5.0 OTHER REQUIRED CONSIDERATIONS

5.1 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA requires that environmental analysis include identification of "...any irreversible and irretrievable commitments of resources which would be involved in the Proposed Action should it be implemented."[86]

This section describes irreversible and irretrievable commitments of resources associated with the implementation of the Proposed Action.

Irreversible resource commitments are related to the use of nonrenewable resources, such as soils, wetlands and visual resources, and the effects that the uses of these resources would have on future generations. Such actions are considered irreversible because their implementation would affect a resource that has deteriorated to the point that renewal can occur only over a long period of time or at great expense, or because they would cause the resource to be destroyed or removed.

Irretrievable resource commitment of natural resources means loss of production or use of resources as a result of a decision. It represents opportunities forgone for the period of time that a resource cannot be used. Irretrievable refers to the permanent loss of a resource including extinction of a threatened or endangered species, disturbance of a cultural site, loss of land production, or use of natural resources (including minerals and coal). For example, production or loss of agricultural lands can be irretrievable, while the action itself may not be irreversible.

5.1.1 Land Resources

The construction and operation of the proposed power plant and its associated facilities and infrastructure would require the commitment of approximately 2,000 acres of land for the plant footprint and additional land for roadway, landfill, substations, railroad connectors, and utility corridor zones; and the excavation and/or grading of an extensive amount of soil within this land. Approximately 750 acres would not be impacted and would be leased for continued agricultural use. This commitment would be irreversible for the life of the power plant. While it is possible that these

[86] 40 CFR 1502.16

structures, roads, railroad connectors, and utility corridor zones could be removed and the natural landscape renewed, this is unlikely in the foreseeable future.

5.1.2 Water Resources

The plant would require a maximum of about 7,400 gallons per minute (gpm) of water, which would be obtained from the Missouri River alluvial groundwater resources. This groundwater reserve is replenished by the river, and recovery of the reserve would occur quickly after pumping is stopped.

An estimated four or five acres of wetlands may be impacted (delineation has not yet been done for the rail alignments and transmission corridors). Given that the entire project is located in farmland with almost total replacement of natural vegetation and high modification of drainage conditions, wetlands that may be present at the site are of low natural quality and replaceable. The approximately three acres at the plant site are in a highly disturbed environment with low natural quality. It may be possible to avoid these wetlands; if not, they are replaceable. Loss of wooded wetlands, which may potentially occur in the rail corridor or transmission line, would not be easily replaceable as it would require some time for the trees to mature, but they could also be replaced.

The floodplain impacts are irreversible as long as the fill used to raise the plant elevation remains in place.

5.1.3 Biological Resources

Aside from farm impacts discussed above, the biological impacts at the plant site are mostly limited to the vegetated fence rows. Impacts to birds from the structures and transmission lines are irreversible as long as these structures are present.

5.1.4 Natural and Mineral Resources

During the lifetime of the proposed plant, it would burn approximately 100 million tons of coal. Fuel oil and limestone would also be consumed.

5.2 SHORT-TERM USES VERSUS LONG-TERM PRODUCTIVITY

NEPA requires consideration of the relationship between short-term uses of the environment and long-term productivity associated with a Proposed Action. This involves the consideration of whether a Proposed Action is sacrificing a resource value that might benefit the environment in the long term, or some short-term value to the sponsor or the public. In the context of the short-term uses of the environment associated with the operation of the facility and the long-term impairment of environmental resources as they have been analyzed in this environmental impact statement (EIS), short-term refers to the that period of time encompassing the life span of the power plant and its associated facilities to the period of time encompassing the disassembly of the plant and subsequent restoration and rehabilitation activities. Long-term refers to that period of time following restoration and rehabilitation activities, during which consequent impacts from the Proposed Action still affect the environment.

The proposed short-term uses of the environment associated with the Proposed Action are the development of about 2,000 acres of land for the footprint of the power plant and additional land for roadway, rail connectors, transmission lines, substations, well fields, landfill and discharge line; the consumptive use of an average of 5,600 gallons of water per minute of Missouri River aquifer water; the direct loss of farmland, vegetation, wildlife habitat, floodplains and wetlands; and the consumptive use of coal, limestone and other nonrenewable resources..

The projected period before natural conditions return to an approximate pre-project status within the project area is expected to exceed several decades following completion of restoration activities. Loss of topsoil in areas where buildings and pavement would be located is essentially permanent. Water withdrawals from the Missouri River aquifer would cease immediately and the aquifer would quickly recover.

Floodplains and wetlands restored following equipment removal and rehabilitation efforts would take several decades to recover pre-development characteristics. However, if restoration were to implement efforts to enhance riparian zones along the Missouri River, long-term productivity could eventually increase as compared to current conditions, which are characterized by poor natural quality of area floodplains and wetlands.

Immediately following the disassembly of the power plant and its associated facilities, and regrading and revegetation of the project site, the viewshed could be restored.