Department of Energy
Oak Ridge Operations
Weldon Spring Site
Remedial Action Project Office
7295 Highway 94 South
St. Charles, Missouri 63304

September 23, 1998

DISTRIBUTION:

QUARRY RESIDUALS OPERABLE UNIT REGULATORS MEETING

Enclosed find a summary of the subject meeting held on August 19, 1998. If you have any questions, please contact Karen Reed, DOE at (314)441-8978 or Yvonne Deyo, PAI Corporation at (314)926-7034.

Sincerely,

Stephen H. McCracken
Project Manager
Weldon Spring Site
Remedial Action Project

Enclosure:
As stated

Distribution:
G. Carlson, MDNR
M. Duvall, St. Charles County
L. Erickson, MDNR
R. Geller, MDNR
G. Hachey, WSCC
B. Stuart, MDNR
D. Wall, EPA

cc w/enclosure:
R. Cato, PMC
S. Folga, ANL
M. Picel, ANL
D. Tomasko, ANL

SUMMARY OF
QUARRY RESIDUALS OPERABLE UNIT REGULATORS MEETING
August 19, 1998

Discussion Items

1. Impacts on redox zone from trench construction

2. Criteria necessary in order to reduce doubt that uranium recovery is not effective

3. What field studies need to be performed to provide acceptable data to satisfy Feasibility Study (FS) modeled performance
   - pilot versus full scale trench
   - cost

4. Quarry proper clean-up prior to restoration

5. Other issues
   - Institutional controls
   - NRDA
   - Well Field Contingency Plan

6. Path forward to ROD

Agency Positions

DOE
- No action with long term monitoring proposed due to no adverse effects on human health and the environment
- Uranium has no impact on water quality in well field
- Original intent of Alternative 6 was to reduce doubt in the model used to determine that uranium recovery was inefficient. Alternative 6 was not considered a Remedial Action (RA) but was suggested as such to fit into CERCLA process
- Address doubt in reasonable time frame with reasonable costs and while project office was still on-site
- If data shows significantly different performance (i.e. greater uranium recovery), DOE to re-evaluate
- Not to be turned into containment structure

EPA
- Wants long term management of the situation which is protective, implementable, and cost effective
- Agreement with model is necessary to move forward with a decision

WSCC
- Long term monitoring with no action is satisfactory
- Intent of project is to protect human health and the environment
- Risks to well field have been evaluated and are low. Well Field Contingency Plan - integral part

- No need to spend money if result doesn't provide a significant reduction in the risk
- Concerned about potentially negative effect the interceptor trench would have on redox zone

MDNR
- Agrees with everyone else's concerns but due to high levels remaining in soils, groundwater, and quarry proper some type of removal should be attempted
- MDNR wants field demonstration (trench) data to support/validate parameters and model
- Does not think restoration of entire aquifer is feasible and is not proposing such
- Would consider "source removal" if recovery is effective
- A more permanent structure is in DOE's best interest. Well Field Contingency Plan and restoration become much more important if nothing is done to groundwater

ST. CHARLES COUNTY
- Supports DOE initiative of the pilot study
- Supports verification of the model

1. REDOX (WSCC Issue)

An explanation was provided on the location of the oxidizing and reducing zones and why installation of the trench would have no effect on the reduction zone's capacity to precipitate uranium. The WSCC was in agreement, resolving the issue.

2. CRITERIA FOR EFFECTIVENESS

Trench as remedial action versus data acquisition:

- MDNR's position was that the trench could be at pilot scale with some contaminant removal benefit but would be mainly used for the purpose of data acquisition.

Trench data would be evaluated against Feasibility Study uranium removal curve:

a. Point-in-time match with the curve (two years)
b. Re-model with new data - new curve
c. Comparison of new curve with old

- Length of trench would likely have an impact on curve
- Curve might have to be modified to take smaller trench into account. Would be based on mass of uranium in area of trench influence.

ROD to state:

No action with long term monitoring with pending action subsequent to verification of the model. Includes duration (two years) of project. RD/RA phase would provide design and operation specifics. A groundwater extraction system, such as trench, will be used to evaluate model.

3. FIELD STUDIES

a. Pilot versus full scale

MDNR will not settle for anything less than a field study using some version of a trench.

Length - Need to determine minimum length necessary to verify the model. Doesn't have to be 1100 feet. MDNR recommends no less than 500 feet.

Depth - no major discussion/wait till design

Location - area of highest uranium impact

b. Cost
- not discussed but mentioned as a factor

c. Other
- to prove model is correct and uranium removal is ineffective, MDNR recommended that guidance for TI waivers be followed. This would be in DOE's best interest if a TI waiver were deemed necessary.

4. QUARRY PROPER ISSUES

Restoration Plan - Quarry would be backfilled with low permeability soil with cap. This would promote groundwater flow around quarry, sheet flow on surface of backfill, and would reduce infiltration.

Cracks and Fissures - Yellow cake in fractures is not an issue with this design. It is not a source to groundwater because fractures lie in the unsaturated zone.

Northeast Corner and Ditch Area - Levels exceed Chemical Plant clean-up criteria. A characterization/potential clean-up commitment must be discussed in ROD. Characterization discussion is not enough.

Restoration Design - MDNR/EPA to be included in design even though not part of the RA:

10% and 30% Presentations
60% and 90% Design Review

5. OTHER ISSUES

a. Institutional Controls
- DOE has responsibility for institutional controls (not only at quarry but at chemical plant)

- Should be stated in ROD that negotiations are being performed - EPA.

- Use-restriction on groundwater. MDNR wants unrestricted use.

b. NRDA - This issue will not be resolved in the ROD.

c. Well Field Contingency Plan
- Will be made part of the action in the ROD.

- Financial responsibility - stewardship issue. Not a ROD issue.

- Waiting on MDNR comments.

6. PATH FORWARD TO ROD

- Meeting minutes will be drafted and agreed upon by participants
- Sections of draft ROD will be modified to include meeting agreements. Pages will be faxed to participants for review.
- MDNR and EPA written comments will be as streamlined as possible in the interest of meeting September 30 milestone.