrams per liter (mg/L). The U.S. Public Health Service has set a standard of 500 mg/L TDS for drinking water. Depending on the dissolved minerals present, higher levels can cause health problems, and objectionable odors and tastes.

**Toxic.** A substance that can cause death, disease, behavioral abnormalities, physiological or reproductive malfunctions, or physical deformities over a short or long time period.

***Toxic Substances Control Act (TSCA).*** A law enacted in 1976 to give USEPA the ability to track industrial chemicals currently produced in or imported into the United States. The USEPA repeatedly screens these chemicals and can require reporting or testing of those that may pose an environmental or human-health hazard, or can ban the manufacture and import of those chemicals that pose an unreasonable risk.

**Toxics Release Inventory (TRI).** A publicly available USEPA database containing information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. This inventory was established under the *Emergency Planning and Community Right-to-Know Act (EPCRA)* of 1986 and expanded by the *Pollution Prevention Act* of 1990.

**Underground Storage Tank (UST).** Any tank, including underground piping connected to the tank, currently or formerly used to contain hazardous substances or petroleum products the volume of which is ten percent or more beneath the surface of the ground.

**Wetlands.** Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

## E.2 ACRONYMS / ABBREVIATIONS

### *Selected Measurements*

°C	degrees Celsius
°F	degrees Fahrenheit
cm	centimeter
km	kilometer
mph	miles per hour
psi	pounds per square inch
g	gram
kg	kilogram (1,000 grams; used for dry measurements)
L	liter (1,000 grams; used for liquid measurements)
lb	pound
mg	milligrams (1/1,000 <sup>th</sup> or 0.001 gram)
µg	microgram (1/1,000,000 <sup>th</sup> or 0.000001 gram)
pCi/l	picocuries per liter (used in this document for radon)
ppb	parts per billion
ppm	parts per million
1 mg/kg	approximately equivalent to 1 ppm
1 mg/L	approximately equivalent to 1 ppm
1 µg/kg	approximately equivalent to 1 ppb
1 µg/L	approximately equivalent to 1 ppb

### *Organizations*

319 CES	319th Civil Engineer Squadron (based at Grand Forks AFB, ND)
319 CES/CEV	Grand Forks AFB Environmental Flight
319 CES/CEM	Grand Forks AFB Missile Engineering
319 CES/CERR	Grand Forks AFB Real Estate Office
319 MDG/SGPB	Grand Forks AFB Medical Group, Bioenvironmental Engineering Office
446 MS	446th Missile Squadron
447 MS	447th Missile Squadron
448 MS	448th Missile Squadron
AFCEE	Air Force Center for Environmental Excellence
AFSPC	U.S. Air Force Space Command
HQ AFSCP/CEM	Headquarters Air Force Space Command, Missile Engineering
HQ USAF/ILEV	Headquarters Air Force, Environmental Office

### *Acronyms and Abbreviations*

AFB	Air Force Base
AFI	Air Force Instruction
AFPD	Air Force Policy Directive
AST	aboveground storage tank
ASTM	American Standards for Testing Materials

CAS	Chemical Abstracts Service
CERCLA	<i>Comprehensive Environmental Response, Compensation and Liability Act</i>
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	<i>Code of Federal Regulations</i>
CWA	<i>Clean Water Act</i>
DEU	diesel electric unit
DoD	Department of Defense
DoDD	Department of Defense Directive
DRO	diesel range organics
EBS	environmental baseline survey
EIS	environmental impact statement
EO	executive order
EPCRA	<i>Emergency Planning and Community Right-to-Know Act</i>
ERNS	Emergency Response Notification System
FEMA	Federal Emergency Management Agency
FFCA	Federal Facility Compliance Agreement
FIFRA	<i>Federal Insecticide, Fungicide, and Rodenticide Act</i>
GIS	geographic information system
GLEAMS	Groundwater Loading Effects on Agricultural Management Systems
GMW	groundwater monitoring well
GRO	gasoline range organics
HICS	Hardened Intersite Cable System
HPRCC	High Plains Regional Climate Center
HQ	headquarters
HUC	hydrologic unit catalog
ICBM	Intercontinental Ballistic Missile
IRP	Installation Restoration Program
LBP	lead-based paint
LCC	launch control center
LCEB	launch control equipment building
LCSB	launch control support building
LEB	launcher equipment building
LER	launcher equipment room
LF	launch facility
LUST	leaking underground storage tank
MAF	missile alert facility
MCL	maximum contaminant level
MILE	Minuteman integrated life extension
MM	Minuteman
MOGAS	motor gasoline
MS	missile squadron
MSL	mean sea level
NCRP	National Council on Radiation Protection and Measurements
NIOSH	National Institute for Occupational Safety and Health
ND	North Dakota

NDCC	North Dakota Century Code
NDDH	North Dakota Department of Health
NDDOT	North Dakota Department of Transportation
NDGS	North Dakota Geological Survey
NDSWC	North Dakota State Water Commission
NPL	National Priority List
NDSU	North Dakota State University
NRC	National Response Center
NRCS	Natural Resources Conservation Service
PCB	polychlorinated biphenyl
PPM	priority pollutant metals
POL	petroleum, oils, and lubricants
RCRA	<i>Resource Conservation and Recovery Act</i>
RCRIS	Resource Conservation and Recovery Information System
ROD	record of decision
RS	reentry system
SARA	<i>Superfund Amendments and Reauthorization Act</i>
SCS	Soil Conservation Service (now Natural Resources Conservation Service)
SD	South Dakota
SHSND	State Historical Society of North Dakota
START	Strategic Arms Reduction Treaty
TAL	target analyte list
TCLP	toxicity characteristic leaching procedure
TDS	total dissolved solids
TIGER	Topologically Integrated Geographic Encoding and Referencing system
TPH	total petroleum hydrocarbons
TRI	Toxic Release Inventory
TSCA	<i>Toxic Substances Control Act</i>
TSD	Treatment, Storage, and Disposal
U.S.	United States
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USAFETAC	U.S. Air Force Environmental Technical Applications Center (now the Combat Climatology Center at Asheville, NC)
USBC	U.S. Bureau of the Census
U.S.C.	<i>United States Code</i>
USDA	U.S. Department of Agriculture
USDHHS	U.S. Department of Health and Human Services
USDI	U.S. Department of the Interior
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service (USDI)
USGS	U.S. Geological Survey (USDI)
USPHS	U.S. Public Health Service (USDHHS)
UST	underground storage tank
WSO	weather service office

*North Atlantic Treaty Organization (NATO) Phonetic Alphabet*

A	Alpha	J	Juliet	S	Sierra
B	Bravo	K	Kilo	T	Tango
C	Charlie	L	Lima	U	Uniform
D	Delta	M	Mike	V	Victor
E	Echo	N	November	W	Whiskey
F	Foxtrot	O	Oscar	X	X-Ray
G	Golf	P	Papa	Y	Yankee
H	Hotel	Q	Quebec	Z	Zulu
I	India	R	Romeo		