

MEMORANDUM

TO : LD Thompson
FROM : JS Pack *JP*
DATE : January 9, 1984
CC : EW Paul
✓CD Grimm
DH Pyfer
RJ Labrie
Running Letter File
Generation Subject File
RE : Colstrip Units #1 and #2
Second Stage Evaporation Pond
Hydrometrics Groundwater Study
Meeting Notes
WO #10-50112

On Wednesday, January 4, 1984, a meeting was held with personnel from Hydrometrics concerning their groundwater study of the Second Stage Evaporation Pond area.

Those in attendance were:

Max Botz	Hydrometrics
Jim Gilley	Hydrometrics
Doug Parker	Hydrometrics
CD Grimm	MPC
JS Pack	MPC
EW Paul	MPC
LD Thompson	MPC

The purpose of the meeting was for Hydrometrics to give a progress report on their study and to propose further activities to be performed. Hydrometrics submitted a preliminary report of their 1983 work in December, 1983. The information contained in this report will be included as part of their final report.

It was explained that approximately 25 private wells lie immediately downstream of the Second Stage Evaporation wells. The majority of these wells are about 300 feet deep, some wells are not as deep. Hydrometrics indicated that the Second Stage Evaporation Pond will definitely cause degradation of these wells. It is not known how soon after the pond is in service the degradation will show up but it is certain that it eventually will. One existing observation well located very close to the private wells is already showing a slight degradation due to the First Stage Evaporation Pond.

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It was pointed out that current state groundwater rules prohibit groundwater degradation at an owner's property boundary whether or not wells exist on neighboring property.

This leads to the conclusion that mitigation measures must be taken to reduce groundwater degradation at the property line. Various possible mitigation measures were discussed including an interceptor system, fresh water injection, and extension of the existing municipal water system to serve the residents near the B&R Village.

In order to complete the study, Hydrometrics has proposed doing the following activities:

1. Install three or four more observation wells: two or three northwest of the Second Stage Evaporation Pond and one at the mouth of Stocker Creek. The purpose of these wells is to complete the ring of observation wells around the Second Stage Evaporation Pond and provide early warning of seepage from the First Stage Evaporation Pond.
2. Perform aquifer testing on all the installed observation wells to determine aquifer hydraulic characteristics.
3. Perform a three dimensional flow net analysis on the Second Stage Evaporation Pond site to estimate seepage quantities.
4. Determine what options are feasible to mitigate the groundwater pollution problem. Hydrometrics will also look into the costs of these measures including the installation of municipal water lines.
5. Institute a monitoring program for wells in the Second Stage Evaporation Pond area so good baseline data is obtained well in advance of construction and operation of the pond.
6. Develop a formal monitoring program to be implemented when the Second Stage Evaporation Pond goes into service. This program can then be provided to the State Department of Health and Environmental Sciences - Water Quality Bureau.

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7. Develop and provide a statistical method to be used to determine when a change in water quality in a well or group of wells can be attributed to pond seepage.

Concerning Item 3 above, Mr Botz did not feel a finite element computer study such as was performed by Bechtel on the Units #3 and #4 Effluent Holding Pond is warranted because it is obvious from Hydrometrics' study thus far that mitigation measures are going to have to be implemented. Further refinement of a seepage estimate from what a three dimensional flow net analysis would give is not needed and the great expenditure for a computer analysis would not be cost effective.

Hydrometrics indicated the final report will contain a section addressing regional impacts of the Second Stage Evaporation Pond.

Hydrometrics suggested performing a well certification activity in which the private wells would be sampled and tested with the well owners signing a certificate of water quality on that date. This information would be used as baseline data.

Hydrometrics will prepare a written proposal, including costs, and submit it by January 13, 1984. It is estimated the entire study will be complete by the middle of the summer of 1984.

JSP/djp/5:16

SUPR GP