

Tuesday January 12, 2016

Hosted by the DEC

1st floor conference room 555 Cordova St. Anchorage with teleconference

Attendees in Anchorage: Jeff Warner (DEC), Charley Palmer (DEC), Chris Miller (DEC), Rebecca Baril (DEC), Bill Kranich (WWC), Roy Robertson (DEC), Wayne Westberg (WWC), David Schade (DNR), Jim Munter (Hydrogeologist/Consultant), Angela Bolton (AWWU),

Attendees via teleconference line: John Craven (Public Water System Officer/Operator), Jacob Dilley (DEC), Pamela Goode (Private Citizen), James Squyres (Private Citizen), Dan Brotherton (WWC), Lee Ice (WWC), Chuck Ice (WWC),

Absent: Jeff Ellison (WWC), Ted Schacle (WWC), Craig Seime (WWC)

Meeting Minutes

Facilitator: Jeff Warner

Introduction

- Roll Call
- **Definitions:** Green highlights are changes made from the previously distributed version.
 - Charley: reviewed the changes made since the last meeting. The title was changed based on the suggestions from the last meeting.
 - Wayne: noted that there is a mixed use of singular and plural words that need to be changed.
 - Charley: Changes made on Annulus/Annular space. The documents use the words interchangeably, so the definition was made to include both. Removed well after flowing artesian in the flowing artesian definition.
 - Charley Added a definition for Hydraulic Head and Hydraulic Gradient.
 - Jim noted that the definition for hydraulic head did not quite correctly capture the meaning. And that hydraulic gradient wasn't quite right either. Jim volunteered to propose a new definition.
 - A definition for permeability was proposed by Angela Bolton.
 - The group agreed, but removed the end of the definition that included explanation of the equations. Ended definition after "pore space".
 - Wayne also proposed that "as fluid moves through it" should be removed.
 - Agreed
 - End of discussion on Definitions.
- **Decommissioning Document:** Green highlighting indicates changes from previous distribution of the document.
 - Charley: All changes up to 5.0.2 (B) Backfilling were suggestions from the last meeting and should not need to be reviewed.
 - Agreed.
 - Charley: 5.0.2 (B) Backfilling. These practices were created from the focus group put together from the last meeting.
 - Wayne: Disagreed that the practices in 5.0.2(B)(2) were feasible to be completed. The practice would be too expensive to be completed. He proposed

perforating the zones of the well, or assume that in shale or siltstone, that like bentonite, squeezes and seals communication between aquifers. His other suggestion was that it could be completed with liquid grout and a trash pump pressurizing from the top. He also added that perforating PVC from the bottom up will cause it to shatter.

- James Squyres asked whether the focus group for this practice included any well drillers.
 - Charley responded that it did, but there was not much input provided.
 - Jim also added that the focus group was a non-linear process that was not simple. They did not accept that this practice was the final product as they understood that there was work that needed to be done.
- Lee added that if we implement these kind of practices, clients will call when they need it done, hear the price, then never call back.
 - Dan added that he has had government jobs that weren't able to pay the money necessary to properly decommission a well.
- Chris added that there has to be some consideration as the intent is to replace current regulations with these practices.
- James: Since the Best Management Practices (BMP) has articulated a solution, maybe the workgroup needs to articulate problems that would define when to implement the practices. If we make the practices strict then we will develop an atmosphere of avoidance and noncompliance.
- Jim: We should try and focus on catching 90-95% of the problems and allow for regulators to enforce in special situations.
- Roy added that judging based on current situation doesn't always work as new situations and contaminated sites can arise and cause problems.
- Jim asked what the DEC wants as an ideal situation for the regulations
 - Chris responded that the DEC wants something that covers 90-95%, but also allows us to catch the high risk situations.
 - Roy added that he just has to make sure that we aren't creating something that recommends against activities that are protective to the aquifer.
- Wayne: What about perforating the upper part of the liner and performing a "squeeze job"?
- Charley: We could make a strong case for the "when" of these practices and not have to focus on the how, similar to what is written for artesian situations.
- Chris asked if it would be worthwhile separating the situations into public water systems or wells near a public water system?
 - James: That could be addressed in the "when".
 - Roy: That is an issue with the current regulations, with arbitrary distances. If you have a liner that has an annulus, you have a direct path into the aquifer. Leaving it unfilled is just as bad as leaving it abandoned without maintenance.
- Jim: The way the current regulation is written, we are only probably getting 1 or 2 or 5% properly decommissioned. If we write up a text that is simpler, it could catch up to 50%. It may promote people to do it themselves, and properly.
- Charley asked if there was a concern for migrating with liquid grout.
 - Wayne and other drillers responded that that is not a concern.

- James asked David Schade if there were regulations that allowed the State agencies to go to a residence if there is suspected contamination occurring
 - David responded that it's fuzzy and requires a lot of paperwork on DNR's end.
 - The group agreed to form a committee made up of Charley, Roy, Jim, Bill, David, Wayne, and any other well drillers interested to revise this section and come up with an agreeable solution to the problem.
 - Jim proposed sending the decided language out to Alaska Water Well Association (AWWA) for comments as well.
 - Agreed
 - Charley: Continuing on, is there any other comments on changes made (highlighted in green)?
 - Jim mentioned that the reference to Driscoll 2nd edition should be changed out and made as a reference to Sterrett 3rd edition.
 - Charley proposed an idea, to be performed on a later date, of developing a flow chart for the decommissioning and construction BMP's as a visual reference to understand the steps and processes.
- **Construction BMPs**
 - Charley removed "regulating authority" in 6.0 Part Q.
 - Charley removed "materials" and substituted "formations" in 6.0 Part E.
 - Wayne: In 7.0 Part F we set a minimum standard to constitute a well. We shouldn't do that as that can complicate the process for realtors and financiers.
 - Jacob added that he gets regular calls from realtors about regulations and yield requirements. He refers them to the lending institution and agrees we should be careful about what we include on these matters.
 - Wayne mentioned FHA/VA requirements.
 - Jim added that this has been around for a long time and the Municipality of Anchorage has a lot of headaches on this issue. It seems fine the way it currently is and suggested leaving it as such.
 - Agreed.
 - Charley commented that he had spoken with DEC's Wastewater Discharge group on the APDES requirements for aquifer testing, as there were questions about this at the last meeting. The contact at APDES said that the requirements are not intended for routine drinking water wells, but for water wells associated with mining and exploration.
 - Wayne: The wording tends to cause delays and problems when people are unsure of the intent.
 - Jim asked that Charley send ADPES Permit link to the group.
 - Charley asked if this document should touch on ground source heat pumps.
 - Wayne responded that on a national level, ground source heat pumps are a distinct and separate issue. He does not believe they have a place in this document.
 - David added that any of these pumps using water under 120 °C (not °F) fall under DNR's regulation.
 - *Melissa Hill clarified the DNR's jurisdiction after the meeting through email string, and it was requested to be added to the minutes:
 - *Chapter 41.06 GEOTHERMAL RESOURCES*

- *Sec. 41.06.005. Jurisdiction over geothermal resources. (a) The commission has jurisdiction under this chapter over geothermal wells to prevent waste, to protect correlative rights, and to ensure public safety.*
- *Sec. 41.06.060. Definitions. In this chapter, unless the context otherwise requires,*
 - *(1) "commercial use" means the sale of heat or power to a third party;*
 - *(2) "commission" means the Alaska Oil and Gas Conservation Commission created under AS 31.05.005;*
 - *(3) "correlative rights" means the right of an owner of each property in a geothermal system to produce without waste the owner's just and equitable share of the geothermal resources in the geothermal system; a just and reasonable share is an amount, so far as can be practically determined and so far as can be practically produced without waste, that is substantially in proportion to the quantity of recoverable geothermal resources under the owner's property relative to the total recoverable geothermal resources in the geothermal system;*
 - *(4) "geothermal fluid" means liquids and steam at temperatures greater than 120 degrees Celsius or any commercial use of liquids and steam naturally present in a geothermal system at temperatures less than 120 degrees Celsius;*
- James: When we send out for final signatures, we should still include the opportunities to provide comments with the signature.
 - Jeff suggested that we get a verbal vote count before sharing the draft with the Well Driller Association, then follow-up with formal votes, signatures, and explanations before finalizing BMP.

Wrap-up and next Meeting

- Dates for the next meeting were discussed. The AWWA well driller convention is in mid-February so would like to have final drafts available to discuss then. Suggest meeting again before then.
- Jim proposed that the BMPs be presented as a Resolution at AWWA and voted on by its members.
- The group agreed that the next meeting will be held **Tuesday January 26, 2016, 6:00pm – 8:00 pm.**

Action Items:

- Definitions
 - Jim to develop definition for “hydraulic head” and “hydraulic gradient”.
- Decommissioning BMPs
 - Focus group to determine best practice for filling the annular space and backfilling.
 - Change reference from Driscoll’s 2nd edition to Sterrett 3rd ed.
- Construction BMPs
 - Some minor editorial changes to be made.
- **Next Meeting is Tuesday January 26, 2015 6:00-8:00pm**