Wind turbines and other energy generating facilities at the NWTC have and will continue to contribute power to the local electrical distribution system as a natural byproduct of the research and testing activities on-site. The amount of power produced varies depending upon research activity and hardware type. As larger machines in the multi-megawatt class are tested, these power contributions may be substantial. Currently, DOE has no power purchase agreement in place to receive credit for this energy production, but a power purchase agreement with the local utility company may be negotiated in the future.

The site, at the mouth of Eldorado Canyon, was selected because of intermittent, extreme high-wind characteristics that are favorable to research. These characteristics do not support the objective of full-time wind power generation because of the periods of calm winds between high wind events. The NWTC is not a wind farm or a dedicated renewable energy generation facility, and no short-term or long-term plans exist to convert the site to serve this purpose.

1.2.2 Description of the Existing Facilities

The following discussion summarizes key aspects of the site, facilities and operations. Figure 1-3 presents existing site conditions.

Buildings: There are currently six buildings and numerous smaller support and testing facilities located on the NWTC site. The six primary buildings are located in the facility development area on the northern portion of the site between the site boundary and the primary access road (West 119th Avenue).

Turbines and Test Sites: There are currently 21 turbine test sites available. Of those 21 sites, between 12 and 15 generally contain operational turbines or other test equipment; five of the turbines are larger than 100 kW. Turbine test sites are described in Chapter 2.

Conservation Area and Open Space: Conservation management areas have been designated within site boundaries to protect the site's natural resources and prevent development within critical wind corridors. Approximately 60 acres have been set aside for this purpose.

Infrastructure: A site-wide electric network provides power to buildings and a majority of the test sites. Natural gas lines follow Highway 93, but do not serve the site. There is no potable water line to the NWTC. Treated domestic water is trucked to the site, stored in tanks, then distributed to the two primary site buildings (IUF and Building 251) via underground piping. Sanitary wastewater disposal is provided by on-site septic and leach field systems. Water for fire protection is trucked to the site and stored in tanks separate from the domestic water tanks. Water for fire protection is piped underground through an independent system within the Research and Support Facilities area. Standard hydrants are located so as to provide sufficient fire protection. The existing utility infrastructure and road system on the site is presented in Figure 1-3.

In 1995, DOE and Western Aggregates, Inc. signed a Memorandum of Understanding (MOU) that granted a road easement to Western Aggregates, Inc. across the southern and eastern portions of the NWTC. LaFarge now owns and operates the aggregate mining plant. A LaFarge subsidiary, Minerals Reserve, Inc., holds the access road easement. LaFarge is one of two adjacent aggregate mining and processing facilities located south and west of NWTC. Access to the road easement would provide LaFarge with an alternate route for industrial traffic from its plant to Highway 128. DOE granted this easement in exchange for a 20-year

moratorium on mining activities on the NWTC site, where mineral rights are privately owned and leased by Minerals Reserve, Inc. The 20-year moratorium will begin on the date that Western Aggregates, Inc. obtains final approval to commence mining operations from all relevant permitting authorities. To date, Minerals Reserve, Inc. has not fulfilled county and state conditions required to begin activities under the lease on the NWTC site, including the completion of tallgrass prairie and hydrological studies. Consequently, construction and use of a road within this easement is not considered in this analysis. Any proposal by Minerals Reserve, Inc. to develop/use the road easement would be subject to a separate NEPA analysis when a formal proposal is submitted for DOE consideration.

1.2.3 Site Planning Process, Decision Protocol and Environmental Management Commitments

Formal strategic and annual planning processes are in effect at NREL that establish work tasks and direct site development decisions in pursuit of the NREL mission. These planning and decision-making processes are coordinated and integrated so that all necessary information is available for consideration, and that the information flows from one element of the planning process to another in the proper sequence. Elements of this formal planning process interact in continuous feedback and improvement loops and include:

- An *Institutional Plan* that sets forth the organization's mission, critical outcomes, and performance objectives, and identifies specific activities and resources (e.g., staff, facilities) necessary to achieve the objectives. The Institutional Plan is revised annually and includes specific environmental, safety, and health (ES&H) objectives and resource needs.
- An NREL *One-Year Plan* that translates the NREL mission defined in the Institutional Plan into specific work tasks, including research activities and site development, to be completed each fiscal year. Coordinated Annual Operating Plans (AOPs) are developed by each internal organization (e.g., technology program, science and technology center, and operations support office) in support of the One-Year Plan. The AOPs identify specific performance objectives, work tasks, and resource requirements for that organization for the fiscal year.
- A *Capital Plan* having a five-year outlook that establishes resource and budget requirements for major projects (e.g., facility construction, infrastructure development, major equipment acquisitions).
- A *Site Development Plan* that captures the results of planning processes that identify, evaluate, and address opportunities and limitations of the NREL's existing land and facilities. The Plan's objective is to maximize the potential of NREL sites, while meeting the near-term and long-term facility and siting needs of the technology programs.
- NREL *Policies and Procedures Manual* that includes NREL's ES&H Policies. The most directly related policies are as follows:

  2-1 Integrated Safety Management
  6-1 Environment, Safety, and Health
  6-2 Environment Management
  6-3 Property Protection
  6-4 Worker Safety and Health
  6-5 Occupational Medicine
  6-6 Risk Assessment