

426.1/LFH/83/01/18/0

- 1 -

JAN 19 1983

WMHT: 3426.1
B-6983

Dr. Richard Gates
Golder Associates, Inc.
2950 Northup Way
Bellevue, WA 98004

Dear Dr. Gates:

SUBJECT: CONTRACT NO. NRC-02-81-037 ENTITLED, "TECHNICAL ASSISTANCE FOR
REPOSITORY DESIGN" GOLDER ASSOCIATES, INC. (LTR. NO. 68).

The Final Draft Task 5 Report (GAI Ltr. No. 80) dated December 20, 1983
entitled, "Evaluation of Engineering Aspects of Backfill Placement for
High-Level Nuclear Waste (HLW) Deep Geologic Repository, has been
received and reviewed by myself and members of the NRC Technical Staff.
I have the following general comments:

The final draft report has made the recommended changes outlined in
NRC's letter (Ltr. No. 63) dated October 8, 1982 for the Interim
Task 5 Report (GAI Ltr. No. 59) dated September 15, 1982.

Several items need to be clarified in the Final Task 5 Report. Two
comments are:

- o The text must be reviewed and edited to reflect a tone that is
consistent with the Technical Assistance approach. The report
should not give the appearance that we are establishing a
design basis e.g., ... the backfill design basis established
here. (Reference Comment No. 4).
- o There are statements of civil engineering principles and design
assumptions that are not referenced in the main text or
appendices. (Reference Comments No. 7, 8, 9 and 10).

WM Ticket No: WM-83-014

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The general comments listed above and the specific comments attached to this letter should be resolved as outlined in Section 4.4, Draft and Final Report of the subject contract.

The action taken by this letter is considered to be within the scope of the current contract No. NRC-02-81-037. No changes to costs or delivery of contract products are authorized. Please notify me if you believe that this letter would result in changes to costs or delivery of contract products.

Sincerely,

ORIGINAL SIGNED ET

Ludwig F. Hartung, Project Officer
High-Level Waste Technical
Development Branch
Division of Waste Management

Attachment:
Specific Comments

cc: D. Umbel, NMSS
D. Mattson, WMPI
J. Fields, ADM-DC
D. Pentz, GAI

Record Note:

This memorandum has been coordinated with:

1. Mr. Nataraja
2. Mr. Chase
3. Mr. Pittiglio
4. Mr. Rhoderick
5. Mr. Tiktinsky
6. Mr. Doyle
7. Mr. Cook
8. Mr. Wright

DesireeM 83/01/19

CC :	WMHT <i>LM</i>	WMHT <i>LM</i>	WMHT <i>LM</i>	:	:	:	:
ME :	LHartung:dm	JTGreeves	HJMiller	:	:	:	:
TE :	1/19/83	1/19/83	1/19/83	:	:	:	:

JAN 19 1983

SPECIFIC REVIEW COMMENTS

<u>Comment No.</u>	<u>Comment</u>	<u>Remarks</u>
1 Table ES-14/4 (NOTE:) Ln. 4 pg. xi	This draft also includes horizontal waste emplacement.	
2 Table ES-3/4	Reference legend on ES-5 for symbols (o) and (o). Note "typo". Performed should be preformed backfill shapes.	
3 Fig. 2.4 pg. 3	This figure is difficult to follow and it isn't discussed in this section. Please try to clarify.	
4 Pg 4 para. 5, ln. 3	The text should be edited for statements that may give the appearance that the NRC or GAI is establishing "design basis". The use of terms like "considered here" instead of "established here" would be a possible "fix".	
5 Pg. 45 5.2.1 para. 2, ln. 5	Reference the "two non-design reports" mentioned in this section.	
6 Pg. 63 para. 4, ln. 4	"Typo" --- stower should be blower.	
7 Pg. 69 para. 1, ln. 6	Included "depth of each lift" as a conditions of compaction depth.	
8 Pg. 82 para. 2, ln. 1	Expand discussion of "backfill placement schedule would be influenced by difficulty of remining for retrievability."	

9
Pg. 83
para. 3

Reference "roll-crete" used by
industry Reference "roll-crete" used
by industry (e.g., COE, Willow Creek
Dam, Heppner, Oregon).

10
Pg. 104
Table 6.8

Also discuss disadvantages of
achieving compaction against the
overhanging wall of an excavated
opening.

11
Pg. 113
para. 4, ln. 4

Reference modeling codes, if known,
for "predictive repository modeling."