

NRC Research and/or Technical Assistance Rept

PDR

INTERIM REPORT

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Project Title: Environmental Assessments of Fuel Cycle Facilities

Subject of this Document: Monthly Progress Report

Type of Document: Monthly Progress Report

Author: M. J. Kelly

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Responsible NRC Individual and NRC Office or Division: Giorgio N. Gnugnoli
Project Manager, Uranium Recovery Licensing Branch, Division of
Waste Management

This document was prepared primarily for preliminary or internal use. It has not received full review and approval. Since there may be substantive changes, this document should not be considered final.

Prepared for
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
Under Interagency Agreement 40-594-75
NRC FIN No. 80279

OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee 37830
operated by
UNION CARBIDE CORPORATION
for the
U.S. DEPARTMENT OF ENERGY

INTERIM REPORT

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OAK RIDGE NATIONAL LABORATORY MONTHLY REPORT TO
URANIUM RECOVERY AND LICENSING BRANCH
DIVISION OF WASTE MANAGEMENT

February 1983

A. Environmental Assessment Activities

None Presently Active.

B. In Situ Mining

Nine Mile Lake

This project is inactive.

Teton In Situ

Answers prepared for DES comments are being word processed for shipment to NRC in March.

C. Mines and Mills

Groundwater Mill Tailings

The status of work initiated on tailings pit study is attached.

Fed-Am Partners

Work on groundwater modeling was initiated this month.

Conoco Sand Rock

ORNL is awaiting NRC input.

Kerr-McGee

This project has been put on hold at the request of the PM. Applicant input needed.

D. Budget

Costs are reported on the attached tables.

E. Overdue Action of FCMS Regarding Laboratory Requests

We have not received the SOEW from licensing.

F. Comments

The requested Generic 189 has been completed, but our experience has been that frequent recycle occurs. We, therefore, will cover in detail our present status on both the topical reports and the other generic programs as well as some potential funding problems.

Topical Reports Cost, Status and Schedule

	Prior Year Cost	FY-83 Budget	Remain- ing Costs	
1. Rock Cover vs. Vegetation	104	20	5	In Word Processing, mats by March 31.
2. Cost Benefit Aspects of Long Term Performance	64	16	8	Draft at NRC. Remaining costs based on minimal rework since processing to mats is a minimum of 6K.
3. Upward Geochemical Migration	34	0	0	Cancelled by mutual agreement.
4. Radon Attenuation	54	34	25	Conclusions discussed with the PM 3 March 83, and draft to NRC in late May with prompt comments. Mats to NRC early September. (including another recycle)
5. Techniques of Groundwater Restoration	61	5	0	Two drafts submitted. Cancelled by mutual agreement at 3 March 83 meeting.
6. In situ Dewatering	50	12	8	Final draft to NRC by 1 April 83. NRC approval expected 1 May 83. If so, mats by mid-June.
7. Tailings Consolidation Techniques and Requirements	48	12	8	Same schedule as Item 6.
8. Land Ownership Requirements	17	35	15	Draft by 31 March 83. Schedule Dependent on NRC comments. Tentatively, mats by late July.
Totals	432	154	69	Total cost 565K

We emphasize that costs to completion are based on minimal NRC changes.

Other Projects Cost and Status

Expected FY-83

9. Assessment of Long-Term Stability Techniques		82K		This project is progressing nicely. Bill Staub reports the peer review meeting went well. Unfortunately, John Nelson says extra work requested by R. Scarano may result in costs above that shown here.
Cost basis: CSU	42			
Peer Review	13			
Word Processing	12			
Bill Staub & Travel	15			
	<u>82</u>			
Initial Estimate:	52			

Did not include peer review, word processing or travel costs.

Other Projects Cost and Status

Expected FY-83

10. Groundwater Fluid Flow Model for Underdrain Systems	135K	This project is in good shape. The month's activities are attached.
Cost basis: CSU 25 Idaho 25 ORNL Technical 75 Word Processing <u>10</u>	<u>135</u>	

Initial Estimate: 117

Did not include word processing or computer costs.

Expected FY-83

11. Analysis of Groundwater Excursion	192K	We have asked Bill Staub to send you a status report.
Cost basis: Idaho 124K Bill Staub 25K Word Processing 10K Idaho FY-83 late costs <u>33K</u>	<u>192K</u>	

Did not include word processing and FY-82 holdover costs were unexpected.

Contractor Status on March 1, 1983

	Colorado State University	University of Idaho
Paid or Escrow	25	27
Outstanding	<u>67</u>	<u>155</u>
FY-83 obligation	92	182
Project Costs		
Item 9	42	--
Item 10	25	25
Item 11		124
Licensing work	25	
FY-82 work extension	<u>--</u>	<u>33</u>
Totals	92	182

Note that 25K of CSU cost does not apply to generic work and is not included in your cost breakdown. The FY-82 carryover costs have been included in Item 11 since ORNL cannot transfer between FIN's. We suggest you take this up with licensing.

In summary, your estimated FY-83 costs are:

Topical Reports	134	
Long Term Stability	82	
Fluid Flow Modeling	135	
Excursion Analysis	<u>192</u>	
Total	543	
Bill through February	-218	plus 42K to licensing = 260K
Minimum needed thru FY-83	325	carryover funding = <u>261K</u>
Received in February	<u>180</u>	Net remaining 1K
Absolute shortage	145K	

Summary Recap

Items	FY-83 Thousands		Remaining Costs Thousands
1-8. Topical Reports	134		69
9. Assessment of Long-Term Stability	82		35
CSU 42K ⁽³⁾		to contractors	<u>30</u>
Peer Review 13K			
10. Groundwater Fluid Flow Modeling	135		
CSU 25K		Not separated	221
Idaho 25K		to contractor	<u>180</u>
11. Analysis of Groundwater Excursions	192		
FY-83 Idaho 124K			
FY-82 Idaho 32K ⁽¹⁾	—		
Total Cost	543	Funding Required	325
Paid with carry over Funds thru February	218	Contractor Obligations	<u>210</u>
Received with SEOW in February	<u>180</u>	ORNL Funds	115
Minimum additional Funding required	145 ⁽²⁾	Expected Word Processing Costs	<u>68</u>
		Remaining ORNL Technical Effort	47

(1) As noted, this 33K was in Idaho FY-82 contract and was carried forward as obligated while they completed the FY-82 report. 27K has been paid.

(2) If generic work continues to use CSU and U. of Idaho effort, forward financing will be required prior to September 1983 as well as a letter confirming used efforts.

(3) CSU has been paid 25K thru February.

Please note that the monthly cost sheet has been brought up to date and is to be considered correct as of February 28, 1983.

There were major errors in the general and special accounts because of prior accounting foul ups.

M. J. Kelly
M. J. Kelly
Project Manager

MJK/baw

	<u>Prior Years</u>		<u>Total Project</u>		Original Estimate
	MY	Cost	MY	Cost	
Kerr-McGee Powder River	2.50	222,470	2.50	222,470	None
Nine-Mile Lake	1.46	137,075	1.46	137,075	150,000
Groundwater Mill Tailings	0.48	237,028	1.16	341,674	NA
Colorado State	0.15	77,468	0.29	119,360	NA
Fed-Arr. Partners	1.83	194,861	1.87	200,488	150,000
Conoco Sand Rock	1.96	209,934	2.07	222,506	150,000
Teton In-Situ	1.43	181,982	1.60	204,982	150,000
General & Special Accounts	7.2	919,810	0.65	72,301 ⁽³⁾	NA ⁽²⁾

- Notes: (1) Accounts Closed.
(2) Consolidated account — previously General charges and Morton Ranch.
(3) Current year cost.

PROJECT COST AND MANPOWER BREAKDOWN FOR FEBRUARY 1983

	MM	Cost	Impact Section Hours	Science Division Hours	Subcon- tractor Hours	Radio- logical Hours	Technical Support Services Hours	Document Prepa- ration Costs	Consult. Costs	Travel Costs
Conoco Sand Rock	--	--	--	--	--	--	--	--	--	--
Cumulative FY-83	1.33	28,279	150	80	--	--	--	1,124	--	--
Groundwater Mill Tailings ⁽²⁾	1.49	104,646	258	--	--	--	--	899	13,429	--
Cumulative FY-83	8.12	76,367	1,396	--	--	--	--	899	27,130	4,628
Colorado State	0.23	13,172	40	--	--	--	--	--	11,000	--
Cumulative FY-83	1.66	41,892	286	--	--	--	--	--	24,610	2,896
Kerr-McGee	--	--	--	--	--	--	--	--	--	--
Cumulative FY-83	--	--	--	--	--	--	--	--	--	--
Fed-Am Partners	0.45	5,627	78	--	--	--	--	--	--	1,419
Cumulative FY-83	0.45	5,627	78	--	--	--	--	--	--	1,419
Teton In-Situ	0.28	4,989	48	--	--	--	--	2,430	--	--
Cumulative FY-83	1.97	23,000	340	84	--	--	--	4,418	--	869
General and Special Accounts	2.19	(21,325)	252	40	--	--	88	150	--	1,571
Cumulative FY-83 ⁽⁴⁾	7.81	72,301	707	140	--	--	506	7,115	--	2,699
Current Month Totals	4.64 ⁽¹⁾	78,392	676	40	--	--	88	3,479	24,429	2,990
FY-83 TOTALS	21.34	260,038	2,957	304	--	--	594	13,556	51,740	12,511

- (1) See comments for cost and status of Topical Reports.
- (2) Idaho subcontract
- (3) See July 79 monthly report for general information regarding costs.
- (4) About \$7,300 of these costs are administrative--the remainder spent on topicals.

INTRA-LABORATORY CORRESPONDENCE

OAK RIDGE NATIONAL LABORATORY

March 1, 1983

TO: M. J. Kelly
FROM: F. G. Pin (6-1853)
SUBJECT: Activity Report

Minton, here is the February activity report for the A-9 and F.A.P. projects.

A-9

- ORNL . Cross-sections and mesh drawing
 - . Completed mesh digitization
 - . Input files generation for computer code
- CSU . Pursue of laboratory tests on samples
 - . Drawing of in-pit cross-sections and tailings distribution maps
- U/I . Writing of final draft of hydrogeological setting section
- All participants:
 - . Meeting and review of first phase of project.
 - . Planning for modeling phase.

F.A.P.

- ORNL . Site visit
 - . Data collection and evaluation
 - . Meeting with subcontractor
 - . Rough draft of introduction chapter of report
- U/I . Review of existing data
 - . Initialization of cross-section drawings
 - . K-1 backfill data collection

FGP:mo

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