

WELL DRILLER REGISTRATION PROGRAM TECHNICAL ADVISORY COMMITTEE

MEETING MINUTES

TUESDAY, JULY 14, 2009 9:30-12:30
John Augustus Hall – West Boylston, MA

I. Attendees List

Committee chairs: Laurene Poland (DCR)/ Paul Blain (MassDEP)

- *Glen Ayers, FRCOG Regional Health Agent*
- *Richard Bonetti, Soil Exploration Corporation*
- *David Bragg, MassDEP*
- *Andrew Chapman, RE Chapman Company*
- *Tom Desmond, Desmond Well Drilling, Inc.*
- *Joe T. Dilk in for Joe Dilk, Jr., CT Valley Artesian Well Company*
- *Kevin Maher, Thermonexus*
- *Steve Nathan in for Steve Mabee, MA State Geology*
- *Brent Reagor, Concord Board of Health*
- *Marcia Sherman, MassDEP*
- *Roger Skillings, Skillings & Sons, Inc.*

II. Review of Well Reporting Forms

(Laurene) introduced drafts of the new Well Completion Reports

A. General Form

- (Kevin) said Section 11 on General Form doesn't require some codes (e.g. bentonite-graphite)
- (Kevin) suggested "Open-Loop only" be put on General Form under Section 12 Geothermal Info to avoid confusion with Geothermal Closed-Loops
 - (Laurene) explained Section 12 on the general form, Sampling for Open Loop:
 - Identify which well the water sample was taken from for geothermal open-loop installations
 - One report for each well, one water sample per site
 - (Roger) asked what the State is doing with the water quality information
 - (Steve N.) said geothermal information helps with geothermal maps across the state, shallow & deep mapping
 - (Laurene) explained the new Section 9 Water Bearing Zones; committee liked new format
 - (Laurene) asked if we should increase the reporting requirement in Section 5 Overburden Lithology which can be hundreds of feet in closed loop geothermal wells: should we keep current policy of documenting the lithology every 20 feet or increase it? She reminded the committee about space limitation on paper copies

- (Kevin) said 20' was good for geothermal, harder for drillers; (Tom D.) agreed about harder for drillers; committee agreed to keep 20' overburden reporting requirement
- (Laurene) asked when well driller receives UIC #'s, and confirm this should be requirement on the well completion report form
 - (Roger) said standing columns are the only issue, Closed Loop systems are easy
 - (Roger) said some drillers may not get UIC first
 - (Laurene) said online form will stop user without UIC#
 - (Roger) said drilling into brackish water would make the driller look unprofessional and is its own deterrent; UIC will give a number to a driller but a warning about brackish water
 - (Tom D.) said that clients often ask for water test first, then ask for drilling logs
 - (Kevin) said UIC should be entered by people who know what it means
 - (Laurene) asked if a model BOH well drilling permit form would be welcome by health agents and drillers where UIC #s are required in order to obtain a local permit
 - (Brent) said upcoming Health Officers Conference with time reserved for UIC program and well driller program would be a good time to present such an idea
 - BOH form would have to be in Word format for online accessibility
 - (Brent) would be glad to work on application with (Laurene)
- (Roger) said drillers are afraid of responsibility of water quality
 - (Paul) said needed to give more thought to who is responsible for obtaining UIC #s
 - (Roger) suggested town could refuse drilling without UIC; turn it into a permit issue

Action Item: Committee to review codes for filter pack/annular seal and advise Laurene on possible missing or additional codes

Action Item: (Laurene) asked committee for names of any towns that have good Board of Health permit applications

Action Item: (Steve N.) to ask (S. Mabee) about whether Extra Large Chips section, currently excluded, can replace # of fractures per foot section (not enough room for both on paper form)

B. Monitoring Well Form

- (Laurene) provided information on the average size lot of gas stations, individual business lots, strip malls, and highway service stations to finalize the definition of a "group" of wells; suggested that based on obtained information an acre would be her recommendation
 - (Roger) and (Kevin) suggested 100' radius, 200' diameter
 - Committee discussed, decided group size of 1 acre or 1 address was best
- (Laurene) asked when drillers and health agents get DEP 21E Site and Groundwater Discharge Numbers
 - (Kevin) and (Rich) said they never get DEP #s before drilling; (Brent) said they may only have transmittal #; (Paul) said he would check on when the discharge permit is issued; Committee agreed to make DEP #s optional on the report; (Rich) suggested coordinating with Licensed Site Professionals

C. Decommissioning Form

- Addendum forms for multiple GPS coordinates online for paper copy submissions; online, multiple GPS coordinate submission is built into the application
- (Glen) asked if there was a way to link decommissioned wells to original new well report; (Kevin) asked if possible to look up well info online to match reports; (Laurene) was apprehensive of this method, explained problem of guessing incorrect well
 - No good way of linking wells before, especially if separate drillers are dealing with same site
 - Suggested well tagging instead
- (Kevin) said all forms should state GPS datum/format to use (WGS84/degrees, decimal minutes); committee agreed

D. Online Well Completion Report Progress

- (Laurene) discussed online progress – pre-form is complete. Explained that the pre-form will be same for all submittals, with more specific info to follow
 - (Paul) said progress is a few months behind scheduled October 1 roll-out, January or February deadline more likely
 - (Laurene) is mapping logic with programmers, lead programmer should have a good idea of timeline in next couple weeks
 - (Paul) suggested a TAC meeting at DEP Worcester to test new application when available
- (Paul) and (Laurene) explained that gradual discontinuance of paper forms is needed; however, some companies don't have computers and will need time to adjust. The goal is for all well drillers to eventually submit electronically

III. Update on SearchWell

(Paul) explained SearchWell progress and components

A. SearchWell Update

- Currently evaluating SearchWell in-house
- Will have live performance next time – currently on DEP intranet, internet soon
- Primary search by Well ID, Town, or Driller
 - Advanced search by date range, well type, work performed; can export to Excel on last page, extra info; sort capability for all fields; able to enlarge and pan – can advance/back up using history buttons
 - Wells show up as blue dots
 - Clicking on dot gives basic info summary (GPS); full info within
 - Data layer – (Steve Mabee)'s wishes
 - Toggling streets/satellite, bedrock/surficial geology, Zen's bedrock geology layer will be used unless already mapped by Steve
 - Surficial geology is currently being mapped by USGS in blocks of 12 quads – A through C done ~ 36 quads complete; remainder of state (blocks D thru I) will be done within 3 years; can toggle town boundaries, well points

B. Bugs already identified / Functions still being worked on

- Can't yet pull up multiple well types simultaneously; why have "all" as option of well type or work performed if just town is selected?
- (Brent) asked about adding certain parameters to disallow users for searching for *all* wells, which would slow down or break the system
- Recommendation for larger Reset and Search buttons
- Suggestion for total number of results to be shown
- Working on messages if no results for search
 - (Brent) suggested similar message if results are too broad (e.g. 500+)
- (Laurene) suggested update tab on front page that lists which towns are have complete data
- (Joe) asked about GPS being off
 - (Laurene) explained that issue is being dealt with; reports can be filled out by a secretary, saved, then verified and approved by drillers
- (Paul) said that idea of pump installer licenses is being worked on
 - Regulations are slow, ETA of February/March
 - Everything else on agenda is being developed

Action Item: (Paul) asked for review and input from committee on SearchWell progress

IV. Two-Tier Certification

- (Dave) said next round of regulation revisions to take place over next two years
- Maine and Connecticut have 2-tier system, models to research
- (Marcia) asked committee if MA should go that way, as opposed to qualifying individuals
 - (Kevin) liked idea of 2-tier because:
 - Keeps liability in check, saves individuals who can't pay if problems come up on job
 - Fees should be equal, manageable
 - Firms should have to show proof of insurance
 - Drillers shouldn't get in trouble for being directed by the company to do something
 - Company should be responsible for giving driller all necessary permits & info
 - (Laurene) said it is ultimately the driller's responsibility to make sure he/she has all info/permits/Digsafe before breaking ground
 - (Marcia) confirmed that if homeowner sues for negligence, company is liable
 - (Roger) said putting some responsibility on drillers is good for owners too
 - Also used analogy of plumbers—Master owns company, Journeyman does the job
 - (Dave) asked what system works better, 2-tier or qualifying individual
 - (Roger) doesn't know, but said NH will eventually license individuals

V. Apprentice Certification / Requirements

A. Apprentice Certification

- (Laurene) said apprentice licensing would put apprentice on DEP’s radar; would document work history and make apprentice eligible for continuing education
 - Certified driller must be on site for setting of casing, setting of well seal, testing for well yield, etc., apprentice could be required to be on site for drilling; therefore, a certified well driller or apprentice is on site at all times
 - Proof of well drilling experience has been to provide copies of well completion reports, considering switching to hours on the job
 - Master Driller – General Exam & Special Exam (not just for Monitoring Drillers)
 - General Exam may be altered to the Massachusetts General Exam, which will ensure all drillers know rules, approximately 20 questions
 - Committee agreed with 1000 hours experience
 - (Tom D.) said HS diploma/GED requirement not a good idea
 - (Andy) said Maine has Apprentice and Journeyman categories
 - (Kevin) said Maine has 1-year requirement to get to Journeyman, 2 more years to become Master/full license
 - Journeyman in Maine has same responsibilities as Master in MA
 - Master should be a representative for the company, as in Maine.

B. Practical Exam

- (Laurene) asked if a Practical Exam was a good idea, in addition to written exams
 - (Brent) said it would be good if a registered Master driller were the one watching/certifying the practical
 - (Roger) said a Practical would help for people bad at taking tests but good on a rig; suggested that if the well driller couldn’t pass the test but passed the practical, perhaps he/she could still become certified
 - (Kevin) said the inverse was true too, practical could be used to catch bad habits/safety issues
 - What % of the total score would the practical exam be?

VI. Continuing Education

- (Laurene) asked about requirements – 4 hours per year, or 10 credits every 3 years if certification requirement changed to a 3-year cycle
 - (Rich) said 4 hours is only half a day; requirements depend on what the state is looking for
 - (Brent) said certification is the issue – boards, CMR, can complicate the issue – topic areas (5 areas?)
 - (Kevin) suggested DEP/Mass. classes, offered 2-3 times a year, catch everyone, different locations – something that offers a certificate that can be turned in is good
 - Committee agreed 4 hours per year is good
 - (Roger) said that a “well driller” has a broad range of things to learn; pump installers should be a part of this, too
 - (Kevin) said pump installers offer a lot of danger, being the last ones to touch a well
 - (Laurene) agreed, since there’s currently no license for them
 - (Rich) said CPR may be a good requirement

- (Andy) asked what would happen if classes were rotated on a three-year circuit and a new driller missed that year's class – Dept. would assure that sufficient number of classes would be offered to allow drillers to fulfill requirements

VII. Hoisting License as a Prerequisite

- (Laurene) asked if hoisting license were required on application, how long of a grace period would be required so all drillers would have opportunity to get licensed
 - (Kevin) said DPS is right, hoisting license is good
 - (Tom D.) said Massachusetts Ground Water Association offers free course
 - (Paul) said DEP is looking into better coordination with DPS

Action Item – We will contact DPS to commence discussion on resolution of well driller certification/hoisting license issue

VIII. Certification Categories (e.g. direct push)

- (Laurene) asked if different certification categories should be considered, besides Master Driller and Monitoring Driller
 - Direct Push?
 - (Kevin) said irrigation is just another type of well, direct push or not
 - (Laurene) asked if they need to know things like cable tooling
 - (Kevin) said people using direct push should still need to know everything
 - Geothermal? – committee doesn't like this as a separate category
 - (Roger) said that New Hampshire has problems about this, certificates for each different rig/well type
 - Committee agreed additional categories should not be added
 - (Brent) said it gets complicated with multiple licenses

IX. Standardization of Well Yield Determination

- (Paul) asked how to develop a consistent requirement for well yield – asked committee to review handout and respond
 - (Kevin) asked what the purpose/goal was – there are different levels of effort, tiers (e.g. 5gpm versus 300gpm well); (Kevin) and (Roger) agreed, smaller domestic wells are the key issue
 - (Laurene) said that consistency and standards are the goal
 - As it is now, well driller is responsible for providing well test data, including method used for test, pump time, drawdown, recovery
 - Pump info from pump installer is fine, but should be on record who did it
 - (Laurene) said/asked if air lift is good until 30gpm
 - What happens if less than 5gpm?
 - (Roger) said there's still a question of accuracy with pump or air lift
 - Air lift, if properly done, is probably most accurate
 - Pump depends on tester for accuracy
 - Minimum 30 minutes for air lift; will know up front if there's an issue with the well

- (Glen) said there's definitely an issue when the town requires 3gpm but the well only produces $\frac{1}{4}$ gpm
 - (Roger) said some towns have 8-hour tests
 - (Brent) said 4-hour time comes from model BOH (5gpm); (Roger) agreed they require 5gpm for 4 hours
- (Paul) concluded that a standard was needed for those wells not subject to DEP Drinking Water requirements
- (Steve N.) asked if there were any way to tell temperature at the top and bottom of the well
 - (Kevin) said a temperature log is really involved, difficult
 - (Roger) said you can only test for overall temperature; water temperature is measured as it comes out, so temperature likely changes as it moves up the well

Action Item – **Start drafting well yield requirements for discussion at next advisory committee meeting**

Meeting adjourned at 12:40pm