



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

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DIVISION OF WATER SUPPLY AND GEOSCIENCE
NEW JERSEY GEOLOGICAL AND WATER SURVEY ELEMENT
BUREAU OF WATER ALLOCATION AND WELL PERMITTING
401 E. STATE STREET – P.O. BOX 420
TRENTON, NEW JERSEY 08625-0420
TELEPHONE: (609) 984-6831
FAX: (609) 633-1231
www.nj.gov/dep/watersupply

New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for January 26, 2017

Approved by the Board on March 16, 2017

Board Member Attendance:

Present

Art Becker (Chairman)
Gary Poppe (Vice-Chairman)
Gordon Craig
Joe Yost
Joe Pepe
Richard Dalton
Carol Graff

Absent

NJDEP representative position vacant
NJDEP representative position vacant

Board Legal Representative: Jill Denyes, Deputy Attorney General (DAG), NJ Division of Law (present at the meeting from the opening until 11:30 am)

NJDEP, Geologic and Water Survey: Steve Domber

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski, Pat Bono, Julia Altieri, Steve Reya, Michael Schumacher, Mark Ortega, Jeremy Wick, Steve Kelly and Melia Stoop

NJDEP, Water Compliance & Enforcement: Bryan Barrett

NJDEP Division of Water Supply & Geoscience, Office of the Director: Katrina Angarone (present from approximately 10-10:20 am)

Members of the Public Present: Denis Crayon, New Jersey Ground Water Association (NJGWA) President and Summit Drilling representative

1. Call to Order-

The meeting was called to order by Chairman Art Becker at 9:48 am with a quorum present.

2. Introductions- Steve Domber, who works in the Department's Geologic and Water Survey, introduced himself to Board members and provided some background on his experience with the Department. He has primarily focused on water supply issues throughout his career. Mr. Domber is extensively involved in drought monitoring and management practices. Department staff is recommending to the Commissioner's office that S. Domber will be appointed to the Board to serve in place of Steve Doughty who has recently retired.

3. Review and Certification of the Minutes for the November 22, 2016 Meeting –

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

4. Review and Certification of the Minutes for the October 27, 2016 Conference Call –

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

5. Review and Certification of Well Driller and Exam Scores for the December 7, 2016 Master, Journeyman, Journeyman B, Monitoring Well Driller, Soil Borer and Pump Installers License Categories –

Master– A motion to approve one (1) listed license exam score was made by G. Poppe, seconded by Gordon Craig and approved unanimously. The applicant did not pass the exam.

Journeyman- A motion to approve three (3) listed license exam scores was made by G. Craig, seconded by J. Yost and approved unanimously. No applicants passed the exam.

Journeyman B- A motion to approve two (2) listed license exam scores was made by R. Dalton, seconded by Gordon Craig and approved unanimously. No applicants passed the exam.

Monitoring– A motion to approve thirteen (13) listed license exam scores was made by G. Poppe, seconded by C. Graff and approved unanimously. Five (5) individuals passed the exam and are now eligible for licensure.

Soil Borer– A motion to approve three (3) listed license exam scores was made by G. Craig, seconded by C. Graff and approved unanimously. All three (3) individuals passed the exam and are now eligible for licensure.

Pump Installer – A motion to approve seven (7) of the listed license exam scores was made by R. Dalton, seconded by J. Yost, and approved by all members with the exception of J. Pepe who abstained. One (1) individual passed the exam and is now eligible for licensure.

6. Well Rule Update by Katrina Angarone-

Katrina Angarone from NJDEP Division of Water Supply & Geoscience, Office of the Director, informed the Board that the proposal to update the well rules N.J.A.C. 7:9D has been sent to the Governor's office. She and other Division staff recently met with representatives of the Governor's Office to brief them on the rule and said the concepts of the proposed revisions were well received by those present. She thanked Bureau staff for their recent assistance in editing and revising the recent draft and added that Board legal counsel, Jill Denyes, Deputy Attorney General (DAG), NJ Division of Law, and one of her colleagues were of great value in reviewing the draft and providing their input before the document was presented to the Governor's office.

7. 2017 Board Meetings and Conference Call Dates-

Board members were reminded that 2017 meetings are scheduled for the following dates:

- January 26, March 16, May 25, July 20, September 21 and November 21
- Two (2) conference calls will be held to review/approve the April and October Exam scores. The conference calls will take place on April 27, 2017 and October 26, 2017.

Licensing Exam Dates for 2017 are: April 6, June 7, October 4 and December 6.

8. GeoPro Power TECx Geothermal Grout Thermal Enhancement Compound–

Following the Board's motion that recommended approval of the product at the November meeting, an approval letter signed by Terry Pilawski, was sent on January 3, 2017, a copy of which was provided to Board members. The letter approved seven (7) variations of geothermal grout mixtures manufactured by Geo Pro, Inc. PowerTECx mixed with Thermal Grout (TG) Lite or TG Select at multiple conductivity (Btu/hr ft°F) values (0.79, 0.88, 1.00, 1.07, 1.14, 1.20 and 1.40) were approved for use in NJ.

An Additional product briefly discussed at the November meeting was CG Plus, another geothermal grout from Geo Pro, Inc. Concerns were raised by Board members that the bentonite-to-cement ratio would result in the failure of the cement to properly cure, which would potentially leach in such a way as to raise the pH of the surrounding groundwater. At the November meeting, G. Craig volunteered to mix up a sample in accordance with the manufacture's

specifications for Board members to inspect. A second question raised in the November meeting was whether this product would be appropriate to use in consolidated formations. The well rules only permit a cement-based grout to be used in rock formations due to concerns over bentonite grouts washing out over time. To date, the only mix approved in the regulations is considered by many drillers to be impractical to mix and pump in the field. Hence, there is strong interest in finding another type of geothermal grout for use in rock formations. G. Craig did bring a sample to the January meeting and members commented that, although the sample was firmer than bentonite, it was still somewhat moldable.

In order to address the concerns regarding the effect of this grout on groundwater pH, G. Craig again volunteered to submerge a cured sample in distilled water for periodic monitoring of pH. The results will be made available to the May Board meeting.

9. Drought Update by Steve Domber-

Rainfall, stream flows, shallow ground water and reservoir levels have improved slightly over the last 30 to 60 days and overall water supply conditions have responded positively. However, conditions have not improved to the point where the department is considering changing the current warning/watch conditions across the state. Reservoir levels are still below long-term averages for this time of year and groundwater levels across the state in the drought network are in the “severely dry” category. The conditions present in late spring, at the start of the summer demand period, will be critical information the department will use to guide its actions in the following months. Ideally conditions will return to normal before then.

A Drought Watch was issued on July 25, 2016, for 12 northern NJ counties. The persistent dry weather resulted in the next level of response, a Drought Warning designation for the 12 counties already under Watch as well as Monmouth and Ocean counties, being made on October 22, 2016. A Drought Warning is a non-emergency, supply-side response by the NJDEP to preserve and balance existing water supplies within affected regions. Drought Warning Administrative Order 2016-10 (AO 2016-10) issued by Commissioner Martin directed modified stream passing flows, water transfers, and other related measures. The objective under a Warning is to avert or lessen the impact of an impending water emergency by balancing supplies between systems/regions.

10. Horizontal Directional Drilling (HDD) by Richard Dalton-

In response to the discussion initiated at the November meeting, R. Dalton presented more information on horizontal directional drilling (HDD) projects that have been performed in NJ along with several proposed HDD projects he has recently reviewed. He reiterated how the intent of the Subsurface and Percolating Waters Act (N.J.S.A. 58:4A) is to protect groundwater and the fact that HDD is essentially unregulated by the Department inconsistent with this mission,

especially considering that HDD drilling technology has advanced to the point where boreholes are drilled up to five (5) ft. in diameter and can be thousands of feet in length and hundreds of feet in depth. As suggested at the November meeting, a strategy to address failed installations that result in abandoned boreholes, was explored as those pose the most serious and imminent threat to both groundwater and public safety. The Board's legal advisor, DAG J. Denyes, found no specific mention of drilling for oil/gas/utility lines in the above referenced statute and could not locate any written interpretation of whether or not such activity would fall within the jurisdictional authority prescribed by the statute. She also noted that federal law and federal entities, such as FERC, regulate such activities, so the Board would need to be mindful that the state well drilling laws would not supersede any federal laws.

T. Pilawski suggested developing guidance on how to address abandoned boreholes created during HDD drilling. Such guidance could be provided to the Department's Office of Permit Coordination and could include a checklist stating that all HDD projects under review are required to contain an abandoned borehole plan as a contingency plan for situations when a HDD contractor is unable to install the pipe or the utility fails to complete the project as proposed.

G. Poppe made a motion that the Division of Water Supply and Geoscience develop guidance for the Office of Permit Coordination to address the issue of abandoned boreholes drilled for pipelines and utility line projects. The guidance should address the gravity of the situation as a threat to groundwater resources and specify under what conditions the borehole presents a concern. The motion was seconded by G. Craig and approved unanimously.

11. Program Updates from the Well Permitting Section-Training Outreach:

- **Online training outreach is available from Gould's Pumps free of charge.** P. Bono mentioned that a representative from Xylem had contacted her regarding their online training initiatives. J. Pepe, who is familiar with Gould's and other online training available from a

variety of other pump manufacturers, suggested that the well permitting staff inform applicants for NJ license exams that this training is available and would be beneficial as part of their test preparations. Denis Crayon agreed that this would be very beneficial but pointed out that there are some aspects that would not be in agreement with the NJ well rules.

- **Data Management of Antique wells now complete** – P. Bono announced that all the paper Antique Well Files are now in the well data base system. The wells, about 6900 in total, pre-date the 1947 statute requiring permits and go back as far as the late 1800s.

- At this point, it was noted that J. Denyes left the meeting at 11:30 am to attend another meeting.
- **New Procedures for Resolving Lost and Destroyed Wells** -M. Ortega presented a summary of the coordination efforts by the Division of Water Supply, Site Remediation program and the Enforcement Bureaus on how to resolve discrepancies and problems that arise from the reporting of lost and destroyed wells via a variety of Department programs. New internal procedures have been developed and a guidance document has been drafted for use by LSRPs, well drillers and others as to what level of effort must be expended before requesting that a well be declared “lost” or “destroyed” and its status noted as such in the database. T. Pilawski agreed with the Board suggestion to provide a copy of the guidance to the Department’s LSRP Board in hopes that they will decimate this document to their members.
- **Summary of Enforcement & Field Activities**- T. Pilawski presented an update on a current situation in Gloucester County where a field of closed-loop geothermal wells was installed without permits by an unlicensed driller. Staff from both the well permitting program and the Southern Enforcement Bureau met with representatives from the company and ordered all well installation activities to cease immediately. The situation was made more egregious when the property owner continued with the well installations despite assuring the Department that no further activity would occur at the site. Rather than decommission the wells in place, the property owner is proposing to remove the current loops and re-use the hole to re-install the loop with proper grouting. This is the first time a party has requested to re-use HDPE loops and the logistics of being able to accomplish this successfully is unknown. As a result, it has been established that a pilot demonstration take place first to establish the effectiveness of the proposed re-use techniques. A variety of concerns were discussed and S. Reya emphasized that, while there has been verbal discussion, a formal written pilot plan has not yet been submitted for Department review. Several Board members indicated that they would like to present when this activity takes place to help determine the effectiveness of the proposed methods. G. Poppe made the motion listed below. G. Craig seconded the motion and it was agreed upon unanimously.

Based on the seriousness of the situation and complexity of the proposed methods for remediating and re-installing the eighty closed-loop geothermal wells on this site, the Board requests advance notice of a pilot field demonstration so that a member or members, without having a quorum, may be present onsite to observe the proposed method(s) used in the pilot tests.

In the absence of the Board's legal advisor, T. Pilawski offered to consult with the Department's management as well as the Board's legal advisor to determine if there are any concerns about Board members witnessing part of the pilot demonstration for the purposes of providing technical advice on the effectiveness of the methods to Department staff.

- **Additional Updates on Enforcement Activities were presented by J. Altieri and B. Barrett.**

- A) Enforcement Actions - The Bureau continues to work towards settling confirmed issues of violations of the well drilling regulations in cooperation with Central, Northern and Southern enforcement regions with several different well drilling companies. The Central Bureau of Enforcement has assisted the well permitting program by issuing ten (10) letters ordering the sealing of wells and settlement offer letters. Violations include: improper grouting of closed loop geothermal, domestic and irrigation wells; instances of drilling without a proper license; drilling without permits; improper well construction other than grouting; improper decommissioning methods, and failure to get prior approval for decommissioning wells.
- B) Field Work- Well Permitting Section staff performed two (2) field inspections over the last two months with one resulting in a confirmed violation of the construction standards for a new domestic well and the other as follow-up for an on-going investigation of illegally constructed wells. Bureau staff are scheduled to witness an upcoming decommissioning of a well ordered sealed for being drilled without a valid permit.

- At 11:54 am Board member J. Pepe left the meeting at this point to attend another scheduled meeting.

- **Summary of Well Permitting Program Output for 2016:**

Mike Schumacher made up a Well Permitting 2016 Year End Progress Report on the number of Permit Reviews, Enforcement Activities, Field Work, Well Searches, & Licensing activities over the past year. (For the sake of brevity, a copy of his summary is attached.)

Note: Bryan Barrett exited the room to attend another meeting.

12. Final Note-Denis Crayon brought to the Board's attention a public statement issued by the New York Department of Environmental Conservation (NYDEC) regarding the discovery of falsified records and documents submitted by a remediation company responsible for the cleanup of a major site in Staten Island. The company had been altering the sample results taken from monitor wells to the point where it appeared the site was clean. The impending court charges carry substantial financial penalties and jail time.

Meeting Adjournment

A motion to adjourn was made by G. Poppe at 12:15pm, seconded by G. Craig and approved unanimously.