UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

(a)

APR 11 RECD

APR 5 1984

Dr. Dae Chung
Staff Scientist
Lawrence Livermore National Laboratory
University of California
Livermore, California 94550

Dear Dr. Chung:

We have reviewed LLNL's monthly management letter No. 11, dated March 9, 1984, summarizing progress under NRC FIN A-0294 for the month of February, 1984. In addition, we have also revisited your previous monthly reports and our monthly reviews as part of a mid-year audit of NRC FIN A-0294.

PROGRAM OBJECTIVES AND DESCRIPTION

In a phone call to Phil Justus, NRC, about mid February, 1984, you announced that Don Emerson, BWIP Task Group leader for this project, was transfered to a DOE project; this resulted from internal LLNL matters. However, no advanced notice was given to the NRC project manager and this major personnel change occured prior to the important BWIP 1984 Geology Workshop. We had no choice but to accept your sole offer that Dr. L. McKague, the NNWSI Task Group leader, attend the workshop in place of Don Emerson. This does not mean that we have accepted L. McKague as BWIP Task Group leader. The matter of availability of key personnel and contract continuity is very important to WMGT in this technical assistance contract.

We are requesting your attendance at a meeting to discuss our mid-year review in Silver Spring at a date to be arranged in April. Please be prepared to discuss the following program concerns:

1) How to cut our losses due to D. Emerson's removal from the project. How to transfer to his replacement as much BWIP data, interpretations, documents, and "corporate memory" as possible.

2) The candidates for BWIP Task Group Leader. Please do not exclude subcontractors from consideration. What are the qualifications, availability and level of commitment of each? If L. McKague is a strong candidate, what will be the impact on his ability to deliver NNWSI products and reviews of documents (such as EA's) that might come in simultaneously from the two sites?

3) The additional cost of training a new BWIP Task leader.

Monthly Management Letter Reports No. 6, 7, 8, and 9, p. 3, stated that considerable efforts were made in preparation for independent, LLNL, evaluation of the BWIP site, NNWSI site, and salt sites. At the mid-year review we will need an accounting of these efforts to enable us to plan, possibly to refocus, future preparation efforts in light of the new DOE schedules, the fact that expenditures are running ahead of levels projected for this time period, and knowledge of the EA format and content for salt sites. Please include a listing of documents, by site, that individuals have reviewed, or used in their preparation of site visits, general background, and site issue development.

Monthly Management Letter Report No. 8, p. 3 refers to specific literature reviews: Mid-Continental Seismicity and Salt Dome Tectonics. These are appropriate topics to review in preparation for developing an STP on seismo-tectonic issues for salt sites. For mid-year review please be prepared to discuss seismo-tectonic issues for salt sites; what reasonable approaches might we take to convey what the issues are, considering that the sites are in different seismo-tectonic provinces and some are bedded, some are domal. The status of review of implication of dome growth rate in Jackson and Seni (1983) will be discussed.

PROGRESS - FEBRUARY 1984

Under this item you have listed discussions of and preparation of a draft SOW for new technical assistance in low-level waste management and uranium recovery sites (facilities). Please understand that this is not in the scope of NRC FIN A-0294 and cannot be charged to A-0294. Please have a statement in your next report acknowledging that A-0294 cannot and has not been charged for this type of work.

You mentioned that D. B. Slemmons worked closely in developing the BWIP STP items. This work requires clarification. Did D. B. Slemmons author the STP or did he review and supervise R. A. Whitney's contribution? What was the nature of R. A. Whitney's participation? How many hours (listed separately for each) did they spend on this task in February?

In all future reports, we want a statement for each major project category. For example: NNWSI- no work done this month. The categories we want listed now are: BWIP, NNWSI, and Salt. Where report reading is part of the work listed under each project, the titles are now required to be listed.

PLANS FOR NEXT MONTH

Please do not unilaterally plan meetings with the NRC PM. No meeting on EA reviews was ever agreed to for March 1984 by the NRC PM. No meetings, except the BWIP workshop, were held in March.

Your plans for making progress on developing work assignments for low-level waste and uranium recovery projects is not in the scope of NRC FIN A-0294. Please have a statement in your next report acknowledging that A-0294, cannot and has not been charged for this type of work.

ESTIMATED PROJECT FINANCIAL STATUS

We are only five months through FY 84 but 60% of the available funds are depleted. March promises to be an expensive month due to travel costs for the four BWIP workshop participants working with LLNL. You are now running over budget!

LIST OF CONSULTANTS/SUBCONTRACTORS

D. B. Slemmons is the sole name listed under this category. Why isn't Robert Whitney listed as a subcontractor?

The action taken by this letter is considered to be within the scope of the current contract. No changes to costs or delivery of contract products is authorized. Please notify me immediately if you believe this letter changes costs or delivery of contract products.

Sincerely,

Kristin B. Westbrook

Kristin B. Westbrook, Project Manager
Geology/Geophysics
Geotechnical Branch
Division of Waste Management

(b)

MEETING AGENDA

PURPOSE: FOR DISCUSSION OF GEOLOGY TECHNICAL POSITIONS AND MODIFICATIONS TO LLNL CONTRACT A0294 TO INCLUDE SEISMIC TECHNICAL ASSISTANCE FOR LOW LEVEL AND URANIUM RECOVERY SITES

CHAIRMAN: Kristin Westbrook

LOCATION: Silver Spring, Md. Room 450

TIME: Thursday, February 9, 1984
9:30 am - 3:00 pm

PARTICIPANTS:

K. Westbrook	NRC
F. Justus	NRC
B. Rice	NRC
D. Chung	LLNL

Mark Logsdon NRC - pm - geology (Miller's staff).

9:30 - 12:00	Discussion of BWIP STP's and upcoming BWIP Workshop in March and generic technical positions.
1:00 - 3:00	Discussion of Modifications to LLNL Contract A0294 to Include Seismic Technical Assistence for Low Level and Uranium Recovery Sites

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840127 Kristin called:

Come to NRC/DWM to write up a draft 173 for both "old" and new projects with DWM/Geotechnical Branch

Time: Feb. 9 & 10th, 1984

Place: NRC/DWM Kristin's Office

Old Project: A0294

Contract mod. to include all the EA's work
Contract mod. to include all the salt sites

New Project:

The project will deals with

- o Seismic hazard assessment of surface facilities, including low-level waste trenches and uranium recovery facilities
- o Study of ground motion variations with repository depth
- o Probabilistic seismic hazard/risk analysis (assessment) of all the nuclear waste repository sites

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TECHNICAL ASSISTANCE IN GEOLOGIC STABILITY IMPACTS ON NUCLEAR WASTE MANAGEMENT SITES

1.0 BACKGROUND

Geologic stability impacts may be of concern to the stability of various types of Nuclear Waste Management Sites. Seismic and tectonic events may have the potential to occur in frequencies and magnitudes which could be disruptive to the stability of a nuclear waste management site. If severe enough such potential events could lead to releases of radioactivity to the accessible environment or to unrestricted areas. Therefore, seismic and tectonic impacts need to be assessed.

For the purposes of this contract, Nuclear Waste Management Sites are defined as including surface and subsurface facilities for any of the following: 1) potential high level waste sites, 2) potential or existing low level waste sites, and 3) potential or existing uranium recovery sites.

OBJECTIVE

The objective of the assistance provided by this contract to NRC will be in evaluating geologic stability and will include assessments and reviews of information on:

1) Identifying existing features (for example, faults, fractures) that may be adverse to nuclear waste management site performance;

2) Identifying and bounding the nature and rates of seismic and tectonic processes that may have adverse impacts on a nuclear waste management site over the long term;

3) Assessing the uncertainties and limitations associated with the extrapolation of seismic and tectonic processes over the long term; and

4) Providing input to the technical basis for NRC technical positions environmental reviews, site characterization plans, decommissioning plans, licensing actions, and other site specific technical documents related to geologic stability.

2.0 WORK REQUIRED

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The performing organization shall evaluate geologic stability related information through reviews of relevant reports, including Environmental Impact Assessments; Environmental Impact Statements; Site Characterization Plans; Site Decommissioning Plans; participation in workshops; data reviews; site visits; and identification and evaluation of assessment methodologies, issues, and information needs in geologic stability related to nuclear waste management site performance.

The purpose of this work is to provide the NRC with independent evaluations of geologic stability related assessments and plans for future investigations. This is to assure that there is adequate information to complete Waste Management Division reviews related to our environmental and licensing assessments. To achieve this purpose, the performing organization shall focus their work on:

1) existing data base and adequacy of methods used to collect and interpret the data;

2) generic and site specific seismic and tectonic questions and ways to resolve; and

3) identification of additional information and acceptable methodologies needed to perform quantitative assessments to assist NRC staff determinations for environmental reviews and licensing assessments.

4) contribute to the technical basis for NRC technical positions and other NRC technical documents such as Environmental Impact Statements or reviews of Environmental Impact Appraisals, Site Characterization Plans, Site Characterization Analysis in the area of seismicity and tectonics.

~~NRC Program plans for FY 85 and FY 86 include:~~

~~This will be accomplished in~~

2.1 Task 1: Review of the DOE Site Characterization Program in Geologic Stability

The Scope of Task I will include:

1) an evalutaion of the existing data base at the high level waste sites (These may change due to the addition/deletion of sites. Currently included are BWIP, NNWSI, up to nine salt sites and 3 regions for granite-North Central, North East and South East U. S.).

2) identification and evaluation of issues in seismicity and tectonics related to design and construction, long-term repository performance, and groundwater flow including the uncertainties and limitations of data, methods, and analyses on site specific or generic bases.

3) evaluation of plans for future seismic & tectonic investigations including information needed to perform quantitative assessments to determine if there is reasonable assurance that the performance objectives of 10 CFR Part 60 will be met.

Subtask 1.1: Environmental Impact Appraisal Review and Preparatory SCP Review

Under subtask 1.1 the performing organization shall prepare for and review DOE high level waste sites Environmental Impact Appraisals for the portions related to seismic and tectonic stability. Preparation will consist of review of the data base used and quantified analyses of the data base, reviews of related key DOE documents, participation in site visits, data reviews and workshops. Written reports and meeting summaries will be required following each site visit and workshop. Work for each site will begin at the written direction of the P. M.

Subtask 1.2: Preparatory SC Analysis

Under subtask 1.2 the performing organization shall integrate the results of the document and data reviews to be conpleted under subtask 1.1 in a comprehensive STP. The performing organization shall transmit a draft letter report containing a comprehensive STP documenting important technical questions (issues) concerning geology ~~and~~ seismic and tectonics at a selected high level waste site or sites as directed by the Project Manager. Work for each site will begin at the written direction of the P. M.

Subtask 1.3: Review of High-Level Waste Site SCP and SCP updates

Stet except for H.L.W. sites replaces specific sites. Time table eliminated.

The project manager's written request shall specify the time table needed by NRC and taking into consioleration concurrent reviews under this and other subtasks of this contract.

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E :84/02/17	:	:	:	:	:	:

Subtask 1.4: Stet w/ seismo tectonic

2.2 Task II: Low Level and Uranium Recovery Waste Site Assistance

The scope of Task II will include:

1) Evaluations of existing data bases at low level waste and uranium recovery waste sites. Emphasis will be given to the adequacy of the data base, and methods of investigations for risks quantification of.

2) Indification of technical question areas needing additional information and acceptable was to obtain such information. This sis to include assessing the uncertainties and limitations in the data and methodologies.

3) evaluation of future plans for seismic and tectonic investigations for determining that performance objectives of applicable NRC or EPA regulations are met.

Subtask 2.1: Uranium Recovery Waste Management

Work under this subtask will involve reviewing site specific historical seismicity and site visits, identification of seismichazards any magnitude and frequency estimations and possible their frequency impacts, reviews of and inputs to environmental impact statements of appraisals or other on siting , or decommissioning licensing a uranium, recovery waste related management site. Work will docuemtn be initieated by, the P. M. in writing a products and the time table will deliver be specifiec TA the written request.

Subtask 2.2:

Work under this subtask will involve reviewing site specific historical seismicity, site visits, meeting attendance, identification, of seismic hazards by magnitude and frequency, estimations and the possible impacts, written review of and written imputs to environmental impact statements or appraisals and otehr licesing related documents on siting or decommissioning a uranium recover waste management site work will be initiated by the P. M. in writing and the time table and detailed products will be specified in the written request.

Task III: Stet same as 2.2 Task II on P. 5 of or.

Subtask 3.1: Subtask added for Technical Positions acceptable methodologies Seismic hazard quantification.

Generic Positions site specific.

2.3 Estimated Requirements

	FY85	FY86
Task I	3.00	3.00
Task II	1.50	1.50
Task III	1.00	1.00
1x1 50 K	5.50 (900K)	5.50 (900K)

Above just discussed as D. Chung's estimate K. Westbrook has no position on costs or effort at this time February 10, 1984 - K. Westbrook February 10, 1984.