Exhibit No. ___(JAD-1T)

Revisions of July 19, 2004

Q. Did you find trend or cycles in this data?

A. No. I used a regression analysis to test for structural shifts and the presence of deterministic trends. I was not able to find statistically significant trends in the water flow in the data. The trend that had been observed in generation is not present at statistically significant levels in the post 1948 period in the natural water flow data (t-statistic = -1.78). This supports the finding that the 40-year period is too short to correctly model this geological phenomenon.

Q. Did you test for stationarity in the water flow data?

A. Yes. The data are generated by stationary stochastic processes. Yevjevich (1972) has concluded that this is generally true for hydrologic series. He notes that while river basins and climate change slowly with time, "these changes are relatively small in the time span of a couple decades or centuries, man-made effects and natural disruptions excluded, so that many hydrologic series … may be considered stationary from a practical point of view."

Q. Did you examine the natural water flow data using correlogram, partial correlogram, and ARIMA analysis?

A. Yes. I did not find significant departure from a purely random or very low-order ARIMA processes in the data. This implies that there is likely to be very little ~~(i.e. short-term)~~ or no (i.e. short-term) forecastability in the natural water flow data.

V. ESTIMATED FINANCIAL IMPACTS OF HYDRO FORECASTS ON PSE

Q. Based on the modeling that you've done, have you made forecasts for the rate year beginning March 2005 ("2005 Rate Year") of expected hydro generation and have you compared those to the levels established using a 40-year average for the period 1948-1987?

A. Yes, I have. In Exhibit Nos. ___(JAD-9) through ___(JAD-13), I show ARIMA models with various degrees of moving-average and auto-regressive ~~and integration~~ components. Exhibit No. ___(JAD-9) is based on the average level of hydro generation for the 60-year period 1928-1987. The forecast for 2005 for this model is 836.3 aMW. Exhibit No. ___(JAD-10) displays the forecasts from an ARIMA model with one order of auto-regressive component, no integration, and zero degree moving average component (ARIMA 100). As I mentioned previously, this model was introduced and popularized in Hydrology by Thomas and Fiering. This model shows that a small persistence effect *i.e.*, generation that was below average in 1987, would be forecasted to return to average levels relatively quickly, reaching those average levels by 1995. The forecast for 2005 from this ARIMA model is 831.6 aMW.

Q. Did you also increase the lag length and consider an ARIMA model with two orders for the moving-average and auto-regressive components?

A. Yes I did and the forecast for 2005 in this case is 823.5 aMW. The forecast is