



March 26, 2012

Ms. Heather Galan
Lake County Public Works
650 W. Winchester Road
Libertyville, Illinois 60048

RE: Water Well Closure and Abandonment Project

Dear Ms. Galan:

After further discussion during our recent meeting we are preparing the following options for the sealing of the Countryside Well No. 3. As previously mentioned this well was with a 7" liner that was not grouted to the surface. In accordance with Mr. Arnie Rapa request we have prepared two options to seal the well.

Option 1 – Removal of the 7" casing 155 feet below grade:

1. Seal the well from the bottom at 1040 up to a depth of about 160 feet in accordance with the Lake County Health Department plan.
2. Excavate around the casing to a depth of about 7 to 8 feet so the entire pitless adapter body can be removed exposing both the 7" liner and the 8" casing.
3. Weld 7" and 8" pipe onto the existing casings to bring them both above grade.
4. Backfill around casings so that a cable tool rig can be set up as close to the well as possible to operate the casing cutting tool.
5. Using a casing cutting tool, cut the casing off at a depth of 155 feet below grade.
6. With a set of bumping jars, bump and pull the 7" liner casing that has been cut off, out of the well. Depending on how much build up exists between the two casings this could take a few hours to several days to remove.
7. Once the liner is removed we will again commence with sealing process as required by the Lake County Health Department by placing neat cement grout to a point 3 feet below grade.
8. Excavate around the casing and remove the top 3 feet of 8" casing.

- Labor and equipment to excavate around pitless adapter, cut off and extend 7" and 8" casings. Backfill and compact around extended casings.....\$11,340.00
- Labor and equipment to run in cutting tool and cut casing.....\$9,490.00
- Labor and equipment to remove the 125 feet of cut off 7" liner casings.
Estimate 6 Hrs. @ \$345.00/Hr.....\$2,070.00
- Additional cost for "neat" cement grout versus the cement grout to fill the casing.
8 CY @ \$28.00/Cubic yard.....\$224.00

Total Change in costs Countryside Well.....\$23,124.00

Option II – Perforation of top 50 Feet of 7” liner:

1. Seal the well from the bottom at 1040 up to a depth of about 60 feet in accordance with the Lake County Health Department plan.
2. Using a casing perforation tool the casing will be perforated every 1 foot with a 3/16” x 4” long slit offset 90°.
3. Pump in neat cement grout from 50 feet to the 2 feet below grade.

- Labor and equipment to perforate 50 feet of 7” liner every 1 foot\$13,425.00
- Additional cost for “neat” cement grout versus the cement grout to fill the casing. 1 CY @ \$28.00/Cubic yard.....\$28.00

Total Change in costs Countryside Well.....\$13,453.00

If you have any questions please do not hesitate to contact us.

Very truly yours,
WATER WELL SOLUTIONS ILLINOIS DIVISION, LLC


Timothy L. Kelly
Vice President