



THE STATE OF WYOMING

04004492 0300

40-4492

PDR

ED HERSCHLER
GOVERNOR

Return to:
39655

Department of Environmental Quality

LAND QUALITY DIVISION

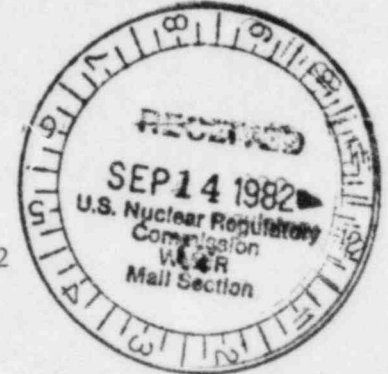
401 WEST 19TH STREET

TELEPHONE 307-777-7756

CHEYENNE, WYOMING 82002

September 8, 1982

Mr. John Linehan
U.S. Nuclear Regulatory Commission
Uranium Recovery Branch
Mail Stop 483 - Silver Springs
Washington, DC 20555



RE: TFN 1 5/261 - Reclamation of Tailings #2 and TFN 1 3/142

Dear Mr. Linehan:

In conjunction with our decision to wait out the NRC process in approving the reclamation plan for Tailings Pond #2 at F.A.P. in the Gas Hills, we wish to submit to you our most critical concerns regarding that facility, so that you may insure that they are addressed in your Final Draft.

1. F.A.P.'s contention that LQD, through Roger Peterson's memo of August 1, 1978, endorses the pumpback system for Tailings Pond #1 as adequate, is out of context. This Peterson endorsement was for the time period prior to use of in-pit disposal, "ie" for about three (3) years use, not ad infinitum. This memo is enclosed.
2. Tailings No. 1 and No. 2 must both be reclaimed as soon as possible.
3. Please refer to the enclosed memo of September 1, 1982 from our meeting with you. It should give some direct information as to our concerns for both the Tailings Reclamation Plan (Pond #2), and for the In-Pit Disposal project.

Sincerely,

W.C. Ackerman

W.C. Ackerman
Administrator



WCA:dlw

cc: Ed Francis *ef*
Gary Beach
Niles Andrus

8211020295 820908
PDR ADOCK 04004492
C PDR

FEE EXEMPT

OFFICIAL DOCKET COPY

20728
info only

040044920300

MEMORANDUM

TO FILE: Federal American Partners, Permit #352, Fremont County, Wyoming
FROM: Roger Peterson, Hydrologist *RP*
DATE: August 1, 1978
SUBJECT: Tailing ponds review.

This reviewer recommends approval of the tailing ponds extension, subject to the conditions mentioned in the July 27, 1978 revision, pg. 1. This reviewer believes that FAP has professionally addressed tailings dam 2 encroachment by Willow Spring Draw in this report by using appropriate flood estimates. Additionally, the Seepage Recovery letter of July 26, 1978 adequately controls seepage from tailings pond 1. For the proposed existence time of these facilities, about 3 years these analysis are quite adequate.

RP:sh

Permit no 352

OFFICIAL DOCKET COPY

20728



0400 4492 0300

Department of Environmental Quality

LAND QUALITY DIVISION

401 WEST 19TH STREET

TELEPHONE 307-777-7756

CHEYENNE, WYOMING 82002

September 8, 1982

Mr. Niles Andrus
Acting Manager
Federal American Partners
Gas Hills Star Route
Riverton, WY 82501

RE: TFN 1 5/261 and TFN 1 3/142

Dear Mr. Andrus:

In answer to your letter of August 30, 1982, I agree that the Land Quality Division should allow the NRC process to become complete before finally resolving the conditional approval of the in-place reclamation plan for Tailings Pond #2.

We will continue to direct input to the NRC in an attempt to accomplish our goals through that on-going process.

To pursue that line of reasoning, we will reiterate certain thoughts for the benefit of John Linehan. Our letter to him is enclosed.

Please note that you will receive a signed Form 11 for the conditional approval of the Tailings #2 Reclamation Plan upon the completion of the NRC process. By waiting, as you have suggested, we should be able to keep the Form 11 a little cleaner too, because we will then know definitely what conditions have not been satisfactorily addressed by the NRC and must be attached to the Form 11.

An item which LQD would find helpful would be a cost itemized estimate from you for what it would cost to backfill the Sagebrush-Tablestakes Pit above the groundwater level prior to using it for tailings disposal.

Sincerely,

W.C. Ackerman
Administrator

WCA:dlw

cc: Ed Francis *et*
Gary Beach
Bill Kearney
John Linehan

OFFICIAL DOCKET COPY

20728

040044920300

MEMORANDUM

TO FILE: FAP TFN 1 3/142, Gary Beach, Bill Kearney
FROM: Ed Francis *EF*
DATE: September 1, 1982
SUBJECT: Meeting between LQD and NRC.
PARTICIPANTS: LQD: Sundin, Shaffer, Francis, Beach, Kearney. NRC: Dale Smith,
Dan Gillen, Project Manager, J. Linehan, Roy Williams, Consultant,
WQD: Mancini.

I Move to Denver - Dale Smith

A. Function: Mills, In Situ, Inspection being initially supervised out of Texas. Then independent. Some stuff will stay in Washington D.C. - Policy, form of materials, interfacing outside, and coordinating of internal interfacing stays in D.C.

B. On October 1, 1982 will be at 730 Sims Street across from the Federal Center. Move occurs over a one year period. Inspection will stay in Dallas for a while. Our contact will be to Washington D.C. until notified. We will deal with the "Denver" group in Silver Springs, MD. We should call Linehan or Pettingill. 301-427-4103. Linehan handles all in-situ and some mills. Pettingill has rest of mills. Contact Dale for inspection needs.

II Federal American Partners

A. Linehan outlined discussion as to points to cover.

B. Francis gave history of In-Pit permitting.

C. Roy Williams justified mathematical modelling.

1. System of 3 aquifers modelled as worst cases.
 - a. perched zone - 80 - 100 years contaminant within cone of depression of dewatered pit area.
 - b. modelled mud stone at base of excavated pit. Bill Kearney disagreed that 10-7 cm/sec. vertical permeability is "worst case."
 - c. unconfined aquifer was modelled with 10-5 cm/sec. Re-checked at 10-4. Boundaries selected were constant-head from Plate 10 and Plate 8. K-1 backfill is assigned same as aquifer because the aquifer value is its highest possible value.
Cone of depression will still exist at 20 years. This explains the configuration of Plate 8. Nothing can escape until cone of depression is filled.
2. Worst case Chemical modelling.
 - a. Experiment showed direct relationship of pH and SO₄ for modeling with ignoring of absorption and dispersion being permissible.
 - b. Mapped SO₄ at two pH values.

20728

September 1, 1982

3. Summarization.

- a. Cone of depression delays pollution.
- b. Degradation will be Cl, SO₄, TDS: Not radioactive product. Buffering capacity is represented by pH value of 7, which means SO₄ will equal 4000 mg/l or less.
- c. Weakness of the exercise is the input material-were stream channels present in unconfined aquifer? Were interfingering sands missed?
- d. Kearney spoke of Union Carbide. Well PW4 shows pH going very acidic in the area of Union Carbide disposal in East Gas Hills.
- e. Drill Holes were discussed. It is felt that many drill holes could exist through the midstone, and that drill holes in the area upset the modelling assumptions.

D. Kearney led thru his thoughts.

1. Modelling is inherently unreliable.
2. The chemical modelling is theoretical only, not proven in field for Uranium.
3. Union Carbide has an impoundment down gradient as a possible development.
4. Concern for Willow Springs.
5. Concern for vertical permeability.
6. ?
7. Backfill could be rather economically achieved above water table without much loss of capacity.

E. LQD Summarization

1. Kearney - cost is negligible to backfill above water table. This alternative did not get modelled.
2. Beach - this proposal sets serious precedent for policy. Does a few feet of backfill offset enough economics for years of uncertain environmental consequence?
3. Regardless of modelling, the backfilling above water table is better.
4. Modelling is not mitigation.
5. Fox and Dames and Moore have not agreed on efficacy of lining. Dames and Moore are in favor of no liner and they are the present consultant.

F. Roy Williams

1. Re iterated that paleo-channels and sand stringers are the only significant risk.
2. Need to prevent slimes from covering drains, which is what is happening at Union Carbide.

G. Beach

1. Reminded that Feds must put up the money to mitigate if below grade alternative is chosen and degradation occurs. Linehan said that about \$250,000.00 would be escrowed. LQD noted this would not be adequate. Linehan said that a total fund is involved, and a particular project only furnishes \$250,000.00

Beach reiterated that the U.S. Government must stand responsible for whatever happens. Linehan said that priorities would determine whether or not a particular site would be mitigated. Priority means people affected - not environment in non-populated area.

H. Tailings No. 1

1. Kearney
 - a. It seeps.
 - b. It must be cleaned up.
2. Linehan agreed except that it can come at end of mining.
3. Final plan is contained in Draft E.S.

I Tailings Pond 2

1. Kearney - reclaim it NOW.
2. Linehan - they propose to line a part of it for an evaporation pond. NRC will review what ever is proposed when proposed.
3. Reclamation of Tailings Pond #2.
 - a. Problem with plan.
 1. Campsite Draw is not designed satisfactorily for long term stability. A fill is needed to achieve positive drainage in the "v" between the "village" and Pond #2.
 2. Rip - rap quality is a problem.
 3. 5:1 slopes need longer than 10 years for evaluation, therefore desire 10:1 slopes unless they use 5:1 with rip-rap. LQD can agree to this.
 4. Concerning the road in July 30, 1982 letter to Andrus from WCA, LQD is satisfied that it will be reclaimed upon final closure.