

LETTER REPORT

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Contract Program or Project Title: Decontamination as a Precursor to

Decommissioning

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Responsible NRC Individual and NRC Office or Division _____

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Prepared for
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March 10, 1981

Mr. G. S. Lewis
Systems Performance Branch
U.S. Nuclear Regulatory Commission
Mail Stop 1130-SS
Washington, D.C. 20555

Dear Mr. Lewis:

DECONTAMINATION AS A PRECURSOR TO DECOMMISSIONING - FEBRUARY 1981
MONTHLY REPORT

PNL has continued programmatic work on the NRC project entitled "Decontamination as a Precursor to Decommissioning." A summary of February 1981 task work follows:

Task 1 - Literature Review and Background Development

A revised draft of the report, Decontamination Processes for Restorative Operation and as a Precursor to Decommissioning: A Literature Review, has been completed and has been sent out for publication and internal PNL review.

The intent is to make final distribution of the report by April 1, 1981. However, some last minute comments were received in early March from the NRC. It is not known whether this will impact the timing or not.

Task 2 - Process Evaluation

Static corrosion testing of nonradioactive metals in several decontamination solutions has been initiated. These are short term tests to examine both the rate and mechanism of corrosion during decontamination and during possible stagnant conditions afterwards. These tests will be complemented by flow tests and high temperature tests. The high temperature tests will simulate operation after rinsing with residuals remaining in crevices and dead-legs.

The flow corrosion tests and the decontamination tests will be performed in a test apparatus which will be in operation in March.

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PNL SCHEDULE & PROGRESS SUMMARY - FY 1981

Task 1 - LITERATURE REVIEW AND BACKGROUND DEVELOPMENT

- 1.1 State-of-Art-Review - scheduled completion for process review August 1980; percent completed 100%.
- 1.2 Definition of data needs - scheduled completion in FY-1980; percent completed 100%.
- 1.3 Develop contacts - scheduled completion in FY-1981, percent completed 100%.
- 1.4 Reporting and evaluation - scheduled completion for process review September 1980; percent now completed is 95%. Updated reports scheduled for December 1981 and December 1982; neither started.

Task 2 - PROCESS EVALUATION

- 2.1 Process definition - scheduled completion in FY-1980; percent completed 100%.
- 2.2 Surface definition - scheduled completion in FY-1980; percent completed 100%.
- 2.3 Contaminant definition - scheduled to be done as samples are acquired.
- 2.4 Application development - schedule dependent upon receipt of samples from Dave Robertson.
- 2.5 Residual effects - scheduled to follow proof of process.

Task 3 - RADWASTE FACILITY EVALUATION

Scheduled to start in October 1980 and be completed in December 1981; percent completed 0%.

Task 4 - SAFETY AND RADIATION EXPOSURE

- 4.1 Safety - start in April 1981 and complete in December 1981; percent completed 0%; now expect completion in March 1982.
- 4.2 Radiation exposure - start in March 1980 and complete in December 1981; percent completed 12%; expect completion in December 1982.

Task 3 - Radwaste Facility Evaluation

Work not scheduled to start until later in FY-1981.

Task 4 - Safety and Radiation Exposure

The work started in January 1981 on 1) identifying the number of personnel required for decontamination, 2) estimating the time to accomplish implementary tasks and 3) estimating the proximity of operating and cleanup staff to radiation sources for decontamination continues. Study and effort on these three areas is expected till mid summer or early fall 1981 so that the effects of decontamination before decommissioning can be thoroughly assessed. To be included in the future will be the impact of radwaste treatment and disposal. Work on safety factors will be started in the third quarter of FY-1981.

Task 5 - Cost Considerations

To start later in FY-1981.

Task 6 - Evaluation and Reporting

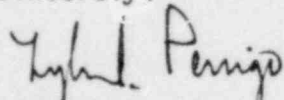
Overall evaluation work on this project is to start in the third quarter FY-1981. G. A. Halseth is expected to play an important role in assessing the relivance and overall significance of the various efforts underway on other tasks in this project.

Task 7 - Project Management

G. A. Halseth is expected to retire on 5/1/81. Following that date he will be available to work on this project on a part time basis. There may be a problem in the period May-December 1981 in adjusting program needs with constraints arising from IRS regulations. The amount of time that newly retired people can work during the remainder of their initial retirement year is limited. Expenses through 2/27/81 were \$135,061 out of \$375,000 allocated for our work. We expect our spending rate to increase in the latter part of FY-1981 as more samples become available. Attached is a sheet giving specific information on schedules and milestones.

Kindest regards.

Sincerely,



Lyle D. Perrigo, Section Manager
Technology Transfer Section
Materials Department

LDP:sfw

cc: R.L. Dillon PNL
R.I. Smith PNL

Task 5 - COST CONSIDERATIONS

Scheduled to start in October 1980 and complete in July 1982;
percent completed 0%; now to start in 4th Quarter of FY-1981.

Task 6 - EVALUATION AND REPORTING

Interim report scheduled for 3rd Quarter of FY-1981 and final
report due 1981; rescheduled for 2nd Quarter of FY-1982 and
September 1982.

Task 7 - PROJECT MANAGEMENT

Ongoing