

1 COMPLIANCE SUMMARY

1.1 Laws and Regulations

Air Quality Protection

The Colorado Department of Public Health and Environment (CDPHE) administers Clean Air Act implementing regulations for all point sources (facilities or other types of operations) in Colorado, under authority delegated by the U.S. Environmental Protection Agency (EPA). NREL holds two site-wide permits for particulate air emissions from construction and one air emissions permit for a pilot scale research project. Detailed information about NREL's air quality protection program is provided in Section 5.1.

National Emissions Standards for Hazardous Air Pollutants (NESHAPs) requirements specific to radiological emissions from DOE facilities are regulated by the U.S. EPA. NREL's potential emissions are calculated annually using a computer model, and are well below the threshold level. Details are provided in section 5.15.

Drinking Water Quality Protection

Drinking water quality is regulated for all public water suppliers in Colorado by the CDPHE, under authority delegated by EPA. NREL purchases water that is delivered by truck to the NWTC, and holds a public water supply identification number to provide that water to NWTC site occupants. Detailed information about compliance efforts is provided in Section 5.2.

Ground Water Quality Protection

Colorado ground water standards are established by the Colorado Department of Natural Resources. That department also issues permits for ground water wells. NREL has no known groundwater contamination and has obtained drilling permits for all of its monitoring wells. Detailed information about NREL's groundwater program is provided in Section 5.3.

Waste Water

Waste water from the majority of the STM Site and the Denver West Office Park flows into the Pleasant View Water and Sanitation District's (Pleasant View) system, and from there flows to the treatment plant at Metro Wastewater Reclamation District (Metro). Federal and State Clean Water Act implementing wastewater discharge regulations are administered at NREL's STM and DWOP via Pleasant View and Metro requirements. NREL's wastewater discharge policy is in conformance with Metro's discharge requirements. Wastewater at the NWTC site flows into two individual sewage disposal systems (septic and leach fields). These are regulated by CDPHE; inspection and permit issuance have been delegated by CDPHE to the Jefferson County Department of Health and Environment. There is also one individual sewage disposal system at the Solar Radiation Research Laboratory on the mesa top at the STM Site. As is the case with NWTC septic systems, the mesa top system regulations are administered by Jefferson

County. Additional detail about NREL's wastewater discharge program can be found in Section 5.4.

Surface Water Quality Protection

The authority for implementing storm water discharge regulations at federal sites in Colorado rests with EPA. NREL falls under the EPA Construction General Permit (CGP) Program for the STM and NWTC sites for storm water discharge from construction areas. Permit coverage for individual NREL activities is obtained when permit thresholds are triggered based on factors such as acreage involved, slope, and soil characteristics. During 2004, no activities requiring permit coverage were conducted on the STM site. Excel Energy ran a gas pipeline across the NWTC site during the reporting period, and both a Notice of Intent and a Notice of Termination were filed with EPA for coverage under the CGP. Details of NREL's surface water protection program are provided in Section 5.5.

Waste Management

The Resource Conservation and Recovery Act (RCRA) established laws that apply to hazardous waste. In Colorado, CDPHE implements hazardous waste regulations under authority delegated by EPA. NREL holds five EPA generator ID numbers for each of its sites. (An additional ID number for the newly-leased ReFUEL Facility was issued by CDPHE in January 2004.) NREL's waste management program is outlined in Section 5.6. Pollution Prevention efforts at NREL are described in Section 5.9.

Storage Tanks

NREL has no underground storage tanks containing hazardous materials; NREL stores only water in underground tanks at the NWTC. Above ground storage tanks that are larger than 660-gallons are regulated in Colorado by the Colorado Department of Labor, Oil Inspection Section. NREL has two tanks larger than 660 gallons on the STM site that are registered with the Colorado Department of Labor. Details about NREL's tank program are provided in Section 5.7.

Threatened and Endangered Species/Species of Concern

Wildlife is protected by a number of federal laws, including (but not limited to) the Endangered Species Act, Migratory Bird Treaty Act, and Golden and Bald Eagle Protection Act. The Endangered Species Act also protects threatened and endangered plant species. State laws also designate and protect rare or unique plants and animals. No threatened or endangered species or species of concern have been documented on NREL's sites. Details of NREL's wildlife and vegetation surveys are provided in Section 5.11.

EPCRA Compliance and Prevention of Toxic Releases:

Executive Order (E.O.) 13148 outlines requirements for SARA Title III, Emergency Reporting and Community Right-to-Know Act (EPCRA) compliance and Toxic Release Inventory reductions for government facilities. NREL maintains hazardous materials

permits with West Metro Fire Rescue (West Metro) and provides chemical inventory information to West Metro for the STM site and Building 16 in the DWOP.

In 2004, NREL facilities had no release exceeding the reportable quantity (RQ) of any material reportable under EPCRA. NREL did have quantities of three chemicals on site that exceeded the EPCRA threshold planning quantity for each chemical, so MSDSs and Tier II reports were filed with the state and local emergency planning organizations and with the jurisdictional fire department.

As a research and development laboratory, NREL does not manufacture or process any materials, and during 2004, the Laboratory did not otherwise use any materials on the SARA Section 313 list in quantities exceeding the 4526-kg (10,000 lb) threshold planning quantity. NREL's compliance with EPCRA requirements is detailed in Section 5.8.

NREL maintains an Emergency Management Policy (8-4) and supporting lab-level programs, including an Emergency Response Team Program (8-4.1), for credible on site emergencies. Hazardous material releases are specifically called out as a credible emergency, and response procedures are in place. These procedures are routinely practiced by internal response groups and with external emergency response agencies.

Cultural Resources Protection

Various laws, including but not limited to, the National Historic Preservation Act and the Native American Graves Protection and Repatriation Act, protect cultural resources. NREL has two sites listed on the National Register of Historic Places on its STM Site. There are no known eligible sites at the NWTC. In 2005, the DOE Golden Field Office and NREL conducted additional surveying of some of the features remaining from the former Camp George West. NREL's Cultural Resources program and additional details regarding the 2005 survey will be described in the 2005 report.

1.2 Executive Orders

Executive Order 13148

In March 2000, E.O. 13148, Greening the Government Through Leadership in Environmental Management was issued, requiring that all Federal agencies ensure that environmental accountability is integrated into day-to-day decision making and long-term planning processes. In February 2001, DOE issued a notice (DOE N 450.4) outlining requirements for DOE contractors under Executive Order 13148. NREL's compliance with these requirements is explained below.

Specific requirements under E.O. 13148 require federal facilities to develop and implement environmental management systems, comply with environmental regulations, report as required under EPCRA, reduce the release and use of toxic chemicals, practice pollution prevention, reduce the use of ozone-depleting substances (ODSs) by maximizing the purchase and use of safe alternatives, and implementing sustainable landscaping practices to reduce adverse impacts on the environment.

Details of NREL's Environmental Management System (EMS) and information on the environmental programs that implement the EMS are provided in Section 4.0 and 5.0, respectively. Compliance with environmental regulations at NREL, including EPCRA is described in Section 2.1, above. ODS and alternative use at NREL are outlined in Section 5.1, and sustainable landscaping is discussed in Section 5.10.

Executive Order 11988, Floodplains Management:

According to maps generated by the Jefferson County Department of Highways and Transportation as part of its urban drainage studies, NREL's STM site does not contain any floodplains, and no floodplains have been identified at the NWTC. As a Best Management Practice (BMP), however, all construction activities that may cross a drainage channel are designed to meet the 100-year flood control standards (designed to withstand the equivalent of a 100-year flood).

Actions undertaken by NREL at subcontractor facilities are assessed for potential impacts on floodplains and wetlands at those sites through the use of an environmental checklist.

Executive Order 11990, Wetlands Protection:

Limited wetland areas totaling less than 0.3 ha (0.75 ac) occur on the STM site. These are narrow, linear wetlands supporting spikerush, baltic rush, sedges, bluegrass, hemlock, and field mint. These wetlands will be protected from adverse impacts as site development continues.

Wetland areas at the NWTC are extremely limited in extent as well. These areas, along the site's eastern boundary, total less than 0.4 ha (1 ac), and will also be protected from adverse impacts.

1.3 Permit Summary

A table is provided in Appendix A that summarizes NREL's permits, registrations, and notifications.