

NUCLEAR WASTE CONSULTANTS INC.

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October 19, 1987

009/Task 5/NWC.009
RS-NMS-85-009
Communication No. 207

U.S. Nuclear Regulatory Commission
Division of Waste Management
Geotechnical Branch
MS 623-SS
Washington, DC 20555

Attention: Mr. Jeff Pohle, Project Officer
Technical Assistance in Hydrogeology - Project B (RS-NMS-85-009)

Re: Draft TDS: "Simulating Response to Testing and Experimentation on
Determination of Paths of Radionuclide Travel and Groundwater Travel
Time", by R. Codell

Dear Mr. Pohle:

Please find attached the preliminary meeting schedule and budget addressing the subject numerical experiment, provided to NWC by Dr. Daniel B. Stephens. Please note that NWC has made some modifications to the budget, based on our analysis of the project's requirements. The principal modifications include:

- o Increasing the level of direction by Dr. Stephens from 80 to 160 hours;
- o Eliminating mainframe computer costs, which NWC assumes will be borne by the NRC through their INEL account;
- o Increasing the travel budget to allow participation by NWC in the team meetings as presented in the DBS proposal.

NWC considers that the project requires more senior direction from Dr. Stephens than he had originally intended, and we consider that 160 hours is a credible estimate for the level of direction that would be required at his level of experience. NWC has discussed the level of effort proposed for Dr. J. Minier of DBS, and Dr. Stephens has a reasonable expectation that for quality assurance of the work being performed elsewhere, this level of modeling assistance from Dr. Minier is appropriate. The additional hours for NWC participation in planning and review meetings can be accommodated out of our current project management budget and therefore are not included in this cost estimate. However, the travel budget should, we consider, include an allocation for NWC participation.

NWC has serious concerns about the level of funding that we and DBS consider will be needed to execute this proposed work. The NWC budget for FY 88 did not anticipate a single modeling project of this magnitude, and our FY 88 budget cannot sustain the NWC/DBS portion of the estimated costs. Therefore, NWC considers that the Staff will need to consider one of two potential courses of action:

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WM Record File: D-1021
LPDR w/encl

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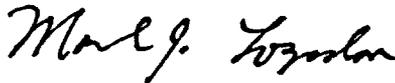
- o Supplemental budgeting to cover the expected costs of this activity;
- o Redirection of resources from the levels of effort anticipated under the current Statement of Work.

Please note that NWC concurs with DBS that the proposed method of dividing responsibilities between NWC and W&A will inevitably lead to a variety of inefficiencies in developing and executing the proposed work. We consider that it should be possible to substantially decrease the potential cost to the Government if the work were to be executed primarily by Dr. Yeh and a graduate student or post-doctoral fellow.

In light of the very substantial costs estimated for this work and the need to develop an effective and efficient working group, NWC recommends that there be a meeting, preferably in Denver or Albuquerque, or, at a minimum, a conference call between all the principals to discuss the appropriate next steps.

If you have any questions concerning this letter or the attached letter from Dr. Stephens, please contact me.

Respectfully submitted,
NUCLEAR WASTE CONSULTANTS, INC.



Mark J. Logsdon, Project Manager

Att: Letter from Daniel B. Stephens to Mark Logsdon, dated September 29, 1987

cc: US NRC - Director, NMSS (ATTN PSB)
HLWM(ATTN Division Director)
Mary Little, Contract Administrator
HLTR (ATTN Branch Chief)
D. Chery, HLTR

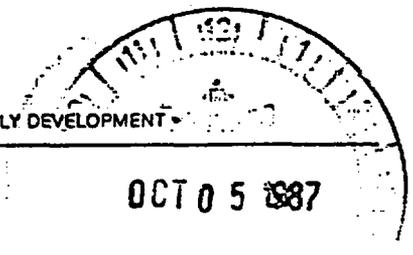
cc: M. Galloway, TTI
L. Davis, WWL
J. Minier, DBS
R. Williams, W&A, Viola, Idaho

Ref NWC. Gen. 11
DRAFT. Codell Oct



DANIEL B. STEPHENS & ASSOCIATES, INC.
CONSULTANTS IN GROUND-WATER HYDROLOGY

• GROUND-WATER CONTAMINATION • UNSATURATED ZONE INVESTIGATIONS • WATER SUPPLY DEVELOPMENT



OCT 05 1987

September 29, 1987

Mr. Mark J. Logsdon
Project Manager
Nuclear Waste Consultants, Inc.
8341 So. Sangre de Cristo Rd.
Littleton, CO 80127

Re: Draft Task Descriptive Summary (TDS) "Simulating Response to Testing and Experimentation on Determination of Paths of Radionuclide Travel and Groundwater Travel Time" by R. Codell (NRC)

Dear Mark:

Please find enclosed a preliminary meeting schedule and budget to perform the task referenced above. The preliminary schedule indicates a final report may be presented in September, 1988, approximately 9 months after commencement of the project. The TDS by R. Codell describes a task similar to that proposed by Jim Yeh and myself last year (September, 1986). In that proposal we estimated the professional time to complete the task at 15 man-months excluding technical support, technical review and administration time. The preliminary schedule is, therefore, probably a lower limit on the actual amount of time that will be required to complete the considerable amount of work contained in this task. Similarly, the level of effort required to complete the task will, most probably, be greater than the level of effort indicated in the preliminary budget. Therefore, we offer a few suggestions which may help to complete this task in the most efficient manner.

We recommend that representatives of Stephens & Assoc. (DBS&A), Nuclear Waste Consultants (NWC), Nuclear Regulatory Commission (NRC), Sandia National Laboratories (SNL) and Williams & Assoc. (W&A) meet in order to plan the performance of this task. The discussions may cover the logistics of performing the task, development of a work plan, and design of the model testing program. It is recommended that a meeting, perhaps two meetings, be held this November and/or December such that the task may be completed in a timely manner.

Mr. Mark Logsdon
September 29, 1987
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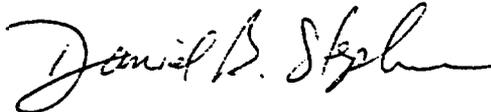
Because of the considerable amount of numerical modeling involved and the relatively early date desired for task completion, we recommend that the bulk of the numerical modeling be performed in Tucson under the supervision of Jim Yeh. Jim will be able to provide theoretical guidance in both numerical modeling and stochastic analysis. This arrangement should allow the task to proceed at the most rapid rate as Jim and the modeler may discuss progress and problems daily. Jim and I have discussed the possibility of obtaining a post-doc to perform the modeling in Tucson.

Alternatively, the computational work could be split into two parts. The first is more deterministic modeling related to problems of field testing and scale. DBS&A could set-up this problem and have someone in Socorro, or W&A, conduct the model study. The second part is the stochastic work related to uncertainty in ground-water travel time. This may be most efficiently done in Tucson, as described in the previous paragraph.

Please call me if you have any questions regarding any matter discussed in this letter.

Very truly yours,

Daniel B. Stephens & Associates



Daniel B. Stephens, Ph.D.
President

DBS:bdf
Enclosures



PRELIMINARY MEETING SCHEDULE

November 1987 Planning, Logistics
Albuquerque, NM
DBS&A, NWC, W&A

December 1987 Develop Work Plan and Model Testing Program
Albuquerque, NM
DBS&A, NRC, NWC, SNL, W&A

February 1987 Bimonthly Progress
Tucson, AZ
DBS&A, W&A

April 1987 Bimonthly Progress
Socorro, NM
DBS&A, W&A

June 1987 Halfway Progress
Albuquerque, NM
DBS&A, NRC, NWC, SNL, W&A

August 1987 Bimonthly Progress
Moscow, ID
DBS&A, W&A

September 1987 Final Presentation
Washington, D.C.
DBS&A, NRC, NWC, SNL, W&A

PRELIMINARY BUDGET

LABOR

Labor Category	Hours	Rate	Total
Technical Director (D. Stephens)	80 160	60.64	\$4,851.20 \$4,702.40
Senior Hydrologist (J. Yeh)	200	49.61	\$9,922.00
Project Manager (J. Minier)	360	49.61	\$17,859.60
Staff Hydrologist (W&A or DBS&A)	1440	33.08	\$47,635.20
Technician	200	27.56	\$5,512.00
Secretarial	80	11.03	\$882.40
			\$41,513.60
		TOTAL	\$88,662.40

+ 4851.20

TRAVEL

Roundtrip	Number	Rate	Total
Tucson/Albuquerque	6	\$141	\$846
Tucson/Moscow	1	\$420	\$420
Albuquerque/Moscow	2	\$514	\$1028
Albuquerque/D.C.	2	\$570	\$1140
Tucson/D.C.	1	\$588	\$588
Amesbury/D.C.	1	\$450	\$450
Amesbury/Albq	3	\$250	\$750
Per Diem	Number	Rate	Total
	24	30	75
			\$1800
			2700
Parking, Mileage, Taxi, Car Rental, Etc.			
Estimated			\$1500

+ 1200

~~3000~~

+ 1100

TOTAL \$7,322.00
\$9,422.00

OTHER COSTS

Cost	Number	Rate	Total
Microcomputer(hours)	250	5.50	\$1,375
Mainframe	estimated		\$15,000
Phone	estimated		\$5,000
Copies	5000	0.05 .10	\$500
Mail/Courier			\$1,000
Support			\$1,000

- 15,000

TOTAL \$23,675.00
\$8,875.00

FIXED FEE

<u>Profit</u>	<u>Total Cost</u>	<u>Rate</u>	<u>Total</u>
	\$117,859.40	0.07	\$8,250.16 \$7,686.74
	\$109,810.60		\$7,686.74
		TOTAL	\$8,250.16
	<u>GRAND TOTAL</u>		<u>\$126,109.56</u>
			\$117,497.34

D1021

PDR ✓

LPDR - WM-10

WM-11

WM-16

WM Record File
D1021
NWCI

WM Project 10, 11, 16

Docket No. _____

PDR

LPDR (B, U, S)

Distribution:

Spohle _____

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