MEMORANDUM

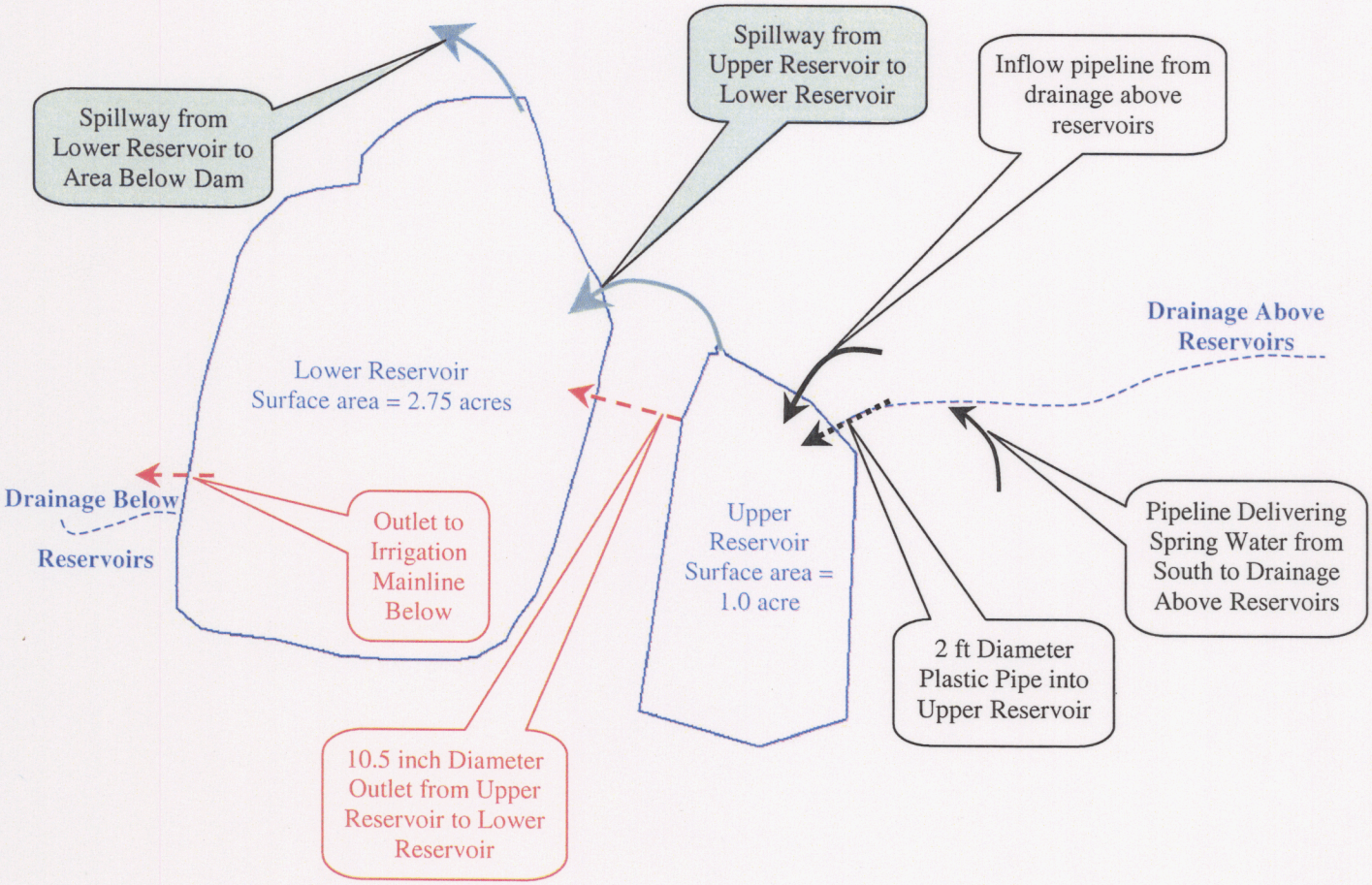
TO: KEF Dam File

FROM: Corey Skinner

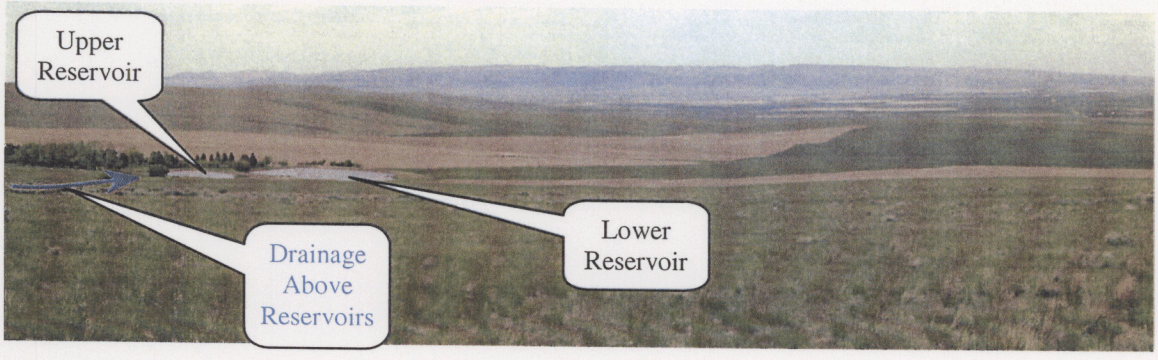
DATE: June 9, 2004

SUBJECT: Field Visit

On June ~~2nd~~ 3rd, Doug Jones and I visited the site of a water storage facility located southeast of Burley specifically within the NE ¼ of the SW ¼ of Section 35, Township 12 South, Range 23 East. The facility basically consisted of two embankments and reservoirs located along an unnamed drainage that drains off the west side of Mount Harrison. The following schematic shows the basic layout of the two reservoirs…



The two reservoirs are located on property owned by KEF Properties LLC. Water is diverted into the upper reservoir, and then flows, or is diverted into the lower reservoir where it is diverted for irrigation use on lands located below the two reservoirs. The upper reservoir and dam are relatively small with a reservoir surface area of one acre, an estimated hydraulic height of less than 10 feet, and an estimated storage capacity of three to four acre-feet. The lower reservoir is larger, with a reservoir surface area of 2.75 acres, a measured hydraulic height of 17.67 feet, and an estimated storage capacity of approximately 20 acre-feet (2.75 x 17.67 x 0.40). The development below the two reservoirs would be classified as "low hazard". The following photographs document my observations during the site visit…



ABOVE: Panoramic view of reservoirs and area below from hilltop to the northeast of reservoirs. Note little development located below the reservoirs.

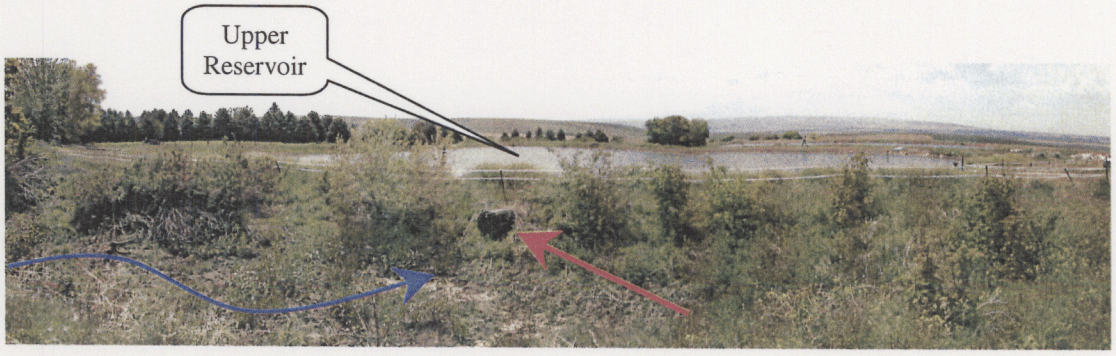
BELOW: Panoramic view of reservoirs from the north side of the reservoirs.



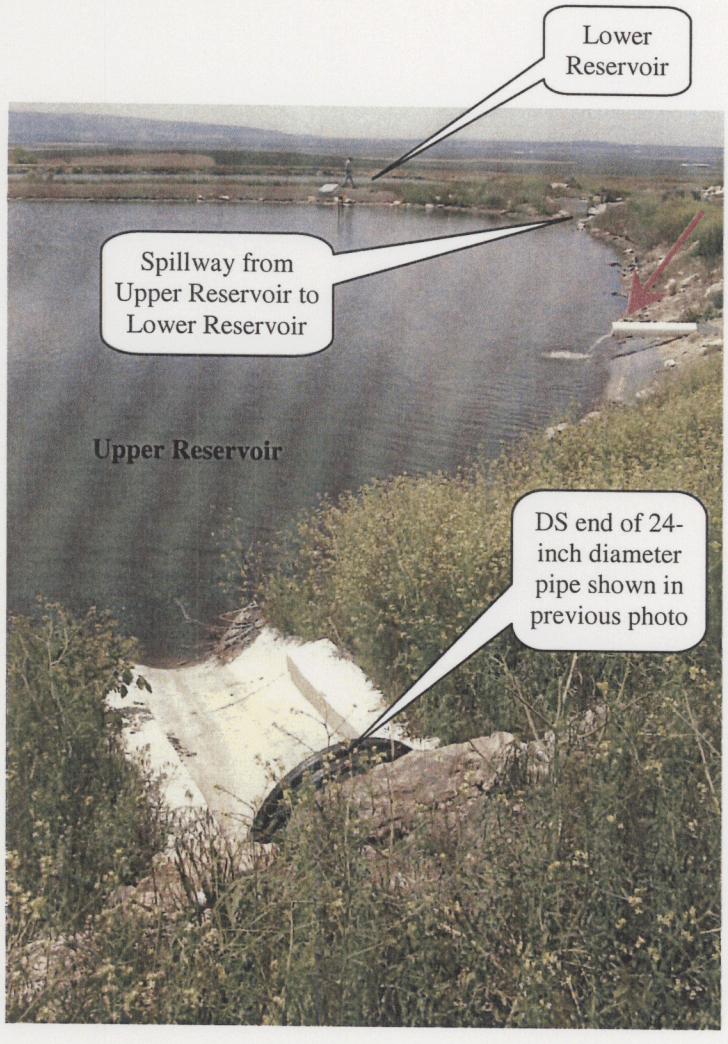


ABOVE: View looking across drainage channel just above the upper reservoir. The blue arrow indicates the direction of inflow into the upper reservoir. The red arrow indicates the approximate location of a 4-inch diameter plastic pipe that discharges into this channel from a pipeline that collects water from two stream sources, fed by springs, in other drainages that do not naturally flow into the two reservoirs.

BELOW: View just to the right of view above showing end of drainage channel just above the upper reservoir. The red arrow indicates the location of a 24-inch diameter pipe that conveys water from the drainage channel through a small embankment to the upper reservoir visible in the background of this view. Note that in order for water to enter the upper reservoir from this channel it will have to back up behind the small embankment to reach an elevation that will allow flow through the 24-inch diameter pipe.



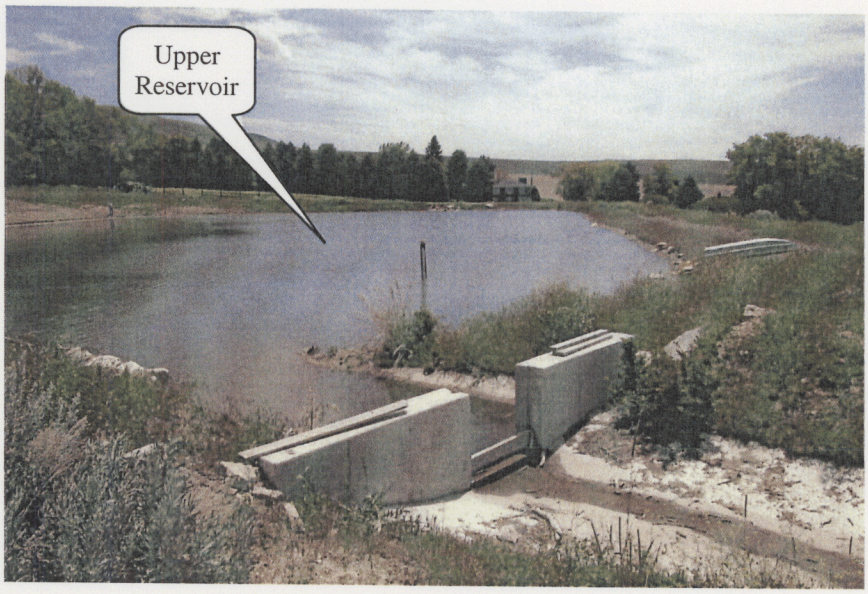
excess
runoff water
ditched around
reservoir



LEFT: View of downstream end of the 24-inch diameter pipe shown in previous photo and discharge into the upper reservoir. The red arrow indicates the downstream end of a pipeline that collects water from the drainage about ½ mile above the two reservoirs.

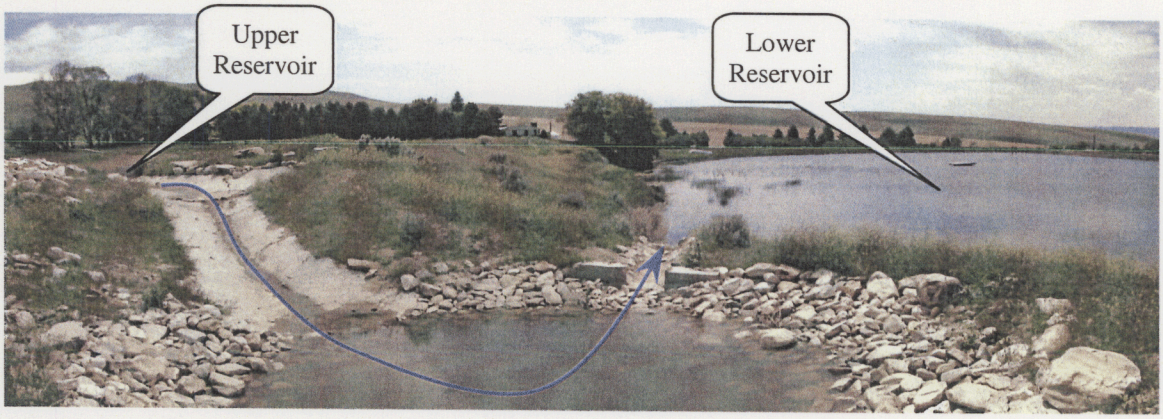
BELOW: View of the downstream end of the pipeline (indicated by red arrow) that collects water from the drainage about ½ mile above the two reservoirs. Note the exposed liner along the right edge of this view below the downstream end of the pipeline.





ABOVE: View of the spillway control section at the right (north) end of the upper dam and reservoir. The opening in the control section is a 2.5-foot x 2.5-foot square that can accommodate flashboards.

BELOW: View further down the spillway from the upper reservoir to the lower reservoir. The channel is lined with concrete and includes a rock-stilling basin shown in the foreground of this view.





LEFT: View of the downstream end of the outlet (indicated by red arrow) for the upper reservoir. The outlet consists of a 10.5-inch diameter plastic pipe with a downstream valve. The downstream end of the spillway (indicated by blue arrow) enters the lower reservoir in the foreground of this view. Note the downstream slope of the upper dam (average slope of 2.2 :1) is visible in this view. Also note lower reservoir level right at the toe of the upper dam.



ABOVE: View of upper reservoir from the east.

BELOW: View of the upper reservoir from the southwest corner of the upper dam. The length of the dam crest for this dam is about 400 feet, crest width is about 14 feet, and upstream slopes are approximately 3 : 1.

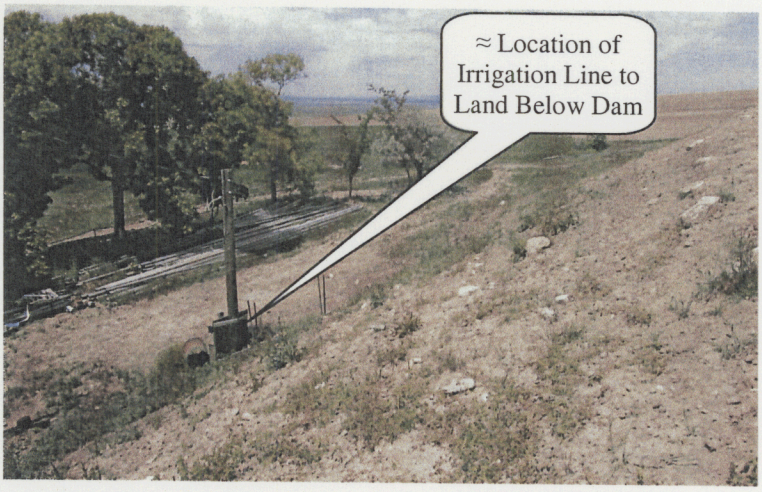




ABOVE: View of spillway entrance (indicated by arrow) for the lower reservoir located at the right (north) end of the lower dam. The spillway consists of a 2-foot diameter pipe that is buried and discharges to an open channel below the dam. Note that the concrete structure at the spillway entrance allows for the installation of flashboards in front of the spillway pipe entrance.

BELOW: View from the southwest corner of the lower dam looking across the lower reservoir. The arrow indicates the location of the spillway entrance at the right (north) end of the dam. The lower dam has a crest length of approximately 800 feet, a crest width of approximately 18 feet, and an upstream slope of 2.85 : 1.





LEFT: View looking down the downstream slope towards the outlet works at the toe of the lower dam. The outlet consists of a buried irrigation mainline to land below the dam.



ABOVE: View of the upper portion of the downstream slope of the lower dam. Note very little vegetation on the downstream slope in this area.

BELOW: View of the downstream slope at the southwest corner (maximum section) of the lower dam. The downstream slope in this area of the dam varied from 2.2 : 1 to 2.7 : 1.



During Doug's SRBA claim review of the property related to the two reservoirs, an opportunity to look over the drainage area above the two reservoirs was presented. As previously mentioned in this memo, some of the water that enters the reservoirs is routed to the reservoirs from drainages that do not directly drain into the reservoirs. After reviewing the water delivery system(s) to the reservoirs, the actual drainage area for the two reservoirs was estimated as being about 420 acres in size. However, note that water from additional drainages is also conveyed to the reservoirs via a four-inch pipeline (noted in page 3 of this memo). The following map provides further detail regarding the drainage area above the reservoirs and the sources of water for the reservoirs…

