

Table 4-1. Summary of potential environmental impacts due to resumption of L-Reactor operations

Parameter	Impact
Land use	No additional land will be required for resumption of L-Reactor operations
Socioeconomic	Employment at SRP will increase by 350, or about 4% of the total existing work force. Direct and composite impacts are expected to be minor.
Archeological sites	One site eligible for nomination to the <u>National Register of Historic Places</u> . Monitoring and mitigative measures have been proposed to protect this site.
Cooling-water withdrawal	Cooling-water withdrawal will withdraw 4% of the average annual flow and less than 7% of the 7-day, 10-year low flow in the Savannah River. Cooling-water withdrawal will entrain less than 5% of the fish eggs and 4% of the fish larvae in the Savannah River that pass the SRP intakes. Withdrawal will impinge an additional 5 fish per day (average) at the intake.
Thermal discharge	Steel Creek is recovering from previous thermal impacts. L-Reactor will discharge about 11 cubic meters per second of cooling water to Steel Creek at 70° to 80°C. Approximately 1000 acres (3% of SRP wetlands habitat) of previously impacted wetlands which are being revegetated will be eliminated and an additional 7 to 10 acres per year will be lost due to the thermal discharges. Delta growth will resume at a rate of about 3 acres per year. The thermal plume in the Savannah River will increase; however, a zone of passage will be maintained.
Water quality	Liquid effluents discharged to the Savannah River via Steel Creek will have chemical characteristics similar to those of the river. Approximately a 15% increase in discharges to the K-Reactor area ash basin will occur due to increased steam generation in the K-Reactor area for L-Reactor.
Air quality	Increased emissions from continuously operating diesel generators in the L-Reactor area and from increased steam generation in the K-Reactor area will occur. No detectable impact on air quality is expected.
Solid waste	All unsalvageable domestic trash will be packaged and disposed of in a State-approved sanitary landfill at the SRP.

Table 4-1. Summary of potential environmental impacts due to resumption of L-Reactor operations (continued)

Parameter	Impact
Endangered species	<p>Habitat for about 25 American alligators in the Steel Creek system will be eliminated. However, no critical habitat as designated by the U.S. Fish and Wildlife Service is on the SRP. Adult alligators could migrate to avoid thermal stress. Smaller alligators might have difficulty migrating and could be more subject to predation.</p>
Radiological exposures	
Occupational	<p>Occupational doses will be controlled to be as low as reasonable achievable, and are expected to average 69 man-rem/reactor-year.</p>
Maximum individual	<p>Maximum individual exposures due to atmospheric releases are expected to be 1.2 millirem/year, and 0.13 millirem/year due to liquid releases. Maximum exposures due to resuspension and transport of radiocesium are estimated at 4.8 millirem during the first year and decreasing to about 0.6 millirem during the tenth year of operation. Maximum individual exposures are a small percentage of the exposure due to natural background (93 millirem/year) and are well within the DOE Standard of 500 millirem/year.</p>
Accidents	<p>Resumption of L-Reactor operations together with other SRP activities is expected to result in 0.012 cancers and 0.026 genetic effects.</p> <p>Accidents are highly unlikely; safety systems have been improved to further reduce the chance of an accident.</p>