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Wm-16 (2)

# WILLIAMS & ASSOCIATES, INC.

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Hydrogeology • Mineral Resources Waste Management • Geological Engineering • Mine Hydrology

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May 7, 1987  
Contract No. NRC-02-85-008  
Fin No. D-1020  
Communication No. 125

Mr. Jeff Pohle  
Division of Waste Management  
Mail Stop 623-SS  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

RE: Monthly Report--April 1987

Dear Jeff:

This document constitutes the nineteenth monthly (April 1-30, 1987) progress report as required by Contract No. NRC-02-85-008. Williams and Associates, Inc. reviewed several documents this month for the Nevada Test Site, for the BWIP site, and for the Palo Duro Basin. These document reviews are in draft and final forms. We are continuing our efforts on the required list of tasks outlined in the SOW. Details about our efforts on this contract are outlined based on Task and Subtask numbers.

We are continuing our efforts on the topical reports on uncertainty. A draft of Topical Report #1 is being completed. Work has begun on producing an outline for Topical Report #2.

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WM Project 10, 11, 16  
Docket No. \_\_\_\_\_  
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Distribution:  
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(Return to WM, 623-SS)

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## TASK 1

The following work was conducted under Task 1.

### Subtask 1.1

This subtask has been completed.

### Subtask 1.2

Williams and Associates, Inc. completed reviews of the following documents in April.

1. Smith, D.M., Updegraff, C.D., Bonano, E.J., and Randall, J.D., November 1986, Assessment of Radionuclide Vapor-Phase Transport in Unsaturated Tuff. Sandia National Laboratories, Albuquerque, NM and Livermore, CA, SAND86-1598, NUREG/CR-4693, 42 p.
2. Winograd, I.J., and Doty, G.C., 1980, Paleohydrology of the Southern Great Basin, With Special Reference to Water Table Fluctuations Beneath the Nevada Test Site During the Late(?) Pleistocene. USGS Open File Report 80-569, Reston, VA.

In addition, we have begun an informal review of the DRAFT SCP for NNWSI.

### Subtask 1.3

Williams and Associates, Inc. is continuing to review the literature pertaining to potential conceptual models for NNWSI.

## TASK 2

The following work was conducted under Task 2.

### Subtask 2.1

This subtask has been completed.

### Subtask 2.2

Williams and Associates, Inc. was unable to further our efforts this month on the two-dimensional cross-sectional model study of the hydraulic gradients indicated by the cluster piezometer sites (DC-19, -20, and -22). This effort is being conducted on a limited basis because of the need to maintain timely responses on higher priority items. The purpose of this effort is to investigate the relationship of vertical hydraulic conductivity to horizontal hydraulic conductivity.

Williams and Associates, Inc. completed reviewing documents in preparation for the DOE-NRC meeting on the hydrogeologic testing program. The principle documents reviewed to date include STP 1.1, the original test plan (SD-BWI-TP-040), a newer version of the same test plan, the Williams and Associates, Inc. trip report; the NRC letter of April 10, 1986, and the letter addressed to Mr. John Linehan from DOE (no date).

Williams and Associates, Inc. completed preparations for attending the DOE-NRC meeting by completing presentations on the cone of depression that will result when the Grande Ronde #5 flow top (Birket) is pump tested. We prepared a presentation on the hydrogeologic response to a sucker rod pump that has been installed in well RRL-2B.

Dr. Williams and Mr. Winter attended the DOE-NRC meeting held April 5-9, 1987. The meeting was held in Richland, Washington. A trip report was forwarded as communication #121.

### Subtask 2.3

Williams and Associates, Inc. is continuing to review the literature pertaining to potential conceptual models for BWIP.

We will update our existing conceptual models per requirements in the SOW.

Williams and Associates, Inc. is continuing to work on the statistical analysis of off-site and on-site hydrochemical data. We are proceeding to create the needed subsets of the U.S. Geological Survey data base. The township and range, well designation, and geologic formations were input to the data set. A subset was created that includes only those wells in the study area. A few wells were input from published sources. A univariate analysis was completed; the analysis was checked for outliers. A second univariate analysis was completed after producing log values for all variables except pH. A copy of the U.S. Geological Survey data base will be forwarded to the NRC in the near future.

### TASK 3

The following work was conducted under Task 3.

#### Subtask 3.1

This subtask has been completed.

#### Subtask 3.2

Williams and Associates, Inc. has completed initial reviews of the documents that describe hydrogeologic testing at the WIPP site. Written reviews will not be prepared for each document. We anticipate receiving additional documents that describe hydrogeologic testing conducted at the WIPP site. The additional documents were lost in transit; new copies of the additional documents are being forwarded. A topical report will be prepared that covers the hydrogeologic testing described in all the reports.

The following document review was completed this month:

1. Stone and Webster Engineering Corp., September 1985, Pumping Test and Fluid Sampling Report, J. Friemel No. 1 Well (PD-9), Palo Duro Basin, Volume I. Prepared for Battelle Memorial Institute, Columbus, OH, ONWI/SUB/85/E512-05000-T31.

#### Subtask 3.3

Williams and Associates, Inc. completed the initial requirement under this subtask with the submission of our conceptual model letter report. We updated our evaluation of existing conceptual models as Communication #120.

TASK 4

This task has not been initiated. We are accumulating relevant documents during the course of our other activities under Tasks 1, 2, and 3.

TASK 5

Williams and Associates, Inc. has prepared drafts of several proposed Tasks. These proposed Tasks will be forwarded to the NRC in May.

Williams and Associates, Inc. has prepared a rough draft of Topical Report #1 on the categories of uncertainties. Work has begun on outlining Topical Report #2; Topical Report #2 will address reducing and quantifying uncertainty.

Contractual Problems

No contractual problems have arisen.

Current Expenditures

A breakdown of individual hours and charges is shown on the attached table. Cumulative costs and projected costs are shown on the second table. The attached figure illustrates projected and current cumulative costs.

Sincerely,

*Roy E. Williams*

Roy E. Williams

**INDIVIDUAL HOURS AND CHARGES**

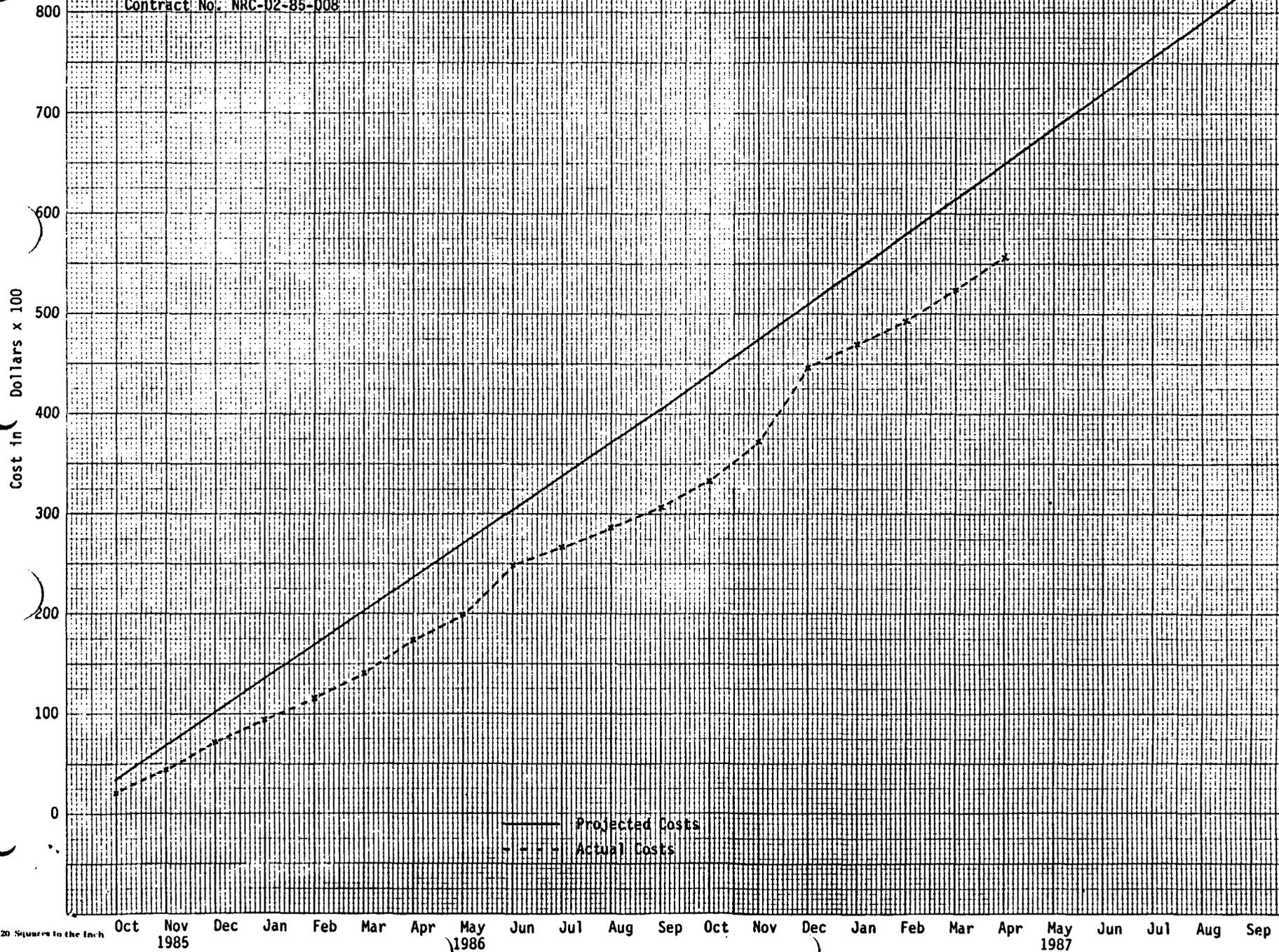
	This Month (hours)	Cumulative (hours)	Cumulative (amount)
Roy Williams	112	1,400	\$ 71,520
Gerry Winter	173.3	2,592.7	63,715.88
Jeff Brown	-	358	12,530
Jim Osiensky	116	2,204	41,603.40
Dale Ralston	0	300	13,490.40
Kirk Steinhorst	6.25	85.75	3,279.13
Terry Eckwright	0	109	1,641
John Sharp	0	84.5	3,403
Charles Smith	-	-	-
George Bloomsburg	13	373	15,074
Terry Howard	-	-	-
Stanley Miller	15.5	291	10,372.26
Noel Krothe	-	7.6	380
Richard Parizek	29.75	67.75	3,387.5
Barbara Williams	35.5	235.5	4,750.96
John Riley	20.5	133.5	2,136

**CURRENT AND CUMULATIVE PROJECT COSTS**

Task	Current Month	Cumulative to Date FY 86	Cumulative to Date FY 87	Total to Date
1	\$ 10,496	\$ 92,077	\$68,754	\$160,831
2	14,697	76,862	66,321	143,183
3	424	86,177	29,942	116,119
4	-----	-----	-----	-----
5	6,998	51,580	85,359	236,939
<b>Total</b>	<b>32,615</b>			

Percentage billed to total funds allocated = 68%.

Williams and Associates, Inc.  
Viola, Idaho 83872  
Contract No. NRC-02-85-008



# Governors say no to waste dump despite cash

Associated Press

WASHINGTON - Democratic Gov. Richard Bryan told Congress Wednesday that Nevada "isn't biting" on a plan that would pay up to \$100 million a year to any state that agrees to host the first permanent dump for highly radioactive wastes.

Local and state officials from Washington and Texas, the two other states tabbed as prospective sites for the repository, also turned a cold shoulder to the incentive plan, drafted by Senate Energy Committee Chairman Bennett Johnston, D-La.

Johnston and other congressional and administration leaders have suggested that Nevada's Yucca Mountain is the most desirable location for the nuclear dump, scheduled for construction early in the next century.

The Hanford nuclear reservation in eastern Washington and Deaf Smith County in Texas are the two other finalists.

No state wants the project, estimated to cost \$25 billion or more, but Johnston is attempting to generate new interest by offering the \$100 million annual bonus.

"The state of Washington is not interested in negotiating with the Department of Energy on a price" for building a nucle-

ar dump at Hanford, Washington Gov. Booth Gardner wrote in a statement delivered to the committee by an aide.

Bryan added, "Perhaps some other state is ready to bite at the monetary bait that is offered, but I can assure you that Nevada is not."

Bryan, armed with a 100-page prepared statement that stressed many environmental concerns about the Yucca Mountain site, said, "I would be very surprised if any state would show real interest in pursuing this particular alternative con-

cept, because its economic incentives could never buy the public trust."

Texas officials, meanwhile, repeated their opposition to the prospect of Deaf Smith County, in the Texas Panhandle, being tabbed. Troy Don Moore, representing the county and the city of Hereford, called it "an uninvited and undesirable burden."

Moore noted the county ranks first in the state in agricultural production, saying it "is not the barren wasteland of the early cowboy movies, but a premier example of the best of agriculture today - the finest technolo-

gy being used on farms, measured in square miles instead of acres, that are still predominantly family owned and operated."

"The success of these family operations is fundamentally tied to the subsurface wealth of fresh water for irrigation from the Ogallala and Santa Rosa aquifers," Moore said.

Johnston's legislation also would offer a \$50 million annual incentive to a state willing to house a related facility for cooling, packaging and intermediate storage of spent nuclear fuels and other radioactive wastes.

Thursday, April 30, 1987/Lewiston Tribune 3A

## DOE, the neighbor nobody wants

The chairman of the Senate Energy Committee wants the federal government to offer \$100 million a year to the state that accepts the first permanent nuclear waste depository, but no state so far is interested. The bill also would offer \$50 annually to the state that accepts a temporary storage site but nobody wants that, either. And considering what has been happening at Hanford, in Washington state, it is no wonder.

The Department of Energy has turned

out to be a reckless steward of the radioactive wastes in its charge as well as a slipshod manager of the nuclear plants it operates. According to the department's own investigators, a plutonium plant at Hanford has thrown some 20 tons of carbon tetrachloride, a carcinogen, into the air over the past two years. The same report says there has been no attempt to control or even measure these emissions.

Another possible carcinogen, tributyl

phosphate, is being emitted by the Plutonium Finishing Plant at Hanford, and there has been no attempt to measure or control these emissions either.

It is not just the air that is being contaminated on the DOE's Hanford reservation. Groundwater has been contaminated by radioactive wastes and so have some soils on the reservation. Animals have been affected by above-ground radioactivity and some birds have been building nests with radioactive mud.

The Hanford reservation has not been a good neighbor, at least to the people living downwind of it in eastern Washington and northern Idaho who may some day feel the effects of those emanations. And what is true of the Energy Department's Hanford operations seems to be true of its operations in South Carolina, where it makes weapons grade plutonium. If the governors and the state legislatures aren't welcoming the DOE into their states, no one can blame them. — L.H.