- limitation of aquifer studies to 30m - couldn't drawdown affect more
- shallow geophys. defn. of subsurface

- overpressured upward mvmt. from below -
- bdrk fracts
- slope factors (25% ?ε)
- backfill materials - stress speed to minimize exposure
  not zeolites or clays mixed to absorb nuclides - in part of eq filling voids
- ESL pitch - need to eval. geol. repts. -
  gather geophys., geoch data
  site studies - largely soil & quat.
  note # of places could be sold bill of goods!

in scoping role, need to ident.

assumption is that ∫ hydrol. is limiting factor

would be stronger if allied w/ eng. co, w/ soil scientists
hydrol. modelers

response to RFP - on characteriz. of backfill radionuclide absorbers (?)
missing step

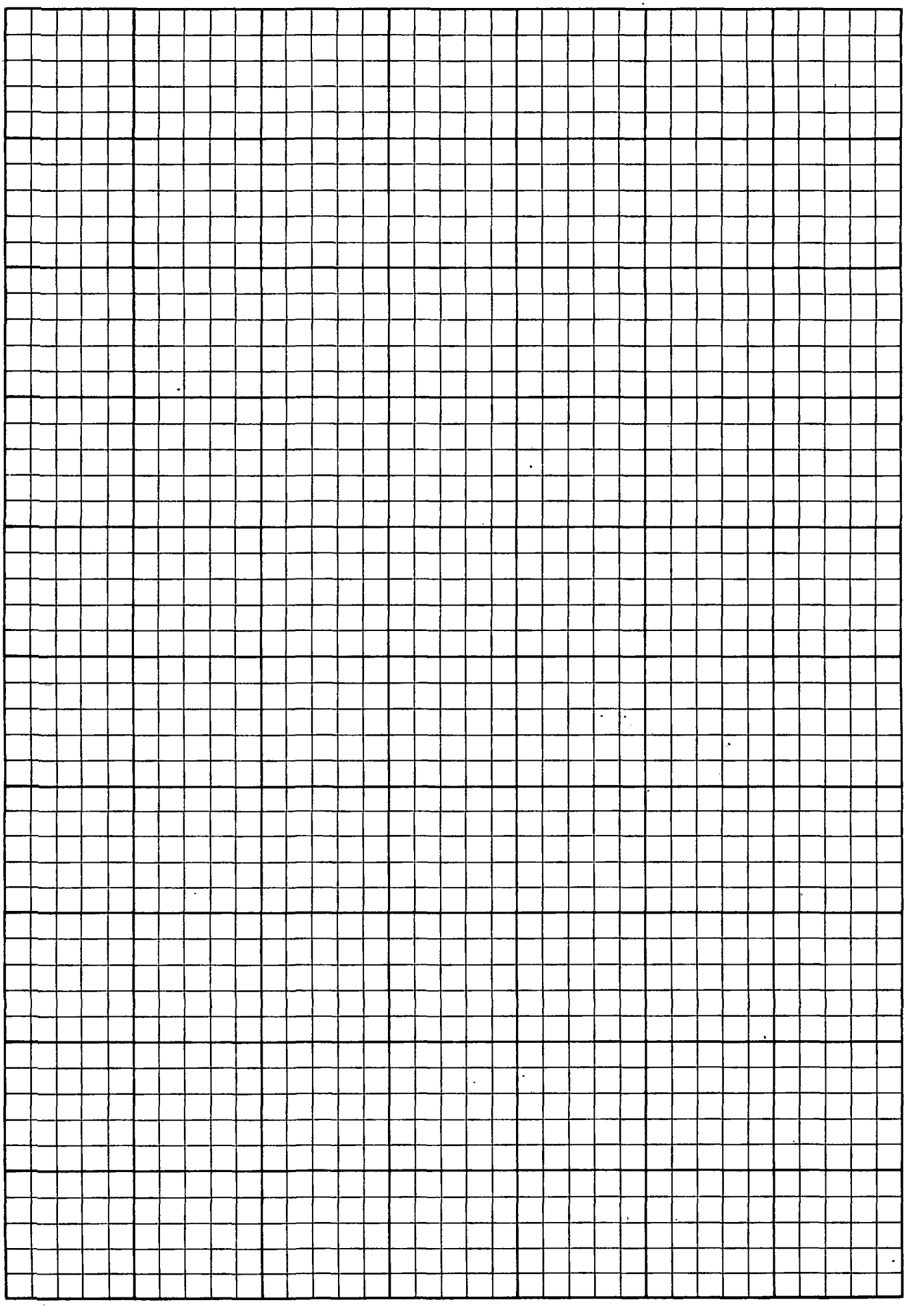
impt. factors - prevent mobility of radionuclides
assumpt. - will have" thru groundwater

also plants, etc. settling, breaking ground cover

geol. factors - non-tectonic
non-erosive

role for ESL - in eval of compact decisions
why ESL - characterize mobility of mvmt of waste (geoch.)
- " site geol
geophy

Missing - hydrologists (EG&G to help here?; or pvt. companies?



screening — resource analysis missing @ times - + in breath of included

slope stability could be a real problem

expansive soils ?

could do as support eval. team

add - aerial photo interp.

The maya problem - may be rather than making sure that plans are inclusive, making sure that contractn site screening and characterization are "

can't rely on public comment to expose fatal flaws
can rely on contractors to do lowest cost proj. possib., ∴ cut corners "buny" misdeeds

intrusions - natural thru
tectonics
weathering, erosion, chem. breakdown
plants
other breakdowns

harvesting activities of emplacement of san. quantities of

handbook is light on the details

lo level waste
Barnard - only $ to ESL would be over Matheson signature
ORNL
EG&G } most $
PNL

shallow burial - ORNL

goal - states to do lo level
Rky Mtn compact UT, CO, NM, WY, NV
NW CA?, HI, AK, ID, OR, WA, MT
└ will select sites in states

MAW - handbook is defficient in geol. sciences
- suggests pitch to Bay - advice on siting, help keep states lined up

2 approaches - RFP
or needs help
└ maybe suggests areas of research

p179
407 - + section following
417

Mtg attendees 255
238
173
159

Memo to: files
From: Mike Wright
Subject: Meeting with Michael Bonnineau, DOE-ID re DOE Low-Level Waste Management Program

~~Items~~

1. DOE would not be interested in attaching work to our present contract, but would "much prefer" a new contract, competitively let, as per recent PRDA
2. Characterization of potential disposal sites is the responsibility of each of the States. The states are grouped in compacts. Utah is in the Rocky Mountain compact, consisting of Utah, Colorado, New Mexico, Arizona, Nevada and Wyoming. The Northwest Compact is Idaho, Washington, Oregon, Montana, Alaska and Hawaii.

The host state for the Rocky Mountain compact is Colorado, i.e. Colorado will get the low-level waste site. Thus the State of Colorado will probably favor the entities within the state to do their characterization.

The only way ID could fund site work in Utah would be over Gov. Matheson's signature, and he is not likely to volunteer Utah for such studies.

3. There is possible work in evaluation of technologies. ~~There could be~~ Two potential areas are Remedial Action and Shallow Land Burial. Contractors already working in these areas are LANL, PNL, and the ASGs among others.

There is a possibility that we could be used in putting the results of ongoing research by others into a format useable by ~~not~~ States.

4. The budget for the PRDA presently issued by EP is small, $500K, and will probably be divided among a number of universities. Reason for PRDA is to channel the long list of unsolicited that they get.

5. DOE's man in EGG who handles the program is George Levin, ~~ext~~ 0665, who can also give us an idea of program scope. Bob Dodge ~~is~~ works for Levin.

6. On the high-level waste program, it now looks like Texas will get the nod over Utah, in which case further money will go there. If Utah gets the nod, then we should interface with:

Woodward-Clyde -- site characterization
Battel -- ~~Environmental~~
? -- EA & E contractor recently selected
? -- drilling contractor recently selected.

w/ Maggie

1. Handbook - being put together by Oak Ridge -

Topics
1. migration of radionuclides
2. Hydrology

In handbook, they are throwing all techniques in like book of sites. Maybe emphasis should be more across the board.
+ listing of data.

Maybe what could be evaluated in various site characteristics data base sets.
Monitoring - all buried people require this during active life span -
All tech are based on water analysis -
Required to have monitor wells. What other techniques could be used double. Is info from monitor wells pursued. Whether double techniques that could be better.

1. Mike has whole national program - Lavin works for him | passed on from ID to next.

2. Dawn Large - DOE/Oak Ridge -
- shallow land handbook
-

first canvas people here that target quality results -
Oak Ridge - geol/geoph/hydro -

Lead office - doesn't have appropriate
review/advise -
no geoscientists doing geosci risks.

Agreed Canvas - applied to any site
but site selection - this is weakest link -

Expl plutonium needs to be imposed on site selection -

Who in DOE will check the state work?

Air earth is the final constraint -- up to site
characterize.

state prog is a cost-shared program - So
DOE will maintain a level of say in what happens
- Congress is being used to form compacts.

- We have a lab to provide tech assist to states
-- can set you up, check state work, etc.

4 - Session B-2

N D. Vaughan - in charge of manual

- Greater Confinement - Method has been pushing -
High-Level Wastes
Low-Level - gloves, etc not long ½ life - SLB
but have whole groups of things to confine for
5000 yrs, but not worth high-level, deep buried -

How to get rid of this - bury intermediate depth →
3rd type most to form -

so they are starting to look at this area.
This has its own site selection procedures, etc.
what are essential rock properties -
more costal than shallow land burial
less than deep -

1. Interested in a new procurement; not coupling w/ current contract

2. Commercial work
   EPRI
   waste volume work
   shallow ~~burial~~ burial – help states establish better
   Shallow disposal techniques –
   Budget for PROA limited:
   $20K avail, do be divided among

   – PROA – to ~~get no~~ handle muscle proposals
   in one ~~batch~~ –
   – Look @ unsolicited proposals for states →

3. His counterpart in EG&G
   George Levins 526-0665

4. Detailed site characteriz is resp of states.
   Utah – Washington Compact
   Colo, NM, NE, Nev, Wy – Rocky Mtn. Rad Compact
   ID, WA, ORE, MT, AK, HA – NW Compact

Host state for R.M. is Colorado —
Site characterize is resp of host state —
Nathoan - will not volunteer for a host state

— It is a possib to evaluate technique —

see p — in Big Blue Book -
Remedial Action & Shallow Land Burial

USGS - double probes
LANL, PNL — buried chem modeling

they are trying to put records results together

rem. action — look @ existing techniques/
concrete action —

— see p. 805 →

- lots | compact for buried #
- to learn more, talk to George Lavin ←
also Bob Dodge. —

Utah - WC -
Bechtel - environ consultant - all them, too
A&E + drill cont. also
But Texas is leading latter