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Mr. John Lenihan
Repository Projects Branch
Division of Waste Management
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Lenihan:

MONTHLY TRANSMITTAL OF "SCHEDULE FOR NEAR TERM BWIP SITE CHARACTERIZATION ACTIVITIES"

Enclosed for your information is a copy of the schedule for Site and Engineered Barriers Department activities in the precharacterization phase of the Basalt Waste Isolation Project, along with a copy of the letter which is routinely sent to the State of Washington and participating Indian Tribes. The enclosed activities schedule has been discussed from time to time as a worthwhile endeaver with Mr. Cook and Dr. Wright. If you find it beneficial to the NRC, we would be most happy to include the NRC on future formal distribution.

If you require further information, please contact Mr. James E. Mecca of my staff, telephone FTS 444-5038.

Very truly yours,

O. L. Olson

O. L. Olson, Director
Basalt Waste Isolation Division

BWI:JEM

Enclosure

cc, w/encl:
C. R. Head, DOE-HQ
J. R. Bartlett, TRG
J. L. Smith, TRG
P. Domenico, TRG



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P.O. Box 550
Richland, Washington 99352

JUL 2 3 1995

Mr. Donald Provost
State of Washington Department
of Ecology, MS PV-11
Olympia, WA 98504

Mr. Max S. Power
Joint Legislative Committee on
Science and Technology
B14 Institutions Building (AG-12)
Olympia, WA 98504

Mr. Roger R. Jim, Sr., Chairman
Yakima Tribal Council
Yakima Indian Nation
P. O. Box 151
Toppenish, WA 98948

Mr. Elwood H. Patawa, Chairman
Board of Trustees
Umatilla Confederated Tribes
P. O. Box 638
Pendleton, OR 97801

Mr. Allen V. Pinkham, Chairman
Nez Perce Tribal Executive Committee
Box 305
Lapwai, ID 83540

Gentlemen:

MONTHLY TRANSMITTAL OF "SCHEDULE FOR NEAR TERM BWIP SITE CHARACTERIZATION ACTIVITIES"

Enclosed for your use is our monthly update and schedule for Site and Engineered Barriers Department activities in this precharacterization phase.

As committed, we will continue to update this information on a regular basis. Should you have any questions relative to this transmittal, please contact Mr. C. Thomas Tinsley of my staff on (509) 376-8736.

Very truly yours,

O. L. Olson, Director
Basalt Waste Isolation Division

BWI:CTT

Enclosure

bcc's for letter, Olson to States/Indian Tribes, "Monthly Transmittal of Schedule for Near Term BWIP Site Characterization Activities"

bcc, w/encl:
Russell Jim, Yakima Indian Nation
Ron Halfmoon, Nez Perce Tribe
Peter P. Ramatowski, Umatilla Conf. Tribes
Wyatt Rogers, CERT
Barry Gale, DOE-HQ
C. A. Peabody, DOE-HQ
Linda Lehman
James B. Hovis
F. R. Cook, NRC
R. J. Wright, NRC
J. Graham, Rockwell
BWI Record Cy

# SITE AND ENGINEERED BARRIERS DEPARTMENT ACTIVITIES

| Activities | Date | Rev.* |
|---|---|---|
| **Site** | | |
| o Install Westbay Packer in RRL-14 | 09/01-09/30/85 | |
| o Run and grout liner in DC-3 (to support seismic monitoring) | Complete | \|7 |
| o Remove bridge plugs from RRL-14 | Complete | |
| o Groundwater monitoring of boreholes DC-19, DC-20, and DC-22 | Daily | |
| o Monitoring of other boreholes | Weekly | |
| o Integrity testing, DB-14 | Complete | |
| o Integrity testing, DB-1 | Complete | |
| o Deepen Borehole DH-28 | Complete | |
| o Drill cable tool start holes, RRL-2B, RRL-2C | Complete | |
| o Drill rotary hole RRL-2C | Complete | |
| o Surveying gravity at magnetic stations | Complete | \|7 |
| o Electronmicroprobe analysis of flow top samples | Ongoing | |
| o X-ray diffraction analysis of flow top samples | Ongoing | |
| o Modeling gravity, magnetic data | Ongoing | |
| o Collection of magnetic and gravity data | Ongoing | |
| o Seismic data surveillance analysis | Ongoing | |
| o Lab studies on sorption and chemical dissolution | Daily | |
| o Test Cohassett in RRL-2A | Complete | |
| o Drill rotary hole RRL-2B | Complete | \|7 |
| o Deepen borehole DH-28 | Complete | |
| o Drill RRL-17 to top of Grande Ronde | 07/15-08/15/85 | \|7 |
| **Solution Chemistry Laboratory** | | |
| o Develop method for rock analysis using ICP-AES | Ongoing | \|7 |
| o Upgrade anion analysis on ion chromotography | Ongoing | |
| o Develop method for analysis of groundwater tracer using HPLC | Ongoing | |
| o Support to Site Department database development | Ongoing | |
| o Development of methods for analysis using AA | Ongoing | \|7 |
| o Procedure development | Ongoing | |
| o Analysis of aqueous solution samples from hydrothermal testing and groundwater sampling | Ongoing | |
| o Field and field analyses of water from local springs, unconfined aquifer and other test horizons | Ongoing | |
| o Laboratory upgrade of uv-visible spectrophotometric equipment | Complete 05/30/85 | |
| o Study of kinetic of decomposition of hydrogen peroxide with basalt under various conditions using uv-visible spectrophotometry | Ongoing | \|7 |
| o Develop method for analysis of fixed gases in water samples by gas chromatography | Ongoing | |
| o Develop improved methods for chemical speciation measurements of arsenic and selenium for use in analysis of hydrothermal samples | Ongoing | |
| o Development and initiation of improved methods of records retention | Ongoing | \|7 |

| Activities | Date | Rev.* |
|---|---|---|
| **Microcharacterization (Solids) Laboratory** | | |
| Scanning Transmission Electron Microscope - | | |
| o Analysis of flow-through run products | Ongoing | |
| o Analysis of well-characterized biotite and chlorite as possible standards | Complete | |
| o Analysis of Dickson autoclave run products | Ongoing | |
| o Analysis of Rocky Coulee flow top clay minerals | Complete | |
| X-Ray Diffractometer - | | |
| o Analysis of McCoy Canyon, Umtanum and high-Mg flow tops | Ongoing | |
| o Analysis of flow-through run products | Ongoing | |
| o Analysis of Dickson autoclave run products | Ongoing | |
| o Analysis of Cohassett and Rocky Coulee flow tops | Complete | |
| o Analysis of fault gouge | Ongoing | \| 7 |
| o Analysis of sedimentary interbed minerals | Deferred Until FY 1986 | |
| o Analysis of concrete samples | Ongoing | |
| o Analysis of corrosion water surface coatings | Ongoing | \| 7 |
| Electron Microprobe - | | |
| o Analysis of Cohassett and Rocky Coulee flow tops | Complete | |
| o Analysis of natural pyrites | Ongoing | |
| o Analysis of Dickson Autoclave run products | Ongoing | |
| o Analysis of oxide minerals in Rocky Coulee/Cohasset flow tops | Ongoing | |
| o Analysis of Rocky Coulee flow tops | Ongoing | |
| **Radioactive Hydrothermal Laboratory** | | |
| o Basalt and synthetic groundwater tests inflow through autoclave | Ongoing | |
| o Radionuclide-doped simulated Savannah River Plant Defense glass + basalt and synthetic groundwater | Ongoing | |
| o Experiments are being conducted using fully radioactive waste forms in the presence of various waste package components (metal barriers and/or basalt) | October 1985 | |
| o Experiments are being conducted on the behavior of specific radionuclides, introduced individually with groundwater, in the presence of packing material at low temperatures | Ongoing | |
| **Non-Radioactive Hydrothermal Laboratory** | | |
| o Hydrothermal tests on basalt + bentonite + groundwater | Ongoing | |
| o Long-term hydrothermal tests (1-5 years) on basalt + groundwater | Ongoing | |
| o Determine the solubility of selenium under hydrothermal conditions simulating the near-field environment | Ongoing | |
| o Evaluate Redox conditions in a hydrothermal experiment simulating a near-field environment | Ongoing | |
| o Dehydration experiments | Ongoing | |

| Activities | | Date | Rev.* |
|---|---|---|---|
| **Waste Package Packing Investigatory Testing** | | | |
| o Uniaxial compression | 50 tests | Ongoing | |
| o Brazillian tension | 50 tests | Ongoing | |
| o Direct shear | 50 tests | Ongoing | |
| o 4-point flexure | 40 tests | Ongoing | |
| o Density | 100 tests | Ongoing | |
| **Concrete Testing Laboratory** | | | |
| o Hydraulic conductivity testing | 5 tests | Complete | |
| o Heat gain testing | 5 | Complete | |
| o Prefabricated Packing testing - | Developmental | Ongoing | |
| **Backfill Testing Laboratory** | | | |
| o Hydraulic conductivity tests | | Ongoing | |
| o Start swelling, pressure permeameter tests | | Late-July | \| 7 |
| o Possibility of (2) long-term flow through permeameter tests | | Late-July | |
| o Compaction tests on bentonite/basalt mixes/specific gravity | | Ongoing | |

*Changes in this schedule from that last issued are indicated by a revision bar and revision number.