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**REQUEST FOR PERFORMANCE MONITORING PLAN FOR THE SOUTH PLUM
GROUNDWATER RECOVERY WELL FIELD**

02/06/97

**DOE-0501-97
DOE-FEMP FDF
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LETTER**



Department of Energy

**Ohio Field Office
Fernald Area Office**

P. O. Box 538705
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(513) 648-3155



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FEB 08 1997

DOE-0501-97

Mr. John Bradburne, President
Fluor Daniel Fernald, Inc.
P.O. Box 538704
Cincinnati, Ohio 45253-8704

Dear Mr. Bradburne:

**REQUEST FOR PERFORMANCE MONITORING PLAN FOR THE SOUTH PLUME
GROUNDWATER RECOVERY WELL FIELD**

The Fluor Daniel Fernald, Inc. (FDF) Aquifer Restoration Project (ARP) is currently involved in a project of rehabilitating four South Plume Groundwater Recovery Wells. These wells, which have been in near continuous operation since August 1993, have experienced significant problems because of iron and iron bacteria accumulating on the well screens and well pumps. Because of the iron fouling, well pumps have been damaged or rendered inoperable causing significant down time in several recovery wells.

The current Recovery Well Rehabilitation Program involves the removal of the pump/motor assembly from the well; alternatively adding chlorine and acid to the water column; surging the chemicals throughout the length of the well screen; and, finally pumping the wells to remove the chemicals and iron encrustation. The approximate cost to rehabilitate a well is about \$20,000 to \$25,000. Early results of the rehabilitation program have been encouraging. Rehabilitation of two recovery wells (i.e., RW-3 and RW-4) has been completed to date and their pumping rates and pumping efficiencies have greatly improved.

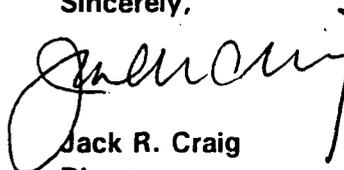
The Department of Energy, Fernald Environmental Management Project (DOE-FEMP) understands that the FDF ARP is formulating a long term operation and maintenance plan for the South Plume Recovery Well Field. This plan will monitor various operating parameters from the recovery well system to minimize extensive well rehabilitation efforts in the future. The monitored parameters will provide data on the operations of the recovery wells that will enable FDF personnel to determine if a well is experiencing problems that could potentially cause the well to shutdown. While the DOE-FEMP is supportive of monitoring key operating parameters, it is recommended that the program be formalized and documented as a "Performance Monitoring Plan for the South Plume Recovery Well

System." The goal of this plan should be to identify the key operating parameters that will be monitored from the recovery wells; how these monitoring data will be used to assess the operating condition of a well; and what actions (if any) will be performed on a routine basis to keep the recovery well field operating in a continuous and efficient manner. In addition, the plan should identify the criteria that will be monitored to determine if a recovery well is in need of maintenance and rehabilitation (as is currently being done on the recovery well system); the steps involved in the maintenance or rehabilitation efforts; the approximate time frame that will be required for any such efforts (i.e., how long will the well be out of service); and lastly, any regulatory issues that may need to be addressed because of adding chemicals to the wells/aquifer.

Within the referenced Performance Monitoring Plan, FDF should document the rehabilitation efforts that are currently being employed on the South Plume Recovery Well Field. Valuable information on well maintenance and care has been obtained during these rehabilitation efforts and this information should be incorporated into the plan. It is recommended that FDF submit this plan to DOE-FEMP on or before April 30, 1997.

If you have any questions, please contact either John Kappa at (513) 648-3149, or Robert Janke at (513) 648-3124.

Sincerely,



Jack R. Craig
Director

FEMP:Kappa

cc:

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