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Mr. Douglas R. Sherwood
Hanford Project Manager
U. S. Environmental Protection Agency
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Dear Messrs. Leja and Sherwood:

PROPOSAL FOR PLANNED SHUTDOWN OF THE PUMP AND TREAT SYSTEMS FOR YEAR 2OOO (Y2K)

The U. S. Department of Energy, Richland Operations Office (RL) Hanford Year 2000 Project committee has reviewed the potential impacts of the Y2K event to the Hanford Site and has provided planning assumptions to all RL contractors, including Bechtel Hanford Inc. (BHI), regarding Y2K activities. The RL committee finding is that there is a high potential for a loss of all normal Hanford power for the first several days of the New Year 2000.

As a result of this finding, BHI evaluated the following three options for the operation of the pump and treat systems in the 100 and 200 Areas during this time period: 1) provide emergency power for full operation of the pump and treat systems, 2) provide emergency power for heating the facilities only, and 3) shutdown the systems, offload the resin, and dewater the systems placing them in safe shutdown.

Providing emergency power for either full operation of the pump and treat systems or for heating the facilities only, is technically and economically feasible. This will require 11 separate 480 V generators and personnel to support facility emergency operation or emergency power to heat the facilities. However, generators are not 100 percent reliable and if power outages were to occur, personnel may not be available, due to personal obligations, to maintain and fuel these generators. Consequences of even one generator failure for a short period of time (four to eight hours) are significant, depending on the weather conditions. If freezing conditions exist, significant damage to system equipment, tanks, and piping could result, possibly requiring the systems to be down for a much longer period of time.

Based upon the risk of not having site power and not having personnel to support facility operation and/or emergency power to heat the facilities, detailed planning is being conducted to shutdown and place the pump and treat facilities in a safe condition with the emphasis on rapid return to service.

Planning the shutdown and restart of the pump and treat systems will focus on minimizing downtime. Portions of the systems will be removed from service early to extend operating time. As an individual vessel/resin is exhausted, the vessel will be taken out of service and the resin will be offloaded and dewatered and that portion of the system will be drained. Wells will be taken offline one at a time and dewatered, keeping others operating as long as possible. Transfer lines will be dewatered to allow timely restart if freezing conditions were to occur. It is expected that all vessels, piping, and tanks will be dewatered by December 30, 1999. If conditions are acceptable, BHI will begin the process to prepare the systems for restart on January 3, 2000.

The systems will be taken offline starting with the 200 Area and bringing the 200-ZP-1 system back online last. Complete capture of the carbon tetrachloride plume in the 200 Area will be regained when the system begins operation. The 100 Area facilities will be taken out of service last and returned to service first. Sequencing the shutdown of the systems in this manner will minimize the down time of the systems in the 100 Area, keeping the loss of containment of the chromium plumes at a minimum. It is estimated that the systems in the 100 Area will be down approximately 1 to 1.5 weeks. During this time, scheduled routine maintenance will be performed as practicable to avoid future shutdown of these systems.

The cost for this effort listed in the FY 2000-2002 Detailed Work Plan (DWP) was based on the worst case estimate. The current estimate of the cost to perform this work is significantly less than indicated in the DWP and is comparable to providing emergency power to operation of the pump and treat systems.

If you have any questions regarding this matter, please contact me or Arlene Tortoso at (509) 373-9631.

Sincerely,

Ronald E. Gerton, Director
Environmental Restoration Division

cc: G. A. Day, BHI
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