**Macaluso, Daria**

**From:** Primrose, Annette
**Sent:** Thursday, July 06, 2000 4:15 PM
**To:** 'CDPHE - Elizabeth Pottorff'
**Cc:** Castaneda, Norma; Surovchak, Scott; Butler, Lane; Lindsay, Thomas; Greengard, Tom; Singer, Stephen; 'CDPHE - Carl Spreng'; 'EPA Gary Kleeman'; 'CDPHE Steve Gunderson'; Macaluso, Daria
**Subject:** FW: Data summary for WWG meeting on June 13th

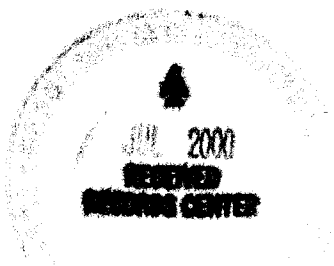
Elizabeth, thanks for your comments and help on the Water Working Group data summary. While some of these issues that you raised were discussed at the WWG meeting, following is additional information:

1) As you noted, and as discussed at the WWG meeting, it appears that we are losing water from the collection trench.
2) The downgradient water is apparently coming from the portion of the plume downgradient of the collection trench.
3) The correlation of the upgradient well with the data logger to the collection trench water levels as originally requested will be completed. No additional evaluations of water supply are expected at this time.
4) As you noted, water may need to be added to the treatment cell to keep the cell functioning if sufficient time passes where water does not flow into the cell.
5)SW flow at GS13 (handwritten on fax copy). George Squibb of the Surface Water group does not believe that the instruments are accurate enough to determine the minor changes in flow rates anticipated from the Solar Ponds Plume and does not recommend installation. No flow measurement installation is planned at this time.

In partial response to your other technical concerns.

- There are no piezometers installed in the fill around the treatment cell. The fill material was saturated during construction because of breaking the ITS line during excavation for the cell. While the area was pumped, the soil is expected to be saturated. There are wells installed downgradient of the system during construction.
- The geotechnical report does evaluate the impact of holding water in the collection trench. As stated in Section 7.1 Conclusions item 3 " As designed, standing water will accumulate in the interceptor trench in the vicinity of the treatment cell, allowing ground water to infiltrate into the soils, south (uphill side) of the trench. Saturation of the soils around the treatment cell could cause a reduction of the slope factor of safety by 24%, however, the resulting factor of safety of 2.7 indicates the slope should remain stable."
- The eastern end of the system was dry during excavation with the only moist soils seen around the pre-existing ITS lines. We inferred that the area was effectively drained by the ITS, and that the only water captured by the eastern section of the collection trench is derived from these ITS lines.
- The fault/fracture system is known to be in the area of the collection trench. However, discussions with Fred Grigsby including discussion of his fault studies, comparing available fault location data with field information from his work and the construction project did not enable the fault/fracture system to be located at the project area. Fred believes that a fault does occur somewhere in the vicinity, however, neither the detailed project photos or project personnel descriptions of the excavation indicate that the type of fracturing he has seen at other locations is found here. He believes that it is unlikely that the fault is the cause of the water loss.

-----Original Message-----
**From:** Elizabeth Pottorff [SMTP:etpottor@smtpgate.dphe.state.co.us]
**Sent:** Tuesday, June 13, 2000 10:25 AM
**To:** Annette.Primrose@rfets.gov
**Cc:** Carl Spreng; STEVE Gunderson




SW-B-000011

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**Subject:** Re: Data summary for WWG meeting on June 13th

Annette- I believe you have some hotbutton issues you need to approach differently. First, the design of the system was for the long term meeting of the 10 mg/l NO3 standard. We understand there is a residual plume that may cause difficulty in meeting 10 to start and that is what the 100 standard is all about.

Second, I would take out everybody else's nitrate loading data unless you really want to piss them off. They know what their numbers are and you can talk about it if the discussion comes around to it. But we suggest getting away from an agressive stance.

There are issues that are not on here that I think are important to discuss.
1) the water levels in the trench have declined, that means you are losing water.
2) If the plume is effectively contained where is the downgradient water coming from?
3) what is the status of your water supply evaluation?
4) The need to keep the treatment cell functioning may supercede the stream standard issue as far as installing a pump.

There are other issues of a technical nature that I would like to discuss in a more technical group.

Are there piezometers in the treatment system external fill to detect water that may pond in the excavation?

The Geotechnical evaluation for the treatment cell recommends keeping water out of contact with the formation. I don't believe this evaluation is transferable to an evaluation of the stability effects of keeping 12' of head in the collection trench and the wetting of the formation that is occuring. How was the requirement to hold water in the collection trench evaluated?

What is the significance of the Eastern end of the system being dry during excavation? Where does the fault/fracture system intersect the barrier?

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