

N42237.AR.000459
NSB KINGS BAY
5090.3a

LETTER REGARDING U S GEOLOGICAL SURVEY REVIEW OF GEORGIA DEPARTMENT
OF NATURAL RESOURCES COMMENTS ON GROUNDWATER MONITORING PLAN FOR
SITE 11 NSB KINGS BAY GA
4/14/1999
U S GEOLOGICAL SURVEY



United States Department of the Interior

GEOLOGICAL SURVEY
Water Resources Division
Peachtree Business Center, Suite 130
3039 Amwiler Road
Atlanta, Georgia 30360-2824

NSB Kings Bay Administrative Record
Document Index Number

31547-000
16.01.00.0033

April 14, 1999

Ms. Rhonda Bath
Naval Submarine Base Kings Bay
Environmental Division
1063 USS Tennessee Ave.
Kings Bay, GA 31547-2606

Dear Rhonda:

Thank you for the opportunity to review the DNR comments regarding the ground-water monitoring plan for Site 11.

General comment 1. I agree with the state. In a letter to Mr. Mark Gage (dated January 8, 1999), the USGS made the following comments:

"I must also address the inclusion of the stratigraphic section generated by ABB-ES. While I believe this is a relatively accurate depiction of the general geology, it does not represent the hydrology. Contaminant movement, water-level data, outcrop data, and geophysical data indicate that the water-table system can be subdivided into two layers. The upper portion of the water table occurs from land surface to a depth of about 35 to 40 feet below land surface. There is little to no evidence to suggest that there is any "layer" above this depth that affects ground-water movement. Below this depth, an increase in clay content results in a decreased vertical hydraulic conductivity. This hydraulic-conductivity change causes a change in the vertical head distribution (this is the break between the upper and lower zones defined in the USGS report)"

Bechtel has chosen to arbitrarily define several horizons for engineering purposes (opposite to the suggestion made by USGS). While this may be important for Bechtel's internal book keeping it does not reflect the hydrology.

General comment 2. No reply.

Specific comment 3. No reply

Specific comment 4a, b, c. No reply.

Specific comment 5. While all of the hydrologic data collected to date suggests that vertical migration will not occur; I would not have a problem with keeping a deep monitor well. However, I would suggest that any deep well that is not abandoned be carefully checked for integrity before being used. Furthermore, the integrity should be periodically checked afterward. A cracked well casing would provide a perfect pathway for contaminant migration.

Specific comment 6. No reply.

Specific comment 7. No reply.

Specific comment 8. If it is the intent of the Navy that USGS do the monitoring work, we can provide the necessary verbiage to satisfy this comment. Please let me know if you wish to have this information.

Specific comment 9. See reply to specific comment 8.

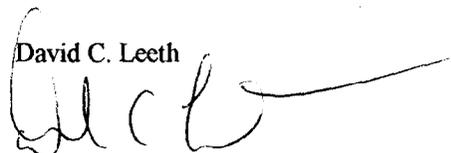
Specific comment 10. See reply to specific comment 8.

Specific comment 11. If it is the intent of the Navy that USGS do the monitoring work, we can provide the necessary documentation to satisfy this comment. Please let me know if you wish a copy of this documentation.

Specific comment 12. The USGS will review any statistical methodology that is put forth to satisfy this requirement.

Specific comment 13. No reply.

If you have any questions, please do not hesitate to contact me.

David C. Leeth

Hydrologist

Enclosure

Copy to D.W. Hicks