



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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*NJ STATE WELL DRILLERS AND PUMP INSTALLERS
EXAMINING AND ADVISORY BOARD*

New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for November 24, 2015

Approved by the Board on January 14, 2016

Board Members Present: Art Becker (Chairman), Gordon Craig, Joe Yost, Joe Pepe, Richard Dalton and Steve Doughty (arrived @ 9:52am).

Board Members Absent: Gary Poppe (Vice-Chairman), and Carol Graff.

Board Legal Representative: Jill Denyes, Deputy Attorney General (DAG), NJ Division of Law (present from 10:27 am until the conclusion of the meeting)

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski, Pat Bono, Steve Reya, Julia Altieri, Michael Schumacher and Melia Stoop. Mark Ortega and Jeremy Wick were present from 10:20 am until the conclusion of the meeting.

New Jersey Geologic & Water Survey (NJGWS) Staff: Jeff L. Hoffman, NJ State Geologist, Steve Johnson and Yelena Stroiteleva.

Other NJ DEP Member Present: Christofer Kaufhold of Water Compliance and Enforcement-Central Region

Members Of The Public: Ben Primost, Master Well Driller (Pickwick Well Drilling), Henry Robbins and his son John Robbins, Master Well Drillers (Robbins Water Service- both arrive at 9:43 am), Chris Mayer, Master Well Driller (Able Environmental, Inc. arrived at 11:41am)

1. Call to Order –

The meeting was called to order by Chairman A. Becker at 9:35 am, with a quorum present.

2. Review and Certification of the Minutes for the September 17, 2015 Meeting –

A motion to approve the minutes without change was made by J. Yost, seconded by R. Dalton and approved unanimously.

3. Review and Certification of the minutes for the Conference Call held on October 29, 2015-

A motion to approve the minutes without change was made by G. Craig, seconded by R. Dalton and approved unanimously.

4. Review and Certification of Exam Applicants for the December 9, 2015 Master Well Driller, Journeyman, Journeyman B, Monitoring Well Driller, Soil Borer and Pump Installers Exams –

Master Well Driller– A motion to approve the sole listed exam applicant was made by J. Yost, seconded by G. Craig and approved unanimously.

Journeyman - A motion to approve all listed exam applicants was made by G. Craig, seconded by J. Yost and approved unanimously.

Journeyman B – A motion to approve all listed exam applicants was made by J. Yost, seconded by R. Dalton and approved unanimously.

Monitoring – A motion to approve all listed exam applicants was made by G. Craig, seconded by J. Yost and approved unanimously.

Soil Borer – A motion to approve all listed exam applicants, including Mr. Wesley Rivett, was made by R. Dalton, seconded by G. Craig and approved unanimously.

Pump Installer – A motion to approve all listed exam applicants was made by J. Yost, seconded by G. Craig and approved by all present with the exception of J. Pepe who abstained.

Dewatering –A motion to approve the sole listed exam applicant was made by J. Yost, seconded by R. Dalton and approved unanimously.

5. The Testing Schedule for 2016 was announced as follows:

April 6 June 8 October 5 December 7

6. Established the 2016 meeting calendar

After some discussion, the Board Members selected the following dates to meet in 2016:

January 14 March 17 May 26 July 21 September 15 November 22

Additionally, the Board scheduled two conference calls to approve Exam Applicants, which will be held on **April 28** and **October 27**. In accordance with NJ Open Meetings Act requirements, the schedule will be publically noticed on behalf of the Board and a meeting room reserved accordingly.

7. Ethics Training for Board Members-

At the Board's September meeting, J. Denyes advised that all members are required to complete an online Ethics Training course to serve on a NJ State Board. This training must be retaken every three (3) years. Following the September meeting, a link to the training module and further information about the training was sent to Board members by P. Bono. All of the members present confirmed that they have taken the training course. The absent board members will be reminded to complete the online course.

8. Enforcement and Field Work Activities –

A summary of Well Permitting Program's recent (past 9 weeks) enforcement and field activities was presented by Julia Altieri.

- A) **Oversight of a Well Decommissioning & Redrilling:** Well permitting staff witnessed the successful alternative decommissioning and reconstruction of an improperly constructed well in Berkeley Twp., Ocean County. The well was constructed in violation of two (2) permit conditions that required the driller to install the well with both an outer casing and utilize saltwater resistant (cement based) grout material for the outer casing. The decommissioning event and successful reconstruction took place on October 13, and 14, 2015. The new well is now in compliance with the construction condition for double casing and salt resistant grout.
- B) **Field work:** Well Permitting Section staff performed four (4) field inspections the past nine (9) weeks. Field work included site inspections of a new public supply well, well decommissioning/reconstruction oversight and verification of recently resolved licensing-related Notice of Non-Compliance (NONC).
- C) **Resolution of Outstanding Enforcement Case:** The Department's Northern Bureau of Water Compliance and Enforcement sent a letter, dated September 22, 2015, to the Estate of Glenn Slater formally rescinding the October 11, 2011 notice of civil administrative penalty assessment issued to Slater Well Drilling. Mr. Slater passed away on July 10, 2015.
- D) **Coordination with DEP's Enforcement Program:** Work continues with efforts to further the integration of the well permitting enforcement program into the Department's computer system, NJEMS. Well regulation checklists have been successfully loaded into NJEMS. Well Permitting and Central Region Enforcement staffs are currently developing standardized section form letters and procedures to be used moving forward and are in the testing and development stage of the process. Remaining work is expected to be completed by the end of the year. J. Altieri stated that the progress thus far has been thanks to the efforts of Water Compliance Enforcement staff member Christofer Kaufhold and Michael Schumacher of Well Permitting who have assisted with this initiative.

9. Drought Status Update-

S. Doughty noted that since his drought status update at the Board's September meeting, the state has received some much needed precipitation that has alleviated the primary drought concerns. While this is certainly good news for the state's water resources, he cautioned that other drought indicators, such as stream flows, groundwater and reservoir water levels do not immediately recover once precipitation increases. Department staff continues to monitor these indicators and a drought watch still remains in effect for three (3) water supply regions. The recent rainfall has been sporadic and not yet plentiful enough to fully curtail concerns.

10. Update on Colts Neck Ground Water Levels-

Jeff Hoffman, State Geologist, followed up on concerns raised previously by G. Poppe regarding dropping water levels in the Englishtown aquifer in the Colts Neck area of Monmouth County. He and T. Pilawski have been working with Water Allocation staff to identify wells that should be targeted for quarterly water level monitoring. Certain wells screened in the affected aquifer were identified by Division staff for monitoring. J. Hoffman will arrange for staff to contract the services of the United States Geologic Survey

(USGS) to monitor water levels in these wells. As previously reported, several well drillers who frequently drill new wells in this area along with the Colts Neck Health Department staff are aware that water levels in this area seem to have lowered drastically.

Mr. Ben Primost, Master Well Driller from Pickwick Well Drilling, stated his own concerns from working in the area. Specifically, he noticed that the static water levels have dropped as much as 70 feet in the last few years. He added that he believes the formation exhibits extreme seasonal fluctuations due to irrigation uses for both golf courses and residential properties with large lawns and landscaping water usage needs. Although he has noticed some seasonal recovery in winter months, he noted that overall; the water level appears noticeably lower in the last few years. J. Hoffman said that confirming that the problem exists via monitoring may be the easy part of the problem; the more difficult problem will be finding a solution to mitigate the drop in water level.

11. Program Updates (Pat Bono, Section Chief, Bureau of Water Allocation and Well Permitting) –

P. Bono reported that Bureau staff just completed the process of entering all “antique files” (well construction documentation for wells installed pre-1947) into NJEMS. The antique well record project took several months to complete and ended mid-November, ahead of schedule. This project represents the completion of data managing every known paper permit and well record, spanning from the late 1800s to current time. All information is now searchable within the Department’s NJEMS system.

Well Rules Update (Terry Pilawki, Water Allocation and Well Permitting Bureau Chief)-

T. Pilawski has assigned P. Bono and S. Reya to revisit the well rule draft that was written several years ago and revise it as necessary. She has been also been working with the Assistant Commissioner’s office to prioritize rules within the Division and coordinate an expeditious review of the well regulations (N.J.A.C. 7:9D) with the Department’s Legal Affairs staff. A. Becker suggested that staff pay particular attention to the sections pertaining to Board procedures, hearing procedures and license revocation, as he felt that lessons learned from recent enforcement cases may necessitate altering these sections.

12. Presentation: Recent Investigations on the Extent of Salt Water Intrusion in Cape May County, NJ by Steve Johnson and Yelena Stroiteleva from NJGWS –

Steve Johnson and Yelena Stroiteleva from NJGWS presented an overview of study on saltwater intrusion affecting Cape May County. They covered the known areas of saltwater intrusion in multiple aquifers used for potable water supply in Cape May. Additionally, the presentation demonstrated how downhole geophysical logging can be used to approximate the salinity of water bearing zones before a well has even been set. This realization came as a result of NJGWS staff observing the installation of new monitoring wells in the area. He believed this discovery can assist future well designers in determining where best to set a well screen in potential saltwater environments. He also explained that the logging geophysical borings could be used to determine the extent of the saltwater intrusion front in each aquifer in lieu of installing a (more expensive) monitoring well. Studying the extent of salt water intrusion is critical to the preservation and development of potable water resources in Cape May County. Y. Stroiteleva will continue to research the saltwater intrusion and water quality issues in Cape May County after the upcoming retirement of S. Johnson at the end of this year. All present thanked S. Johnson for his work on this important issue throughout the years and wished him well in his upcoming retirement.

13. Installation of Closed Loop Geothermal Wells into the Clay Layer above the 800-Ft Sands Aquifer-

Closed loop geothermal wells installed in areas of known saltwater intrusion have recently become a concern to the Division of Water Supply and Geoscience. P. Bono summarized how geothermal wells drilled to depths of approximately 400 ft. on New Jersey's barrier islands potentially pose a risk to the 800 ft. sands aquifer because the borehole in which the geothermal "loop" is installed often penetrates into the confining unit that overlays this prolific potable aquifer. Since the concern has been to protect the integrity of the aquitard above the aquifer, Bureau staff has worked with various well drillers to limit the target depth of the boreholes. In at least one case, the Bureau has also required saltwater resistant (cement based) grout material to seal the annulus of certain wells when the proposed depth of the borehole was anticipated to penetrate significantly into the confining unit. Although public community supply wells and monitoring/observation wells have been set into the 800 ft. sands aquifer, these wells are often double-cased to seal off the upper saltwater formations from the lower freshwater formation. Closed loop geothermal wells in this area do not have any true well casing, only a polyethylene "loop" and grout material to allow for the transfer of heat.

Henry and John Robbins from Robbins Water Service both noted that the Department has not issued a permit for one of their closed loop geothermal permit submissions for over a month as they work to better develop a policy on this issue. Mr. Henry Robbins suggested that if the Department is concerned with penetrating the entire confining unit, perhaps the Department could take the best known estimated depth to the bottom of the confining unit, add a certain safety factor and include this limitation (maximum allowable depth the contractor is allowed to drill) as a permit condition. However, he, John Robbins, Chris Mayer (from Able Environmental), Ben Primost (from Pickwick Well Drilling) and G. Craig, all expressed confidence that proper placement of today's geothermal grout products allow for fully grouting the borehole. The grout would be a sufficient and effective seal against saltwater contamination migrating from one aquifer to another. All of these drillers felt that the Department's rigid grouting requirements create a safeguard preventing vertical migration so it is unnecessary to limit the depth of the boreholes and restrict the depth of the boreholes within the clay layer above this aquifer.

R. Dalton raised concerns about the need to for the Bureau to look into taking the same steps to protect the integrity of other confining units above potable aquifers, such as the one that overlays the Potomac-Raritan-Magothy (PRM) aquifer in northern Ocean and Monmouth Counties. Division staff will work together to develop a comprehensive policy to address these issues, rather than trying to continue to handle these permits on a case by case basis. The drillers present agreed that having a policy would be very helpful to them as they designed the wells and submitted permits.

14. Adjournment- A motion to adjourn was made by S. Doughty at 12:33 pm. The motion was seconded by G. Craig and approved unanimously.