

4. Standard Operating Procedure

The Taum Sauk project is a peaking and emergency reserve facility. A typical daily cycle in the summer is to generate in the morning by releasing water from the upper reservoir through the pump/turbines to the lower reservoir, pump from the lower reservoir to the upper reservoir in the afternoon, generate in the evening and pump from the lower reservoir to the upper reservoir in the early morning. Generation and pump-start and duration is determined by system needs and controlled from AmerenUE's Osage Plant. In the fall, winter, and spring, the number of cycles is typically less, usually pumping at night and generating during the day. At times, during periods of low demand, the facility is not operated.

The project is controlled through a microwave system from the Osage Plant at the Lake of the Ozarks, under the direction of the load dispatcher in St. Louis. Both units can be put on full load in a few minutes.

Normal automatic settings before the installation of the membrane liner were:

	UPPER RESERVOIR ELEVATIONS		LOWER RESERVOIR ELEVATIONS
	Summer [feet]	Winter [feet]	All seasons [feet]
1 st pump OFF	1595	1588	739
2 nd pump OFF	1596	1589	736.2
All pumps OFF	1597	1590	736

After the installation of the liner and new reservoir level measuring instruments in 2004, but before October 2005, the 1st pump off and 2nd pump off were Elev. 1594 and 1596, respectively. After October 2005, the first pump was to be shut down at the indicated Elev. of 1592 and automatic shutdown of the 2nd pump at Elev. 1594. At Elev. 1594.2, automatic shutdown for both pumps was to be initiated if they were not shutdown already. The 2 ft. lowering of the shutdown elevations for the pumps in October, 2005 was initiated by AmerenUE because movements of the protective pipes housing the pressure transducers in the reservoir was noticed as early as October 7, 2005. This is discussed in more detail in Section 7.2