

***The following questions were forwarded to us from the board.***

**---do we have a cost breakdown for 2 sites to support summary in 1/25/11 memo??which are firm?? soft??**

*Yes from the 2009 Alternative Study and Access Road Report. These are planning level costs based on recent projects and published cost guides.*

**--- what is duration of blasting 16,000 cu yds at A vs 4000 at C? estimated # detonations @each site??**

*This question can best be answered at the presentation by Gordon Revey*

**---what is relative depth of rock excavation at each site?**

*At Site A the depth of cut will be 15 to 20 feet with the depth increasing to 25 to 30 feet at southern end. At Site C the depth of cut will be generally 5 feet.*

**----where do we take spoils??**

*The spoils at Site A will be used to construct the berm.  
The spoils at Site C will be left on site, likely piled between the fence line and tank.*

**----are spoils at C useable for road construction??**

*Unknown at this time, it might be suitable for rip rap but not structural fill. The road will likely require some imported material.*

**---as to C, how serious are road construction costs/impacts on water and blasting for it RE: spillway??i.e. are there risks or impacts or costs that cannot be quantified and properly engineered??**

*Depending on the construction method used there would be an additional \$500,000 to \$1,000,000 added to the project for the access road. The excavation for the road at the northern end is much closer to the main dam abutment and spillway than the excavation at Site A. The Division of Safety of Dams has not formally commented on the project but Gordon Revey (Revey & Associates, blasting expert) and Stan Kline (AECOM, dam geotechnical expert) expect that they will be very concerned. There is a greater risk to disturb the reservoir during construction of the tank at Site C because of the closer proximity to the water for the road construction and longer length of travel over the main dam versus the saddle dam.*

**---is latter concern any greater than for small dam and our building proximity to site A??**

*No, restricting the peak particle velocity to 0.5 in /sec and implementing the other recommendations in the Blasting Evaluation Report makes the risks acceptable and safe.*

**---describe an alternative of building at A with say 4000 cy of blasting....what**

**would tank look like...is rock harder as we go deeper??**

*Assuming 4,000 cubic yards of excavation and a 170 foot diameter, the tank would sit up sustainably higher and be much more prominent. Additional pumping would be required because the floor of the tank would be higher than the floor of the finished water reservoir. The current design places the top of the tank at the same elevation as the top of the filtration plant building and the floor of the tank at the same elevation as the finished water reservoir. The hardness of the rock increases with depth because it is less weathered. However this is relative because except for the first foot the rock is not rippable.*

***The following questions were forwarded to us from the City***

**-were alternative sites explored and why were they rejected?**

*Yes six sites were considered two near Morrison Tank in Agoura Hills, two near Three Springs Park and two near the reservoir. The sites near Three Springs Park and in Agoura Hills were eliminated because they were either more costly, were very difficult to access for construction and operations, had greater visibility or did not provide the necessary hydraulics.*

**-Is a steel tank an option that could cut down the number of trips up and down our street (versus all the cement trucks)? Answer from Dan Ellison with AECOM**

Concrete vs. Steel:

*A 2005 study prepared by the City of San Diego determined that the life-cycle cost of a 5 MG concrete tank would be \$700,000 less than a steel tank. This study was based on the performance history of the 46 tanks in their system, including both steel and concrete. The cost savings is a combination of a lower initial cost and lower cost of maintenance (concrete tanks do not need to be coated or cathodically protected).*

*Because of the cost savings associated with concrete, we have not analyzed the number of material delivery trucks that would be required for a steel tank at this site, but it is safe to say that delivery trucks would also be fairly frequent for a steel tank. The floor of a steel tank requires a concrete ring foundation, oil sand, and steel plate—significantly more material than used in a concrete tank. And while the walls and roof of a steel tank require less material than a concrete tank, the material is preformed and fabricated off-site and is bulky to ship, so the number of truck trips would not be a small fraction of what concrete tanks require—the magnitude will be similar. The major advantage of steel would be that the deliveries can be staged, whereas concrete has to be delivered early in the morning sometimes. The major disadvantage of steel is that more of the trucks would be tractor-trailer rigs, which are difficult to maneuver.*

*In our experience, the numbers of truck trips for this tank should only be an issue when the floor and roof slabs are poured, when hundreds of yards of concrete are poured. The floor and roof pours should take only 4 days maximum, 1 to 2 days for the floor and 1 to 2 days for the roof. These events would be about 3 months apart. We recently completed a similar size tank in the North Hills area of Thousand Oaks,*

*where the trucks had to navigate narrow, winding streets to the top of a hill. The neighbors were very tolerant, as long as we communicated with them. On the 3 days when big pours occurred, work started very early in the morning, but we did not surprise anyone.*

**-How many trips are estimated per day over what length of time.**

*There will be a total of 250 concrete trucks over a 6-month period with the following schedule:*

*16 concrete trucks per day for 4 nonconsecutive days for floor construction, 6 concrete trucks per day for 11 nonconsecutive day for wall construction, 5 concrete trucks per day for 7 nonconsecutive days for column construction and 20 concrete trucks per day for 4 nonconsecutive days for roof construction. This is the worst case for the floor and roof; these pours might only take 2 days each. At the Harris Reservoir project (slightly smaller at 4 MG in Thousand Oaks, but with a much thicker floor slab), the finished floor took 2 days and the roof took one day to pour. Site work, such as grading, piping and paving is estimated to take an additional 6 months.*

**-Do we really need this and what exactly does it accomplish.**

*Yes, see Q & A paper*

**When I (Philippa Klessig) attended the homeowners meeting - the biggest concerns in addition to the above were:**

**Safety of kids when there are numerous trucks going back and forth daily.**

*Working with the City and Association a traffic control plan will be implemented to assure safety.*

**Noise and dust pollution**

*See Q & A paper.*

**Screening of the tank so it is not an eyesore.**

*See Q & A paper.*