

CHRIS CHRISTIE  
Governor

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Lt. Governor



BOB MARTIN  
Commissioner

## State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mail Code 401-04Q

Division of Water Supply & Geoscience  
Bureau of Water Allocation & Well Permitting  
Mail Code 401-04Q

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NJ State Well Drillers and Pump Installers  
Examining and Advisory Board

### Minutes for January 17, 2013

**Board Members Present:** Art Becker (Chairman), Gary Poppe (Vice Chairman), Richard Dalton, Gordon Craig, Joseph Yost, Joseph Pepe, Carol Graff, Steve Doughty and Dr. Karl Muessig

**Board Members Absent:** None

**Board Legal Advisor Present:** Jill Denyes, Deputy Attorney General (DAG)

**NJDEP Bureau of Water Allocation & Well Permitting Staff Present:** Terry Pilawski, Pat Bono, Steve Reya, Julia Altieri, Mike Schumacher, Brian Buttari, Julie Mullins and Melia Stoop

**Member(s) of the Public:** None.

#### 1. Call to Order –

The meeting was called to order by Chairman A. Becker at 9:36 am with a quorum present. A. Becker then reintroduced Deputy Attorney General (DAG) Jill Denyes as the Board's Legal Advisor. J. Denyes has previously served as the Board's DAG and will again be taking over this role for Tirza Wahrman, who will no longer be serving in this capacity.

#### 2. Review of the Minutes from the November 29, 2012 Meeting –

A motion to approve the minutes for the November 29, 2012 meeting without change was made by G. Poppe, seconded by G. Craig and approved unanimously.

#### 3. Board Meeting Schedule for 2013-

Board members set the meeting schedule dates for 2013 as follows:  
January 17, March 21, May 23, July 18, September 12 and November 21. In accordance with the NJ Open Public Meetings Act, the meeting dates were published in the Star Ledger, Trenton Times and the Press of Atlantic City.

The 2013 well driller and pump installer exam schedule was provided to Board members. The 2013 exams will be held on: April 3, June 12, October 2 and December 11.

**4. Review and Certification of Exam Applicants for the December 12, 2012 Master, Journeyman, Journeyman B, Monitoring, Soil Borer and Pump Installers Exams –**

**Master** – A motion to approve all listed applicants for the exam was made by G. Poppe, seconded by J. Yost and approved unanimously.

**Journeyman** - A motion to approve all listed applicants for the exam was made by C. Graff, seconded by S. Doughty and approved unanimously.

**Journeyman B** – A motion to approve all listed applicants for the exam was made by A. Becker, seconded by R. Dalton and approved unanimously.

**Monitoring** – A motion to approve all listed applicants for the exam was made by G. Poppe, seconded by C. Graff and approved unanimously.

**Soil Borer** – A motion to approve all listed exam applicants was made by G. Craig, seconded by K. Muessig and approved unanimously.

**Pump Installer** – A motion to approve all listed exam applicants was made by J. Pepe, seconded by G. Craig and approved unanimously.

**5. Review of the Pump Installers Exam Surveys completed by Applicants who took the October 3, 2012 Exam-**

S. Reya updated the Board on the results of the latest round of Pump Installer Exam Surveys that were submitted by applicants who took the October 3, 2012 exam. Unfortunately only four (4) exam candidates sat for the exam and only two returned a completed survey, which provided very little data on the work experience and study preparation of the applicants. Board members suggested revising a few questions on the survey to learn more about the work experience of the applicants (such as re-wording question #6 on page 1, to make it the same format as question #3 on page 2, as suggested by S. Doughty). It was also suggested that the survey be altered to include the name of the individual completing the survey. **Board members requested that S. Reya send out an electronic copy of the survey to all members for updating. Board members will then email back suggested revisions, which will be compiled by S. Reya for final review at the March 21<sup>st</sup> meeting.**

**6. Well Driller and Pump Installer Licensing Update-**

S. Reya discussed a chart compiled by J. Mullins, which depicted the average number of years of experience that applicants have acquired before taking the Pump Installer exam. This data revealed the fact that on average, applicants have over five (5) years of experience in the pump installation industry. Although it would appear the average test candidate has more than sufficient experience in the field prior to sitting for the exam, the pass rate for this exam is only around 20 percent. Based on this information, S. Reya raised the possibility that raising the minimum experience required from one to two years may still not be enough to significantly raise the passing rates for this exam as anticipated. (Raising the experience requirement for pump installers can only be accomplished via a rule change.) There was general agreement between Board members and DEP staff that more emphasis on the study guide materials and the educational component will be necessary to improve the passing score.

J. Mullins next presented a chart showing the past five (5) years of initial (non-renewal) licenses for all classes of driller and pump installer licenses. The number of new licenses issued in fiscal year 2012 was 37, which was significantly lower than the 51 issued in 2011. The five year average is 44 licenses issued annually. This information was compiled in response to a recent request from the NJ Department of Labor, which performs an annual audit of all state issued licenses.

## **7. Pump Installer Study Guide for Regulatory Section of Exam-**

In an effort to counter the extremely high failure rate exhibited by Pump Installer Applicants, J. Mullins compiled all applicable regulatory study material into one ten page study guide. The study guide contains all applicable text from the Well Construction Regulations, N.J.A.C. 7:9D, as well as two links for obtaining the “NJ Board of Public Utilities Underground Facilities: One-Call Damage Prevention System” and the “NJ Underground Damage Prevention Program: A Guide to Safe Excavation Practices in New Jersey.” The purpose of her draft study guide is to narrow down the regulations that should be studied by Pump Installer Applicants, as it has often been stated that much of N.J.A.C. 7:9D applies to well drillers, not those who solely want to install and service well pumping systems. J. Mullins stated that by using the new study guide she was able to take the regulatory portion of the test as an open book exam and answer all questions correctly except one, which was geared toward having some knowledge of field safety. Therefore, she felt that if she could find the answers within this condensed guide and correctly answer most questions, while never having worked in the industry, most applicants should find it easier than studying the entire 60 page regulation. Board members were extremely pleased with this study guide and suggested that it be added to the Bureau website and included with all Pump Installer, Journeyman, Journeyman Class B and Master Exam Study packets that are sent out by the Bureau. Members also felt that local county and municipal inspectors could benefit from the guide, as the concise guide spells out pump installation regulatory requirements within 10 pages, rather than the full 60 page well construction regulations.

## **8. Discussion on the Geothermal Guide Module-**

The recent exam workgroup session with Board volunteers G. Craig, A. Becker and S. Doughty resulted in the development of a comprehensive NJ Regulations module for the Vertical Closed Loop Geothermal Driller license that will ultimately be administered by NGWA, according to S. Reya. Board volunteers will also be staying after today’s Board meeting to work on the Journeyman/Journeyman B NJ Regulatory module. S. Reya stated that once complete, the only two licensing exams requiring review and formatting into NGWA format will be the Master and Dewatering exams. He thanked all Board members for their continuing assistance with this task.

## **9. Enforcement Activities- Julia Altieri.**

J. Altieri spoke about three main active enforcement cases on which the Department is currently working:

- 1.) A case concerning a domestic unpermitted well drilled by Michael Kavlunas from Total Quality Drilling. Mr. Kavlunas had personally appeared at a Board meeting in May 2011 to discuss the decommissioning of this well. J. Altieri noted that the Department has been working with Mr. Kavlunas and his legal representation to address the still open well. If these attempts fail, a

hearing date has been set for February 4<sup>th</sup>. The Department is working to attempt to resolve this situation prior to this date.

- 2.) J. Alteria reported that the Department is close to a final settlement in a case where the Department has ordered a driller to decommission three domestic wells that were installed without permits. Two of those wells are located in an area of salt water intrusion, meaning that additional construction requirements would have included double casing the well and the use of a salt water (cement based) grout. J. Altieri indicated that the Department and well driller have reached a resolution on the proper decommissioning and subsequent replacement of all three wells. Of the utmost importance to the Department was an agreement to have the driller completely over drill and decommission the wells. As a result, the Department has been willing to reduce the fines assessed against the well driller. The Bureau intends to send staff to witness the decommissioning of these wells to ensure full compliance.
- 3.) In a third situation, the Department is working with a driller to arrange for the decommissioning of a public community supply well. Based on the submitted well record and subsequent information submitted by the drilling company, it appears the well was not constructed properly. Department staff has met with representatives from the drilling contractor but no progress towards a mutual resolution has been made. The drilling company and driller of record failed to submit a timely request for a hearing on an Administrative Order and Notice of Civil Administrative Penalties (AONOCAPA).

Finally, J. Altieri said that there are currently two (2) additional cases being pursued that involve pending hearing requests.

P. Bono said that the Well Permitting Section has not been successful in progressing this far with enforcement cases and that she hopes it will serve to notify the drilling community that the Department is serious about pursuing compliance with the well regulations. T. Pilawski wants the outcomes of these cases published on the website and possibly other newsletters to act as a deterrent for others in the industry. G. Poppe said he believes recent enforcement activity seems to be having a positive effect on the drilling industry as individuals begin to see that the Department is actually following through on some enforcement cases. J. Yost suggested that New Jersey consider developing a drilling contractor license, not solely an individual license, to allow the state better oversight and accountability with regard to drilling companies that exhibit repeated non-compliant practices.

T. Pilawski and P. Bono provided an update on drilling contractors that owe the Department a significant amount of outstanding well records. The Bureau is working to identify the drilling companies which routinely fail to submit well records and decommissioning plans. These companies are contacted by staff to develop a submission schedule to catch up of the delinquent well documents. If these outreach efforts are not successful, the situation will be turned over to the Enforcement program for follow-up.

## **10. Update on the Heating, Ventilation, Air Conditioning and Refrigeration (HVACR) Board Proposed New Rules -**

S. Doughty updated the Board concerning the NJDEP's attempts to resolve potential conflicts between the proposed new HVACR rules and the State's existing Well Construction and Maintenance; Sealing of Abandoned Wells rules, NJAC 7:9D. NJDEP Division of Water Supply and Geoscience (DWS&G) Director Fred Sickels and Steve Doughty organized a conference call with

HVACR Board staff (the Division of Consumer Affairs (DCA) within Law & Public Safety), members of DEP's radon protection program, and others, to ascertain the status of addressing the concerns DEP has expressed on numerous previous occasions via letter, phone, and in person. The purpose of the conference call was to convey, once again, DEP's concerns about likely conflicts between the proposed new HVACR rules and N.J.A.C. 7:9D, and to learn how DCA staff and/or the HVACR Board plan to address such concerns prior to adopting the proposed new rules. The conference call, originally scheduled for late October 2012, but postponed on a couple of occasions due to preparation for and then recovery efforts associated with Hurricane Sandy, was held on Tuesday, January 8, 2013.

At the October 11, 2012 HVACR Board meeting held in Newark (personally attended by Director Sickels and Board members G. Poppe and G. Craig), it was reported that the HVACR Board was still reviewing the written comments that previously had been submitted by the New Jersey Ground Water Association (NJGWA) and NJDEP. However, during the conference call, Burt Liebman, Director of Regulatory and Legislative Affairs with DCA stated that the Board had no intention of making changes to the rule to address NJDEP's concerns and that the adoption was moving forward as-is. Mr. Liebman stated that NJDEP's expressed concerns "were coming at the 11<sup>th</sup> hour and are the Department's problem." Mr. Liebman was reminded of the following:

1. NJDEP had not been included in any pre-proposal information sharing, which is customary practice between sister agencies;
2. Immediately upon learning of the proposed new HVACR rules through a third party, DWS&G staff members have been communicating its concerns and attempting to resolve the perceived conflicts since May 2012; and
3. Despite DWS&G's repeated attempts to consult with the HVACR Board and staff on this matter, there has been no apparent reciprocal effort by DCA to work toward a mutual resolution of these issues.

After some further discussion, Mr. Liebman stated that DEP's noted concerns and proposed revisions to the existing proposal were too broad, and, while the NJDEP could again submit its concerns/revisions, any potential changes would be considered outside of and following the adoption of the proposed new rules, which is anticipated shortly because the proposal will expire on (March 16, 1013).

Board DAG (Jill Denyes), re-assuming her legal advisor to the Board duties from Tirza Wahrman (who has left State service), is intending to reach out to her DAG counterpart within the DCA to discuss this matter. Finally, S. Doughty and Fred Sickels have prepared a summary of related issues, which has been elevated to NJDEP Water Resources Mgmt. Assistant Commissioner Michele Sierkerka, who is expected to contact her senior-level management counterparts in NJDEP's sister agency in an attempt to resolve this matter.

## **11. License Suspension Procedures-**

T. Pilawski intends to follow up with the Department's DAGs on the acceptability of the license suspension process and form developed by Jeff Hoffman of the Department's Central Water Compliance and Enforcement region. Preliminary discussions do indicate that the current version of the regulations grant the Department authority to suspend licenses, however, the actual process for doing so must be worked out. She anticipates having an update for the Board by the March 21<sup>st</sup> meeting.

## **12. Board Website-**

J. Denyes discussed a law, which becomes effective on February 1, 2013, concerning NJ state Board websites. She noted that the Board already has a website link off the Department's Water Supply page, so the Board is at least partially in compliance. She will discuss the full content of the website with P. Bono in the coming weeks to ensure that all required content is contained within the page.

## **13. License & Regulation Topics-Well Program Updates**

### **Historic Well Records-**

Pat Bono reported that the Historic Well Records Project that includes the scanning, indexing and data entry of historic well records has been completed. There were 147 boxes that dated back to the 1950s that were entered into the Department's computer system, NJEMS. Over 45,000 records were added to the database last year alone and the progress has made a difference in processing time and search requests for well records and other documents.

### **Well Decommissioning Reports-**

There was also a backlog of decommissioning records awaiting review and processing. Over 9,000 decommissioning reports were reviewed and process last year with substantial assistance from the Technical staff from the Water Allocation program.

### **Online Well Search Tool-**

M. Schumacher has been working on the online well search tool and associated Regulatory Service Portal (RSP). The RSP will serve as a security check and verify the identity of users who are requesting information from the Department. Those with DEP issued licenses will be able to log in by providing his or her license number. Once logged in, individuals can enter criteria such as: street address, permit numbers, lot and block numbers, state plane co-ordinates to retrieve well information including well depth, pump capacity and usage. If the well record was submitted electronically, this report will yield a PDF copy of the original well record. Historic paper well records will not be downloadable through the site at this time.

### **Rule Status-**

Chairman Becker questioned the status of the regulatory revisions to N.J.A.C. 7:9D (Well Construction Regulations). T. Pilawski stated that unfortunately the draft is still under legal review and little to no progress to report. The need for the Department to promulgate emergency rules as a result of Hurricane Sandy has delayed the timing of the review of the well rule amendments. This stress on the limited staff resources of the Legal Department has put the well regulations further behind than anticipated initially.

## **14. Horizontal Drilling-**

R. Dalton raised a potential environmental concern associated with horizontal drilling. Specifically, he discussed a recent project involving drilling for a gas line in Monksville, NJ that entails a 4,000 foot long, 42 inch diameter hole ranging from 80 to 200 ft. below grade in depth. He stressed the fact that the annular space between the borehole and the pipeline is entirely ungrouted. The pipe is only reportedly pushed and/or pulled through the borehole, which is larger than the outside pipe diameter. R. Dalton expressed concern that these wells pose potential environmental risks due to lack of

grouting. He noted that lack of oversight by DEP makes it so there isn't even a requirement to set a "surface plug" at each end of the drilled hole at the entry and exit points. He also stated that there is no contingency plan or requirement in such construction plans to grout the borehole if a hole needs to be abandoned due to being unable to install the pipeline in a satisfactory manner. Bureau staff discussed the fact that since this work is being conducted for the installation of a utility line, the proposed work does not constitute the definition of a well, as per N.J.A.C. 7:9D. Therefore, although the activity could pose risks as detailed by R. Dalton, the Department has no authority to regulate this activity and could not do so without a significant law change.

**15. A motion to adjourn was made at 12:30 pm** by C. Graff, seconded by G. Craig, and approved unanimously.

**Postscript:**

Several Board members and Well Permitting staff met in a closed session in the afternoon to develop the bank of questions for the Journeyman license exam.

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### Minutes for March 21, 2013

**Board Members Present:** Art Becker (Chairman), Gary Poppe (Vice Chairman), Richard Dalton, Joseph Yost, Joseph Pepe, Carol Graff, Steve Doughty and Dr. Karl Muessig

**Board Members Absent:** Gordon Craig

**Board Legal Advisor Present:** Alison Reynolds, Deputy Attorney General (DAG)

**NJDEP Bureau of Water Allocation & Well Permitting Staff Present:** Terry Pilawski, Pat Bono, Steve Reya, Julia Altieri, Brian Buttari, Julie Mullins and Melia Stoop

**Member(s) of the Public:** Steven Skufca & Raymond Hemmings, PhD, of GEA GeoEnergy Alternatives and Dennis Crayon of Summit Drilling

#### 1. Call to Order –

The meeting was called to order by Chairman A. Becker at 9:43 am with a quorum present. A. Becker then introduced Deputy Attorney General (DAG) Alison Reynolds as the Board's Legal Advisor. Allison Reynolds served as the Board's DAG while Jill Denyes was unable to attend.

#### 2. Review of the Minutes from the January 17<sup>th</sup>, 2013 Meeting –

A motion to approve the minutes for the January 17<sup>th</sup>, 2013 meeting without change was made by G. Poppe, seconded by J. Yost and approved unanimously.

#### 3. Board Meeting Schedule for 2013-

Board members reviewed the testing schedule dates for 2013 as follows:  
The 2013 exams will be held on: April 3, June 12, October 2 and December 11.



**4. Review and Certification of Exam Applicants for the April 3<sup>rd</sup>, 2013 Master, Journeyman, Journeyman B, Monitoring, Soil Borer and Pump Installers Exams –**

**Master** – A motion to approve all listed applicants for the exam was made by J. Yost, seconded by G. Poppe and approved unanimously.

**Journeyman** - A motion to approve all listed applicants for the exam was made by S. Doughty, seconded by Richard Dolton and approved unanimously.

**Journeyman B** – A motion to approve all listed applicants for the exam was made by G. Poppe, seconded by J. Pepe and approved unanimously.

**Monitoring** – A motion to approve all listed applicants for the exam was made by Richard Dolton, seconded by C. Graff and approved unanimously.

**Soil Borer** – A motion to approve all listed exam applicants was made by G. Poppe, seconded by K. Muessig and approved unanimously.

**Pump Installer** – A motion to approve all listed exam applicants was made by J. Yost, seconded by J. Pepe and approved unanimously.

**Proctoring of Exams--**

P. Bono noted that the Department staff will be proctoring future exams beginning with observation of the April 3<sup>rd</sup> exam to learn the current process. Thereafter the Bureau will proctor all future exams with the goal of maintaining consistency and making improvements if necessary.

**5. Comments from Board members on wording and content of the Pump Installer Exam surveys--**

It was suggested that having the name added to the survey would benefit the Board members with evaluating passing rates and allow the Board to build effective training tools for applicants. C. Graff suggested giving one (1) point to applicants who complete the survey. J. Yost supported this 'point' incentive idea. A. Becker suggested making the Pump Installer test score invalid without completion of the survey. A. Reynolds will follow up with J. Denyes on the legality of making the survey mandatory and requiring the applicant's name to be included on all surveys.

**A motion was made by G. Poppe to attach the Pump Installers Survey to the Pump Installers Exam as a mandatory section, pending DAG approval. J. Pepe Seconded the motion which was approved unanimously.**

Bureau staff will await legal advice before making any changes to the current exam survey.

**6. Update on Work Sessions to revise Licensing Exams**

Board members and Well Permitting staff have been working to revise and update the various license exams to become compatible with the National Ground Water Association test format. S. Reya discussed the progress made to the Journeyman/ Journeyman B module covering NJ well regulations after the January Board meeting. Several Board members and well permitting staff successfully updated the regulations section intended to be used for the National Ground Water Association (NGWA) Journeyman/ Journeyman B exams.

Following today's Board meeting, the Master exam revisions will take place. C. Graff, G. Poppe, J. Yost, and A. Becker volunteered to assist in this review. S. Reya suggested that the first step in formulating the Master Driller license exam is decide on a clear direction and strategy. This exam

has no direct counterpart in the NGWA technical testing modules. The Board members will need to identify the increased responsibilities delegated to NJ Master Drillers and develop questions based on these topics. The first step will be to develop an outline for the proposed NGWA Master exam module in the afternoon session, rather than simply updating the existing exam.

## **7. Update on the Heating, Ventilation, Air Conditioning and Refrigeration (HVACR) Board Proposed Rules N.J.A.C. 13:32A1.1**

S. Doughty updated the Board concerning the status of the NJDEP's repeated attempts to resolve licensing conflicts between the proposed new HVACR rules (N.J.A.C. 13:32A1.1) and the State's existing Well Construction and Maintenance; Sealing of Abandoned Wells rules, N.J.A.C. 17:27D. These concerns relate to licensing, permitting, construction and decommissioning requirements for geothermal wells and the potential for two state regulations (and corresponding implementing agencies) to regulate the same activities. (See previous Board minutes for additional background information)

Following numerous previous requests by NJDEP staff to resolve these issues with the New Jersey HVACR Board and staff (the Division of Consumer Affairs (DCA) within Law & Public Safety) and intervention by the Assistant Commissioner of NJDEP's Water Resources Management, S. Doughty reported that the HVACR Board has also voted on and approved of NJDEP's suggested revisions. Accordingly, DCA staff indicated they intend to incorporate said revisions upon adoption. S. Doughty stated that NJDEP must be vigilant in checking to make sure that the changes do in fact appear in the final rule adoption. Adoption of the proposed new rule is anticipated shortly because the rule proposal was set to expire in mid-March 2013. It is anticipated that the rule adoption will be published within the next few weeks.

## **8. Enforcement Activities--**

J. Altieri spoke about four main active enforcement cases on which the Department is currently working:

- 1.) A case concerning an unpermitted domestic well drilled by Michael Kavlunas from Total Quality Drilling. J. Altieri noted that the Department has been working with Mr. Kavlunas and his legal representation to resolve the still open well, which the DEP contends was improperly constructed and drilled without a well permit. The attempts failed, and a hearing was held on February 4, 2013 at the Atlantic City Courthouse. Bureau members T. Pilawski, P. Bono, J. Altieri, and S. Reya attended, with S. Reya testifying on behalf of the DEP.
- 2.) J. Altieri reported that the case concerning three (3) wells in and around Reeds Beach reached a settlement resulting in a proper decommissioning of the three (3) wells with a substantial reduction in fine. She noted the DEP is willing to work with violators regarding fine amounts if they are cooperative in resolving an issue.
- 3.) In a third situation, the Department is working with a DAG on pursuing a geothermal company that improperly constructed a geothermal well system. The Department has cited the driller for licensing, permitting and construction-related violations. This case is pending a hearing for a penalty assessment resolution.

- 4.) Finally, J. Altieri said that there are currently two (2) additional cases being pursued, both of which have pending hearing requests.

J. Altieri mentioned that the Bureau will start to 'spot-check' well installations beginning this spring with assistance from New Jersey Geological and Water Survey (NJGWS) staff. G. Poppe said that this is great news for the industry and that an increased field presence on a routine basis would be helpful.

T. Pilawski and P. Bono provided an update on drilling contractors that owe the Department a significant amount of outstanding paperwork. The Bureau has begun to contact the top 10 drilling companies with outstanding well records to develop a submission schedule to catch up the delinquent documents. The first company contacted submitted over 200 outstanding records soon after. Companies are warned that those behind on paperwork will be selected for enforcement inspections in the field.

## **9. License Suspension Procedures-**

T. Pilawski intends to follow up with the Department's DAGs on the acceptability of the license suspension process and form developed by Jeff Hoffman, of the Department's Central Water Compliance and Enforcement region. Preliminary discussions do indicate that the current version of the regulations grant the Department authority to suspend licenses, however, the actual process for doing so must be worked out.

The proposed procedure for non-renewal of a license is as follows:

- A document summarizing the enforcement history and justification for non-renewal would be submitted to the board in a closed session.
- The board would make a recommendation and DEP Enforcement would then notify the commissioner's office and send a notification of intent to not renew the license to the licensee.
- The license holder in question could then go before the Board and DEP would make a final decision.
- An appeal of this decision could be made within 20 days, during which time the old license would remain in effect.

### **Draft Rule Status-**

Chairman Becker questioned the status of the regulatory revisions to N.J.A.C. 7:9D (Well Regulations). T. Pilawski stated that unfortunately the draft is still under legal review and there is little to no progress to report.

## **10. Technical Topics**

### **Presentation by Steve Skufca of Geo Energy Alternatives (GEA) - GA-Xtra Geothermal Grout-**

S. Skufka began by explaining that Bentonite mixed with sand is the most common grout of choice for geothermal well applications, yet it still is not as thermally conductive as other grouts (as bentonite itself is somewhat of an insulator), is not saltwater resistant, and cracks if it is not hydrated. He then discussed GA-Xtra geothermal grout, which a cementitious grout designed for use in grouting boreholes containing ground source heat loops. S. Skufka noted that he is requesting that their geothermal grout be approved for use in New Jersey, as it is protective of groundwater resources. One of the most important aspects of their grout is that it is a single bag mixture where the only field

variable is the amount of water that must be added. There is no blending of two solids prior to the addition of water, which is believed to make the mix more consistent when in use by different contractors and ensure that it is actually mixed and pumped in accordance with the manufacturer's specifications. He added that other advantages include that it withstands salt water, does not degrade, expand, or contract, adheres well to plastic piping, resists chemical attack and is stable in both low and high pH groundwater environments. J. Hoffman inquired about decommissioning a well containing GA-Xtra grout and whether or not the grout could be drilled out if needed. R. Hemmings, the chemist who developed the grout mixture, answered that it drills out like concrete if need be and that the handling of waste generated is the same. Both S. Skufca and R. Hemmings noted that the tested permeability values are below NJDEP's maximum allowable permeability for a grout mixture.

They explained that the grout is currently in use in Maryland and they are in the process of presenting their product to Tennessee, South Carolina, and Georgia. S. Skufca stated the grout has been developed and marketed as a geothermal grout, however, there isn't any reason it could not be used in other wells, such as those utilized for potable water supply.

R. Hemmings noted that the one bag mix does not contain any sand or bentonite and is a proprietary cement-based mixture. R. Dalton questioned whether the mix contained fly ash and expressed that the Department may require testing on any mix containing fly ash material because of the known heavy metal content contained within. R. Hemmings stated that contaminants do not leach out of GEA's grout material when submerged in water and provided a Toxicity Characteristics Leaching Procedure (TCLP) data sheet as supporting documentation. This sheet showed that the TCLP test was conducted for ten (10) metals. Additional documentation in the form of Laboratory Testing of the Stability of Geothermal Grout Formulations (a lab test designed to simulate grout submerged in a saltwater environment). Prior to the meeting GEA also provided the Bureau with a Materials Data Safety Sheet (MSDS) and a product sheet that summarized the product.

R. Dalton continued that permeability tests done by methods that the state does not approve of will not be recognized. GEA grout has not yet submitted independent lab verification that the grout material, when tested in accordance with ASTM D5084, meets the Department's standard. S. Skufka expressed a willingness to complete other lab testing required by NJ and a field demonstration to show that the mixture can be emplaced within a geothermal well. He concluded by stating that protection of the groundwater is the most important requirement of a grout and he and his colleagues believe they can demonstrate that GA-XTRA grout can accomplish this task.

S. Reya will send a letter to Mr. Skufka detailing the required permeability and field demonstration that must be conducted, in addition to any other questions that would have to be addressed before the Board could recommend approval of this product (to the Department) for use in New Jersey.

## **11. Receipt of info on Earth to Air DX system**

The board read an updated information packet recently received by the Bureau concerning Earth to Air's Direct Expansion (DX) system. They found that no new technical data was conveyed, which would address any concerns with this, or any other DX system. As has been indicated in the past, both the copper tubing and refrigerant (i.e. circulating fluid) do not meet the closed loop geothermal requirements specified in N.J.A.C. 7:9D.

## **12. Selection of Geothermal Mixes in Areas of Salt Water--**

P. Bono discussed that the aftereffects of Hurricane Sandy damage have resulted in many Geothermal Permits being requested on the Barrier Islands, as residents begin to rebuild their homes. G. Poppe stated that many new wells are being requested on the Barrier Islands such as Mantoloking & Long Beach Island. R. Dalton, K. Muessig, and S. Johnson (all from NJGWS) want to have a discussion, in conjunction with licensed well drillers, on what grouts would be appropriate for this area. With concern for the Atlantic City 800 foot sands aquifer, P. Bono asked if geothermal should be entirely banned on the barrier islands, limited to certain maximum depths, and/or restricted to the selection of certain grout mixtures. J. Yost agreed that our most pristine water is located on the Barrier Islands and that such water bearing strata should be given the utmost protection from the chloride contamination posed by saltwater intrusion. P. Bono discussed setting up a discussion to include the above parties at the May Meeting. Both she and K. Muessig agreed that the Department has a responsibility to promote and foster technologies such as geothermal, but not at the risk of other resources.

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

### **Postscript:**

Several Board members and Well Permitting staff met in a closed session in the afternoon to develop the bank of questions for the Master's license exam.

CHRIS CHRISTIE  
Governor

KIM GUADAGNO  
Lt. Governor



BOB MARTIN  
Commissioner

## State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mail Code 401-04Q

Division of Water Supply & Geoscience  
Bureau of Water Allocation & Well Permitting  
Mail Code 401-04Q

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NJ State Well Drillers and Pump Installers  
Examining and Advisory Board

### Minutes for May 23, 2013

**Board Members Present:** Art Becker (Chairman), Gary Poppe (Vice Chairman), Gordon Craig, Richard Dalton, Joseph Yost, Joseph Pepe, Carol Graff and Steve Doughty

**Board Members Absent:** Dr. Karl Muessig, NJ State Geologist

**Board Legal Advisor Present:** Jill Denyes, Deputy Attorney General (DAG)

**NJDEP Bureau of Water Allocation & Well Permitting Staff Present:** Terry Pilawski, Steve Reya, Julia Altieri, Michael Schumacher and Melia Stoop.

**NJDEP Enforcement Member Present:** Jeff Hoffman, NJDEP Water Compliance and Enforcement, Central Region

**Member(s) of the Public:** Charles Dougherty and Dennis Crayon, from Summit Drilling

#### 1. Call to Order –

The meeting was called to order by Chairman A. Becker at 9:32 am with a quorum present.

#### 2. Review of the Minutes from the March 21, 2013 Meeting-

A motion to approve the minutes for the March 21<sup>st</sup>, 2013 Board meeting without change was made by G. Poppe, seconded by R. Dalton and approved unanimously (note: J. Pepe was not yet present at the time this motion was made).

#### 3. Review of the Conference Call Minutes for May 2, 2013-

A motion to approve the minutes from the May 2, 2013 Conference Call without change was made by Gordon Craig, seconded by Gary

Poppe (note: J. Pepe was not yet present at the time this motion was made). The conference call was held solely to review and certify the April 3<sup>rd</sup>, 2013 exam results.

**4. Review of the Minutes from the Executive Session for March 21<sup>st</sup>, 2013-**

A motion to approve the minutes from the March 21<sup>st</sup> Executive (Closed) Session meeting without change was made by C. Graff, seconded by J. Yost and approved unanimously (note: J. Pepe was not yet present at the time this motion was made) .

**5. Well Driller Exam Schedule for 2013-**

S. Reya again reminded Board members of the three remaining exams in the event that members have any employees or associates who wish to sit for an exam. Well driller and pump installer exams for all licenses classes will be held on the following dates: **June 12, October 2 and December 11.**

**6. Review and Certification of Exam Applicants for the June 12<sup>th</sup>, 2013 Master, Journeyman, Journeyman B, Monitoring, Soil Borer and Pump Installers Exams –**

**Master** – A motion to approve all listed applicants for the exam was made by G. Poppe, seconded by J. Yost and approved unanimously.

**Journeyman** - A motion to approve all listed applicants for the exam was made by G. Craig, seconded by S. Doughty and approved unanimously.

**Journeyman B** – S. Reya noted that for the first time in years there were no Journeyman Class B applicants.

**Monitoring** – A motion to approve all listed applicants for the exam was made by G. Craig, seconded by G. Poppe and approved unanimously.

**Soil Borer** – A motion to approve all listed exam applicants was made by R. Dalton, seconded by A. Becker and approved unanimously.

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

(note: J. Pepe was not yet present at the time the motions identified in item 6 were made).

**Proctoring of Exams—**

S. Reya said that June 12 marks the first exam cycle in which the Bureau of Water Allocation and Well Permitting (Bureau) will proctor exams. Bureau staff will focus on ensuring that exams are administered in a fashion that eliminates potential cheating to the fullest extent possible.

**7. Licensing Concern- Written Exams-**

Charles Dougherty, from Summit Drilling Co., Inc. (Summit), addressed the Board regarding a fellow Summit employee who he believes may have some type of learning disability that may be preventing him from being able to pass the Bureau's written Monitoring Well Drilling exam. This long time well driller's assistant, he stated, is one of the most technically sound Summit employees when it comes to field knowledge. When it comes to being able to translate this field knowledge into answering questions on a written exam, however, he has struggled repeatedly in the past. C. Dougherty noted that he had recently spoken to S. Reya about this problem and questioned whether

the Bureau could make any special considerations or accommodations for those who may have problems reading and/or interpreting questions on a written exam. S. Reya indicated that in the past the Bureau has utilized the Department's Training Division to administer verbal exams in instances of documented reading or learning disabilities. Unfortunately, C. Dougherty expressed that he had recently contacted the gentleman's high school and was only able to determine that he did graduate; however, no additional documentation was available.

J. Denyes and T. Pilawski believed that it was the American Disabilities Act (ADA) that mandates that testing consideration must be provided to individuals with documented learning disabilities. The individual, therefore, may need to obtain written documentation that details his specific disability in order for the Department to make any accommodations. All licensed individuals on the Board urged the employee to attempt to sit for the exam again (he reportedly failed it several years ago) and see how close he comes to passing should be unsuccessful. This would give Summit staff an idea if he simply has a difficult time passing written exams or truly has a problem reading and comprehending the written test. Summit staff could then possibly work with the employee on a one-on-one basis to further assist him in the topics for which he may need help. Board members all expressed that they have had employees who are often very competent field drillers, yet sometimes have an extremely difficult time passing the exam. They encouraged C. Dougherty to relay to the employee that he should be persistent, as some individuals ultimately sit for the exam close to ten times before passing. C. Dougherty thanked the Board members for their suggestion and said that he would be back in touch with the Board and Bureau if they are to request any alterations to the standard written testing procedure. Finally, Board members thanked C. Dougherty for taking the time to come in and for spending his time trying to resolve this problem on behalf of Summit's employee.

#### **8. Proposed National Ground Water Association (NGWA) Testing- Progress of Updating Existing Exams-**

S. Reya provided an update of the progress thus far with revising existing New Jersey exams into regulatory exam modules that can be administered by NGWA. He explained that so far Board members have assisted in revising, reformatting and drafting new exam questions for the Environmental & Geotechnical Driller (the equivalent to the current Monitoring Well Drilling), Closed Loop Geothermal, Journeyman and Journeyman Class B exams. The two (2) remaining exams upon which the Board and Bureau staff work are the Master and Journeyman exams. Work has begun outlining the new structure and format for the Master exam and will continue this afternoon. Volunteers included A. Becker, C. Graff, J. Yost, G. Poppe and R. Dalton have assisted in this task. S. Reya noted that work on the Master exam will continue after today's meeting. He also noted that Julie Mullins compiled the complete list of exam questions (approximately 170 questions) and has coded this master list to show which test(s) would include the referenced question. He intends to forward this list to NGWA for input as exams continue to be revised, so he can forward them into the appropriate format for NGWA and their testing contractor.

#### **9. Pump Installer Survey-**

Board members and DAG J. Denyes discussed allowable protocol for requiring that all Pump Installer Exam candidates complete the Pump Installer Survey as a required component of the exam. In the past this has been a voluntary section and contained a coversheet detailing the fact that the Board and Bureau are attempting to revise exams or develop better study material after reviewing the data compiled from the surveys. Recently, it has come to light that without knowing the name and score of the individual who completed the survey, the data is of little value. J. Denyes advised that it would be permissible to add the survey to the test packet as one complete bundle and have a line item in which the applicant is to provide his or her name. She stated, however, that no action could be taken



if the individual either does not complete the survey or list his or her name. Failure to provide a completed survey can in no way affect the scoring of the exam.

#### **10. Heating Ventilation Air Conditioning and Refrigeration (HVACR) Rule-**

Amendments to the Heating Ventilation Air Conditioning and Refrigeration (HVACR) Rule, N.J.A.C. 13:32A, were discussed by S. Doughty. Prior to the meeting he forwarded copies of the rule adoption, which incorporated revised wording to clarify potential overlap in jurisdiction, licensing and construction requirements between the draft rule and the State's existing Well Construction and Maintenance; Sealing of Abandoned Wells rules, N.J.A.C. 7:9D. The adopted text contained two (2) important changes in text as a result of correspondence, meetings and conference calls between NJDEP and New Jersey HVACR Board staff (the Division of Consumer Affairs (DCA) within Law and Public Safety). A. Becker and G. Craig both thanked S. Doughty for his efforts to resolve this problem.

#### **11. Extending "Buried" Wells Above Grade-**

J. Pepe raised concerns about extending "buried" well casings of existing wells to bring the well casing and pitless well unit above ground, as is required by the well regulations (N.J.A.C. 7:9D) when repairing the pumping equipment on a buried well. He stated that Warren County Health Department requires that contractors should steel casing, not PVC casing when doing so. He indicated that he recently spoke with S. Reya about this issue who stated that as long as a compression type fitting (such as a Dresser coupling or equivalent) is used to join PVC and steel materials at the point of connection, the installation would be in accordance with the Department's well regulations. J. Pepe was not aware of any County or Municipal ordinance that differed from the state requirement, which would grant the County Health Department the authority to solely require steel. He also raised concerns of relevant electrical code and that bonding of the electrical system to the casing must be considered when using PVC casing to extend an existing well constructed with steel casing. S. Reya stated that he believes this issue would need to be addressed via future changes to the electrical sub code and offered to assist J. Pepe with coordination with local officials in interpreting and enforcing the state well regulations.

#### **12. NJDEP Enforcement Activities Update-**

- A. Kavlunas/Total Quality Drilling, LLC-** S. Reya provided an update on the Michael Kavlunas/Total Quality Drilling, LLC case in which the Department alleged that Mr. Kavlunas improperly constructed a well measuring approximately 415 ft. deep. Mr. Kavlunas contested this claim. Specifically, the Department contended that the well was not grouted in accordance with the well regulations, N.J.A.C. 7:9D. The Department also alleged that the well was never permitted, which Mr. Kavlunas acknowledged, although he offered some rationale as to why he failed to permit the well in question. The case was tried on March 25, 2013 before Administrative Law Judge W. Todd Miller. The decision, which was made on May 3, 2013, reduced the construction-related penalty from \$3,250 to \$2,250 (note: a Department Deputy Attorney General has filed an exception to this modification, citing the fact that construction related violations must be assessed as "serious" not "moderate" as Judge Miller indicated in his penalty assessment. Most importantly, S. Reya quoted the "order" section of the decision that stated that "It is further ordered that petitioner must decommission the well in accordance with the DEP rules and regulations. This will require petitioner to establish, among other things, the depth of the existing grout in the well and fill the void in the annular space to the required

level.” He hopes the Bureau will work with Kavlunas in the near future to ensure proper decommissioning of the well.

- B. Unapproved Direct Expansion (DX) Geothermal System-** Julia Altieri discussed another case where the Department is working with a Deputy Attorney General on pursuing a geothermal company that improperly constructed a geothermal well field in Mercer County several years ago. The Department has cited the well driller for licensing, permitting and construction-related violations. This case is pending a hearing for a penalty assessment resolution, unless the Department and well driller are able to settle the matter beforehand.
- C. Reeds Beach Well Sealing Update-** T. Pilawski discussed a settlement in which a drilling contractor agreed to decommission three (3) wells that were drilled without permits and constructed in violation of the well drilling regulations. Two (2) of the wells, which were located at Reeds Beach (Cape May County) were not constructed utilizing outer casings and salt-water resistant grout and were situated directly between the Delaware Bay and a saltwater marsh. Both of these wells were recently drilled out entirely and decommissioned in the presence of Bureau staff. M. Schumacher, who was onsite for some of the decommissioning activities displayed site photos and discussed some of the obstacles encountered while decommissioning the improperly constructed wells. Both wells have subsequently been replaced with double cased wells constructed in accordance with Department regulations. T. Pilawski was pleased to report that this case will be fully resolved once the last well (located in Dennis Twp., Cape May County) is decommissioned and replaced. She noted that our increased field presence has resulted in staff overseeing every aspect of the decommissioning and replacement well drilling activities. This sends a clear message to the drilling contractor that the Bureau is serious in ensuring compliance with the regulations.

#### **Start of Closed Session**

At 11:48 am the Board entered closed session to discuss potential license sanctions, to be pursued against a driller with repeated unresolved construction-related violations. The Board returned to open session at 12:39 pm.

After discussion in closed session regarding license sanctions against Journeyman Well Driller Brian Funkhouser, G. Poppe moved to have the Board begin the process to invoke its authority to recommend to the commissioner any of the licensing sanctions against Mr. Funkhouser, as provided by Subsurface and Percolating Waters Act, N.J.S.A. 58:4A-12), as it may deem appropriate following a hearing attended by Mr. Funkhouser or his counsel. It was further stated that the process of the hearing and notice of same to Mr. Funkhouser be initiated as soon as practicable. The motion was seconded by J. Yost, and approved unanimously, with the exception of S. Doughty, who had to leave the meeting following the executive session discussion.

#### **12. Technical Topics-**

S. Reya discussed the Department’s review of GeoEnergy Alternatives GA-Xtra Geothermal Grout, which was presented by company representatives at the Board’s March meeting. He stated that review of the Toxicity Characteristics Leaching Procedure (TCLP) by Department staff outside of the Bureau of Water Allocation and Well Permitting, has led to questions about the components within the grout mixture. The components have not been released to NJDEP, as some of the mixture has been labeled as proprietary by the manufacturer. The TCLP test exhibited an Arsenic reading greater than the Arsenic Maximum contaminant level (MCL) allowable for potable water. Additionally, the product has not been NSF certified as being nontoxic to groundwater. S. Reya will be sending a letter

to the manufacturer representatives requesting clarification on these issues and will report back to the Board once further information is received.

**13. DEP program updates-**

S. Reya discussed grout mixes for known or suspected salt water intrusion areas. He noted that the Bureau has been working to better determine appropriate well construction standards that would be appropriate for wells in potential salt water or brackish water areas. He added that the Bureau may look to solicit the input of well drillers to assist in making sound policy decisions that are protective of the state's groundwater resources.

**14. ePermitting- Facility Service Administrators-**

M. Schumacher noted that when well drillers leave one employer and move to a new company they frequently call the Bureau indicating that an active account remains with the previous employer while no account has been set up for the new company. Drilling companies need to establish policies to insure that the employee has access to his or her account and properly submits outstanding records and decommissioning reports before leaving their employ and to delete that employee from their account. The employee is responsible for submitting all outstanding well records and decommissioning reports for work completed under the original employer. Therefore, the original account should not be deactivated until this is complete. This step will also be a safeguard to the driller so that staff from the previous employer cannot submit electronic paperwork under the name of a previous employee without his or her knowledge. Licensed drillers need to make sure they know their own account information so that they can establish one with the new employer.

**15. Bureau Updates- Additional Staff-**

T. Pilawski mentioned that the Bureau is in the process of hiring new summer and hourly employees for several positions. She anticipates that this will assist in keeping well record and well decommissioning reviews up to date while freeing up existing staff resources to conduct additional site inspections and other field work.

**1:10pm Adjournment-** A motion to adjourn was proposed at 1:10 pm by G. Craig, seconded by C. Graff and approved unanimously.

CHRIS CHRISTIE  
Governor

KIM GUADAGNO  
Lt. Governor



BOB MARTIN  
Commissioner

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NJ State Well Drillers And Pump Installers  
Examining and Advisory Board

**Minutes for Conference Call May 2, 2013**

**Board Members Present:** Art Becker (Chairman), Gary Poppe (Vice-Chairman), Gordon Craig, Richard Dalton, Dr. Karl Muessig and Steve Doughty

**Board Members Absent:** Carol Graff, Joe Pepe, Joe Yost

**NJDEP Staff Present:** Steve Reya

The conference call was called to order by Chairman, A. Becker at 10:43 am, with a quorum present.

**Certification of Exam Scores for April 3, 2013 Well Driller and Pump Installer Exam Scores (all license categories)–**

**Master** – A motion to approve the exam scores was made by S. Doughty, seconded by G. Craig and approved unanimously.

**Journeyman** – A motion to approve the exam scores was made by G. Poppe, seconded by G. Craig and approved unanimously.

**Journeyman B** – A motion to approve the exam scores was made by G. Craig, seconded by G. Poppe, and approved unanimously

**Monitoring** – A motion to approve the exam scores was made by G. Poppe, seconded by G. Craig and approved unanimously.

**Soil Borer** – A motion to approve the exam scores was made by S. Doughty, seconded by G. Poppe and approved unanimously.

**Pump Installer** – A motion to approve the exam scores was made by G. Poppe, seconded G. Craig and approved unanimously.

A motion to adjourn was made at 10.50 am and approved unanimously.

CHRIS CHRISTIE  
Governor

KIM GUADAGNO  
Lt. Governor



BOB MARTIN  
Commissioner

## State of New Jersey

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NJ State Well Drillers and Pump Installers  
Examining and Advisory Board

### Minutes for July 18, 2013

**Board Members Present:** Art Becker (Chairman), Gary Poppe (Vice Chairman), Dr. Karl Muessig, Gordon Craig, Richard Dalton, Joseph Yost, and Steve Doughty

**Board Members Absent:** Joe Pepe and Carol Graff

**Board Legal Advisor Present:** Alison Reynolds, Deputy Attorney General (DAG)

**NJDEP Bureau of Water Allocation & Well Permitting Staff Present:** Terry Pilawski, Steve Reya, Pat Bono, Julia Altieri, Michael Schumacher, Brian Buttari, Jeremy Wick and Melia Stoop.

**NJDEP Bureau of Safe Drinking Water Staff Present:** Kristin Tedesco

**NJDEP Enforcement Member Present:** Jeff Hoffman, NJDEP Water Compliance and Enforcement, Central Region

**Member(s) of the Public:** None

#### 1. Call to Order –

The meeting was called to order by Chairman A. Becker at 9:45 am with a quorum present. T. Pilawski introduced Jeremy Wick, a student majoring in Geology at Temple University, who is a new hourly employee recently hired to work in the Bureau of Water Allocation and Well Permitting (Bureau). He is assisting technical staff with the review of recently submitted well documents and will also be gaining some field experience by observing drilling activities. A second hourly employee who will soon start working with the well permitting staff is Fayard Ali, a recent graduate from Rutgers University who majored in Geology. T. Pilawski anticipates he will receive permission to start working in the next few weeks. He will perform similar tasks as Mr. Wick. The assistance of these two individuals will provide the permanent technical staff with more time to conduct needed site inspections.

**2. Review of the Minutes from the May 23<sup>rd</sup>, 2013 Meeting-**

A motion to approve the May 23<sup>rd</sup>, 2013 open session Board meeting minutes without change was made by G. Craig seconded by R. Dalton and approved unanimously.

**3. Review of the Minutes from the Executive Session for May 23<sup>rd</sup>, 2013-**

A motion to approve the May 23<sup>rd</sup> Executive (Closed) Session meeting minutes without change was made by J. Yost seconded by G. Craig and approved unanimously.

**4. Well Driller Exam Schedule for 2013-**

S. Reya again reminded Board members of the two remaining 2013 exams in the event that members have any employees or associates who wish to sit for an exam. Well driller and pump installer exams for all licenses classes will be held on the following dates:

**October 2 (September 1 application deadline)**

**December 11 (November 15 application deadline)**

**5. Review and Certification of Exam Scores for the June 12<sup>th</sup>, 2013 Master, Journeyman, Monitoring, Soil Borer and Pump Installers Exams –**

**Master** – A motion to approve all listed applicants for the exam was made by G. Poppe, seconded by G. Craig and approved unanimously.

**Journeyman** - A motion to approve all listed applicants for the exam was made by G. Craig, seconded by S. Doughty and approved unanimously.

**Journeyman B** – S. Reya noted that for the first time in years there were no Journeyman Class B applicants for an exam session.

**Monitoring** – A motion to approve all listed applicants for the exam was made by G. Poppe, seconded by G. Craig and approved unanimously.

**Soil Borer** – A motion to approve all listed exam applicants 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 S. Doughty, seconded by J. Yost and approved unanimously.

**6. Review of Pump Installer Surveys—**

The June exam cycle marked the first time that the names of the individuals completing the Pump Installer Exam Survey were provided since the Bureau began including the survey in exam envelopes. This allowed the Board members to correlate the experience, training and feedback provided by each applicant with their exam score. S. Reya noted that three of the five applicants who sat for the exam returned a completed survey. Of particular interest on one of the surveys reviewed by Board members was a written paragraph stating that much of the information contained in the study material pertained to well construction, well drilling methods and regulations and was therefore not specifically geared toward Pump Installer applicants. S. Reya mentioned how the recently developed Pump Installer Study Guide that focuses specifically on those portions of the regulations relevant to Pump Installers was not posted to the Bureau's website until recently (which was after he checked the website upon reading the applicant's comments). Regrettably, the applicant would not have seen this

material unless he obtained the study guide from the Bureau via regular postal mail. A. Becker felt that since the applicant took such effort to write his complaint, the DEP should send a reply to let him know that the info is now available directly online and to thank him for his feedback. .

## **7. Proctoring of Exams—**

Now that the Well Permitting program staff proctor the exams directly, they are getting better acquainted with the process. P. Bono described how she noticed how nervous some of the test takers become when they enter the testing center and observed that some of them arrived visibly rattled if they were late due to heavy traffic. She attempts relieve concerns on the part of the test takers by announcing that the Bureau Staff will stay all day at the test center so there is plenty of time to finish any exam, regardless of the license category for which the applicant is sitting.

## **8. NJDEP Enforcement Activities Update-Julia Altieri Updates-**

### **Recent Field Activities-**

J. Alteri reported that Bureau staff has inspected over ten well drilling sites within the past six weeks. The monthly average in the past has been about two sites per month. Staff reported that for each of the sites visited, properly licensed drillers were present and copies of the requisite well permits were on hand for inspection. In addition, grouting materials and equipment were on site. All present agreed that this was encouraging news. Several of these inspections were prompted by the Bureau's new policy of adding a condition to permits which requires the drilling company to provide advance notice of when the work will be done, so that Bureau staff have the opportunity to plan a site inspection. To date, these conditions have been randomly assigned to seven permits, said J. Altieri, other spot checks are the result of staff observing drill rigs/drillers while on route to some of these sites. The Bureau intends to continue to conduct more spot checks in the future.

M. Schumacher indicated that the Bureau is now catching up on both well records and well decommissioning reports; this is partly attributable to the assistance of the new hourly employees trained to review these documents. As previously noted, this is also furthering the Bureau's field initiative by opening time for the technical staff. J. Hoffman suggested that if the Well Permitting staff could provide training on how to conduct and document a spot check, Enforcement staff would be able to respond quicker when a complaint or problem is called into the Department. He also believes that in the course of traveling to other sites, Enforcement staff could keep an eye out for operating drill rigs and conduct spontaneous inspections for basic compliance. The same could be provided to local health department staff to provide even more surveillance in the field. Chairman Becker volunteered the idea that various drilling industry representatives would be willing to assist with this effort to train folks.

### **Status of Ongoing Enforcement Cases-**

J. Altieri noted that two longstanding enforcement cases are continuing to progress.

1) The E.A. DeSantis case in which the Bureau required the decommissioning of three wells has progressed to the point where two wells have been decommissioned and two replacement wells have been drilled. The third and final well that must be decommissioned is located at a summer produce farm stand. Therefore, the Bureau has been working with the drilling contractor and property owner to allow use of the existing well throughout the summer, while making it clear that the well must be decommissioned and replaced in the fall.

2) The illegal direct expansion (DX) geothermal installation case is also moving along. Bureau staff and Department DAGs have been working to reach a settlement with the contractor that installed the system.

Further enforcement activity was summarized by T. Pilawski and J. Altieri as follows:

- The Bureau is working to resolve some wells that were drilled by the deceased driller, John Ricigliano. While the Bureau will not be pursuing any fines against Mr. Ricigliano's estate, there remains the issue of working with property owners to decommission any illegally drilled, nonconforming wells. T. Pilawski will be reaching out to K. Muessig to see if there is a possibility that the New Jersey Geological and Water Survey (NJGWS) staff can assist in this endeavor.
- Finally, the Bureau anticipates sending a letter to licensed Journeyman Driller, Brian Funkhouser, notifying him of the Bureau's intention to not allow him to renew his license at the June 30, 2014 deadline, as he has a number of outstanding violations. This letter will specify that Mr. Funkhouser is requested to attend an upcoming Board meeting to answer for his outstanding violations and give his account of what happened. He may also bring legal counsel should he choose.

#### **9. Well Regulations (N.J.A.C. 7:9D): Status of Draft Regulations-**

T. Pilawski said that the Department continues to resolve comments from several state DAGs who have reviewed the draft regulations. These rules have been prioritized and fast-tracked within the Department, she stated. Multiple DAGs have commented on the draft so far and it is the task of Kristin Tedesco, the Division's rule manager, to address comments and concerns raised by all involved DAGs. Once these are resolved, DEP's internal legal review will commence (expected to begin in August). It is hoped that the rule proposal will be published in the New Jersey Register for public comment in October of 2013, which would mean a filing deadline in September.

K. Tedesco provided copies of the Board procedures, which are specified in the draft regulations. She discussed the fact that Board DAG, Jill Denyes, was involved in the drafting of this section. Upon review by other DAGs, however, some questions and concerns arose. Board members reviewed the section and accompanying comments and provided feedback to K. Tedesco so she can finalize the language in this section and relay the members' comments and opinions to legal counsel.

#### **10. Review of proposed drilling activities in areas of Saltwater Intrusion-**

Recent activity concerning construction and decommissioning of wells in areas of known or suspected saltwater intrusion have focused the Bureau's resources on requiring certain well construction specifications and grout mixtures for these areas. Sites located in close proximity to the Atlantic Ocean, Delaware Bay and saltwater marshes are all areas where the Bureau considers requiring double cased well installations and/or saltwater resistant (cement based) grout materials. M. Schumacher discussed a meeting that was recently held between Bureau and NJGWS staff to develop tools to assist in flagging permits for sites located in areas that should receive further review by staff. Specifically, he indicated that he is in the process of modifying an existing saltwater wetlands layer and adding several other layers and buffers to develop a single layer. Board members commented that it would be helpful if drillers could view this layer through the GeoWeb or iMap programs so they can better determine if they are working in an area that is vulnerable to salt water intrusion prior



to submitting a well permit application. M. Schumacher anticipates that the layer would be a publicly available layer that would be identical to the layer utilized by Bureau staff when reviewing permit applications to determine the appropriate well construction.

G. Poppe questioned whether M. Schumacher could provide a summary of the Bureau's concerns with saltwater environments and a short description of how the Bureau is handling permit applications for sites located in these environmentally sensitive areas. He wishes to add this summary to the New Jersey Ground Water Association's newsletter to inform their members. M. Schumacher will provide the requested summary to G. Poppe.

#### **11. GEO Supergrout- Geothermal Grout; Request for NJ Approval-**

S. Reya discussed a July 12, 2013 email from David Bazzell, from SuperGrout Products, LLC describing GEO SuperGrout geothermal grouting product and requesting approval for use of this product in New Jersey. In addition to the product description of this cement-based geothermal grout, Mr. Bazzell provided supporting documentation, which consisted of the following: approvals for various states, Material Safety Data Sheet (MSDS), product literature, photographs, NSF/ANSI 60 Standard, NSF/ANSI 60 approval, Nebraska Grout Study article and permeability report. Board members discussed the fact that the permeability value on the lab summary sheet was below the maximum limit allowed the regulations, so the grout could be approved if all other applicable requirements were met. They requested, however, that the Bureau contact Mr. Bazzell and request the backup documentation that confirms the permeability value was obtained in accordance with ASTM D5084. Additionally, several members noted that the information provided did not contain enough hard evidence on shrinkage of the grout material (which is reported to be very little according to the supplied paperwork). Resistance to cracking as a result of thermal cycling was also noted as an item that was overlooked in the submission. Finally, no mention of the bond strength created between the cement based grout and polyethylene closed loop geothermal piping was made. Members stressed that if and when these items are addressed the manufacturer will be required to perform a field demonstration to illustrate that the product can be mixed and emplaced within a well borehole, while maintaining suspension of the solids within the grout slurry. S. Reya will draft a response letter to Mr. Bazzell requesting clarification and additional information for the items raised by Board members.

#### **12. Proposed National Ground Water Association (NGWA) Testing- Progress of Updating Existing Exams-**

S. Reya noted that Kathy Butcher from NGWA recently provided him with some helpful comments regarding the list of questions that will be used to make up the various NJ Regulatory exam modules. Once he and the volunteer Board members have completed revising the exam revisions to the Master and Dewatering Modules, he can complete the spreadsheet of all available questions and make sure that all questions and answer choices meet the requirements and guidelines of NGWA and the associations, testing vendor. Board members will postpone the review of the Master exam module until the September 12<sup>th</sup> meeting, as not all members had time to draft possible exam questions. S. Reya will email out a list of questions he has received from Board volunteers thus far and the remaining volunteers will provide suggested questions to S. Reya for inclusion in the list. The compiled list will then be reviewed after the regular Board meeting on September 12.

**12:35pm Adjournment-** A motion to adjourn was made by G. Poppe at 12:35 pm, seconded by K. Muessig, and approved unanimously.

CHRIS CHRISTIE  
Governor

KIM GUADAGNO  
Lt. Governor



BOB MARTIN  
Commissioner

## State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mail Code 401-04Q

Division of Water Supply & Geoscience  
Bureau of Water Allocation & Well Permitting  
Mail Code 401-04Q

401 E. State Street - P.O. Box 420  
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Tel #: (609) 984-6831 - Fax #: (609) 633-1231  
NJ State Well Drillers and Pump Installers  
Examining and Advisory Board

### Minutes for September 12, 2013

**Board Members Present:** Steve Doughty, Gary Poppe (Vice Chairman), Gordon Craig, Richard Dalton, Carol Graff, and Joe Pepe

**Board Members Absent:** Art Becker (Chairman), Dr. Karl Muessig and Joe Yost

**Board Legal Advisor Present:** Jill Denyes, Deputy Attorney General (DAG)

**NJDEP Bureau of Water Allocation & Well Permitting Staff Present:** Terry Pilawski, Pat Bono, Steve Reya, Julia Altieri, Brian Buttari, and Melia Stoop.

**NJDEP Division of Water Supply & Geoscience Staff:** Katrina Wessling (present from approximately 10:12 to 11:05 am)

**Member(s) of the Public:** None

#### 1. 10:04am -Call to Order –

The meeting was called to order by Vice Chairman Gary Poppe at 10:04 am, with quorum obtained at 10:07 am, as some Board members were delayed due to traffic.

#### 2. Review of the Minutes from the July 18<sup>th</sup>, 2013 Meeting-

A motion to approve the July 18<sup>th</sup>, 2013 Board meeting minutes without change was made by G. Craig, seconded by R. Dalton and approved unanimously.

#### 3. Well Driller Exam Schedule for 2013-

The two remaining well driller and pump installer exam dates for 2013 are as follows:

**October 2 (September 1 application deadline)**

**December 11 (November 15 application deadline)**

P. Bono reminded Board members that the proposed dates for 2014 Board meetings, conference calls and well driller/pump installer exam dates will be provided for scheduling and approval at the next Board meeting (November 21, 2013).

#### **4. Review and Certification of Exam Applicants for the October 2, 2013 Master, Journeyman, Monitoring, Soil Borer and Pump Installers Exams –**

**Master** – A motion to approve all listed applicants for the exam was made by C. Graff, seconded by S. Doughty and approved unanimously.

**Journeyman** - A motion to approve all listed applicants for the exam was made by G. Craig, seconded by R. Dalton and approved unanimously.

**Journeyman B** – A motion to approve all listed applicants for the exam was made by G. Craig, seconded by S. Doughty and approved unanimously.

**Monitoring** – A motion to approve all listed applicants for the exam was made by G. Craig, seconded by C. Graff and approved unanimously.

**Soil Borer** – A motion to approve all listed exam applicants was made by S. Doughty, seconded by G. Craig and approved unanimously.

**Pump Installer** – A motion to approve all listed exam applicants was made by J. Pepe, seconded by R. Dalton and approved unanimously.

#### **5. NJDEP Enforcement Activities Update-**

**Recent Bureau Field Activities, as reported by J. Altieri, include the following:**

- a.) **Field Inspections** - Staff performed six (6) site inspections since the last Board meeting (held approximately seven (7) weeks ago). Inspections are becoming more of a routine activity within the well permitting program. J. Altieri reported that staff found a high level of compliance during the inspections. Board members expressed support for the increased effort to conduct inspections and reported that they have individually received positive feedback from the well drilling industry as a whole. Many Board members expressed the fact that the increase in field enforcement is long overdue.

T. Pilawki relayed how she conducted a spontaneous site inspection upon noticing a drilling contractor on her way home from work one evening. She indicated that the driller was properly licensed and was in possession of a valid drilling permit. The driller expressed support of the Department's plans to conduct more enforcement in the field. Some Board members expressed that news of the Department's compliance spot checks is traveling throughout the drilling community. Hopefully this will create incentive to comply with the regulations.

- b.) The Bureau continues to await the final decision from the DEP Commissioner in regards to the exceptions filed on behalf of the Bureau in response to the Judge's initial decision on the case against Master Driller Mike Kavlunas, which was issued on May 3, 2013 (subsequent to the February 4, 2013 hearing). Two (2) extensions have since been filed by the DEP Commissioner. The deadline for issuing the final decision has, therefore, been extended to September 16, 2013.
- c.) J. Altieri spoke to Journeyman Driller Edward DeSantis to schedule a date to properly decommission an unpermitted well drilled by his firm several years ago and to drill a new replacement well. Once this is complete the well decommissioning and replacement of wells

located at three (3) properties in Cape May County will be resolved. The Bureau required the replacement and decommissioning of a total of three unpermitted wells in Cape May County. Additionally, two of the wells were installed in an area where double casing and cement-based grout is required for protection against salt water intrusion. Bureau staff has been witnessing all of the activity to insure compliance. Mr. Desantis has paid all fines associated with these wells.

- d.) The Department has reached a settlement in the case concerning an illegal Direct Exchange (DX) geothermal well system that was installed in Princeton Borough by an unlicensed driller. The system installer and geothermal contractor owner, Don Creyts, submitted a settlement offer to the Department through his attorney. In response to this offer, a State Deputy Attorney General (DAG) submitted a counteroffer, which was accepted by Mr. Creyts. Upon satisfactory payment of the penalty assessment, the case will be fully resolved, as no remedial work remains at the site at which the violations occurred.

## **6. Bureau Outreach and Training Material-**

T. Pilawski reported that two staff members are developing a training booklet and “check list” to provide assistance to county and municipal health department staff when inspecting wells in the field. Primarily, the document will direct the user to target basic well construction parameters: properly licensed drillers on site, valid permits, and adherence to the well permit requirements. Commonly identified construction violations would include the failure to grout wells using DEP approved grout mixes and placement methods. The Bureau plans to email the document to local inspectors, DEP Compliance and Enforcement staff and posted on the Bureau’s website for public access. This booklet should not only aid inspectors by directing them to focus on a few key items; but hopefully provide additional “eyes and ears” to the Department’s compliance program.

## **7. Motion for the Board to Engage in Closed Session Discussion (10:27 am)-**

A motion to open an Executive (Closed) Session to discuss proceeding with possible license sanctions against Journeyman well driller, Brian K. Funkhouser, was made by G. Craig, seconded by Carol Graff and approved unanimously at 10:26 am.

## **8. Open Session Motion of the Item Discussed in Item 7 Above-**

The Board returned to Open Session at 11:05 am, at which time the following motion was made by G. Craig:

With regard to the ongoing enforcement and licensing case between the Department and Brian K. Funkhouser, the statutory deadline for hearing licensing charges shall be extended beyond three (3) months after the date on which the charges are preferred, as there was good cause for further delay (as is consistent with N.J.S.A. 58:A-12). The motion was seconded by C. Graff and approved unanimously.

Additionally, G. Craig proposed a second motion relating to this issue as follows:

The Board shall notify Mr. Funkhouser via letter that a hearing will be held on the matter of non-renewal, suspension or revocation of his Journeyman well driller license. Notification of the hearing, as recommended by the Board, shall be provided to Mr. Funkhouser as soon as practicable to afford

him the opportunity to attend the hearing and arrange for legal counsel and/or compile any related documentation. This motion was seconded by S. Doughty and approved unanimously.

T. Pilawski will confer with all involved DAGs and notify Mr. Funkhouser via letter that a hearing will be held to discuss the Department's intention suspend, revoke or not let him renew his license upon expiration of his current license (June 30, 2014). She anticipates notifying Mr. Funkhouser that the hearing will be held at the Board's next regularly scheduled meeting on November 21, 2013. He will be notified a minimum of 30 days prior to the hearing date.

#### **9. Vented vs. Non-Vented Well Caps for Wells in Flood Prone Areas-**

S. Reya described a phone conversation he recently had with a licensed well driller who has been drilling and repairing wells in areas that were either severely impacted by Hurricane Sandy or located in areas that are prone to flooding. The driller discussed the well drilling regulatory requirement that well casings extend a minimum of one foot above grade and be equipped with a downward facing vent. He believed that there is some merit to venting wells in general, which includes preventing wells from developing a vacuum as pumps operate, thereby reducing the potential for contamination being drawn into the well. In flood and storm prone areas, however, the harm caused by saltwater, other surface water or sand/silt debris from entering the well (and potentially the aquifer in which it is screened ) through the vent is far worse than a well that is not vented, according to the driller. S. Reya posed the question of whether the drillers and pump installers on the Board agreed with the caller's assessment. He also provided two photos that were forwarded to him to illustrate the caller's "fix" in such areas. The photos depicted a typical 4-inch well casing extending above grade with a pitless well cap installed (containing the conduit pipe and vent). Inside the vented pitless cap, a PVC compression cap had been installed, which renders the well water tight. A smaller diameter threaded port was also present so the cap could be opened for disinfection or water level readings.

Board members support the use of non-vented wells in flood prone as a way to minimize flooding and damage to the above-ground portions of well casing. Other alternatives such as running remote vent lines to nearby structures and installing flood proof caps that contain check valves/balls have in increased risk of failure during flooding and in many cases are not practical. Such alternatives were deemed by most Board members to add little benefit while greatly increasing the risk of damage or failure. Bureau staff will look into the existing regulations and the draft rule revisions to determine if any changes should be made to the regulations to allow for installation of water-tight flood proof well caps in appropriate areas.

#### **10. Status of the Revisions to the Well Regulations-**

T. Pilawski reported that unfortunately the Bureau has not yet received feedback or comments from the Department's legal staff, as they continue to review the draft regulations (N.J.A.C. 7:9D). Once complete, the document will be sent back to the Bureau to address questions, concerns or problems raised by the legal review.

#### **11. Division Move –**

P. Bono reminded the Board that the entire Division of Water Supply & Geoscience recently moved from the 3<sup>rd</sup> floor of the DEP to the 4<sup>th</sup> floor. Any mail sent to the Division should now list the updated mail code: Mail Code 401-04Q. Improperly addressed mail will not be delivered to the well permitting program.

**12. Adjournment (11:50am) -**

A motion to adjourn was made by Gordon Craig, seconded by Carol Graff, & approved unanimously.



## State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE  
*Governor*

BOB MARTIN  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

MAIL CODE 401-0Q  
DIVISION OF WATER SUPPLY AND GEOSCIENCE  
NEW JERSEY GEOLOGICAL AND WATER SURVEY ELEMENT  
BUREAU OF WATER ALLOCATION AND WELL PERMITTING  
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[www.nj.gov/dep/watersupply](http://www.nj.gov/dep/watersupply)

### **NJ State Well drillers and Pump Installers Examining and Advisory Board Meeting Minutes for November 21, 2013**

*Approved by the Board on January 23, 2014*

**Board Members Present:** Art Becker(Chairman), Gary Poppe (Vice Chairman), Steve Doughty, Joe Yost, Gordon Craig, Richard Dalton, Dr. Karl Muessig, and Carol Graff

**Board Members Absent:** Joe Pepe

**Board Legal Advisor Present:** Jill Denyes, Deputy Attorney General (DAG)

**NJDEP- NJ Geologic & Water Survey Staff:** Helen Rancan-Acting Section Chief Geologic Mapping/Coastal Section (arrived at approximately 10:45 am)

**NJDEP Bureau of Water Allocation & Well Permitting Staff Present:** Terry Pilawski, Pat Bono, Steve Reya, Julia Altieri, Brian Buttari, and Melia Stoop.

**Member(s) of the Public:** None

#### **1. 9:45am -Call to Order –**

The meeting was called to order by Chairman A. Becker at 9:45 am, with a quorum present.

#### **2. Review of the Minutes from the September 12, 2013 Meeting**

A motion to approve the September 12<sup>th</sup> Board meeting minutes without change was made by G. Poppe, seconded by R. Dalton and approved unanimously.



**3. Review of the Minutes of the Executive (Closed) Session for September 12, 2013 Meeting**

It was requested that the third sentence of the second paragraph of the minutes that reads “T. Pilawski noted that she has been working with Board DAG, J. Denyes, and two other DAGs...” be corrected to read “...one other DAG...” because J. Denyes is currently only working with one other Deputy Attorney General in her office (Division of Law) on the referenced matter.

A motion to approve the Minutes of the Executive (Closed) Session for the September 12, 2013 Board meeting with the above noted change was made by Gary Poppe, seconded by Gordon Craig and approved unanimously.

**4. Review of the Minutes of the November 7, 2013 Conference Call**

A motion to approve the minutes of the November 7<sup>th</sup> conference call without change was made by S. Doughty, seconded by C. Graff, and approved unanimously.

**5. 2014 Board Meetings, Conference Calls and Well Driller/Pump Installer Exam Dates Were Provided for Scheduling and Approval-**

- a.) The dates for the 2014 Board Meetings were set as listed below. All meetings are scheduled to start at 9:30 AM and to take place at the NJ DEP headquarters at 401 E. State Street, Trenton, NJ. Conference room assignments are considered to be tentatively set.

<b>January 23</b>	<b>5<sup>th</sup> Floor Large Conference Room</b>
<b>March 20</b>	<b>4<sup>th</sup> Floor Large Conference Room</b>
<b>May 15</b>	<b>4<sup>th</sup> Floor Large Conference Room</b>
<b>July 17</b>	<b>4<sup>th</sup> Floor Large Conference Room</b>
<b>September 11</b>	<b>4<sup>th</sup> Floor Large Conference Room</b>
<b>November 20</b>	<b>4<sup>th</sup> Floor Large Conference Room</b>

- b.) The dates for the 2014 Conference Calls to certify exam scores are as follows:

**May 1<sup>st</sup>, 2014 at 10:30 am for certification of the April exam results**  
**October 30<sup>th</sup>, 2014 at 10:30 am for certification of the October exam results**

- c.) Well Driller Exam Schedule for 2013:

The remaining well driller and pump installer exam date for 2013 is:  
**December 11 (November 15 was the application deadline)**

- d.) The Well Driller/Pump Installer Exam Dates for 2014 are listed below. All exams will be administered at the NJ Rutgers EcoComplex in Burlington, NJ.

<b>April 3</b>	<b>Application Deadline is March 1</b>
<b>June 11</b>	<b>Application Deadline is May 15</b>

**October 1  
December 10**

**Application Deadline is September 1  
Application Deadline is November 15**

S. Reya reported that an issue occurred wherein exam applicants did not receive written notification of their exam scores for the October exam until a day or two after the application deadline for the December exams. Both P. Bono and he personally called all pre-approved applicants to notify them that they were being granted additional time to reapply and still be considered to have met the deadline. Interested applicants were allowed to first FAX the application and then followed up by sending the original applications and the required exam fees via mail. Further compounding the problem for both new and pre-approved applicants are changes made by the Department's recent restructuring which led to changes in mailing address codes, use of out dated forms and internet postings which list the older mail codes and addresses. As a result delayed or returned applications left little or no time for applicants to correct or minor deficiencies.

**In response to the Bureau's inability to notify applicants in a timely manner and provide forms containing accurate mailing address information, S. Doughty made a motion that due to the mail delays and associated confusion caused by the Department, any untimely submitted applications would be included on the exam list as "approved" to sit for the exam provided the applicants meet the requirements specified by the regulations and the Board.**

**Karl Muessig seconded the motion, and it was approved unanimously.**

**6. Review and Certification of Exam Applicants for the December 11<sup>th</sup>, 2013  
Master, Journeyman, Monitoring, Soil Borer and Pump Installers Exams –**

**Master** – A motion to approve all listed applicants for the exam was made by G. Poppe, seconded by J. Yost and approved unanimously.

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

**Journeyman B** – A motion to approve all listed applicants for the exam was made by G. Craig, seconded by S. Doughty and approved unanimously.

**Monitoring** – A motion to approve all listed applicants for the exam was made by K. Muessig, seconded by R. Dalton and approved unanimously.

**Soil Borer** – A motion to approve all listed exam applicants was made by J. Yost, seconded by G. Poppe and approved unanimously.

**Pump Installer** – A motion to approve all listed exam applicants was made by S. Doughty, seconded by A. Becker and approved unanimously.

P. Bono reported that since the Bureau has taken over proctoring exams she observes reoccurring problems with those sitting for exams. Specifically, she noticed that the vast majority of applicants appear both nervous and anxious upon sitting down to take the exam. While administering the exam she stresses the fact that all applicants have ample time to complete the exam so care should be taken to

answer every question, as there is no need to rush through the test. Furthermore, she recently reached out to the President of the New Jersey Ground Water Association (NJGWA), Joe Neri, in the hope of working together to develop and provide a training course to better prepare exam applicants. P. Bono expressed that perhaps the Bureau could provide regulatory training on specific areas of importance and NJGWA personnel could provide technical training. Both she and Mr. Neri hope to have something in place by the April 2014 Exams.

#### **7. CETCO High TC Geothermal Grout Field Demo Results-**

S. Reya discussed the CETCO High TC geothermal grout field demonstration held on September 18, 2013 and provided a September 23, 2013 memorandum written by R. Dalton, which summarized the event. Board members R. Dalton, G. Craig, S. Doughty and G. Poppe were onsite to witness the mixing and pumping of CETCO's High TC Geothermal Grout for which they request DEP approval. P. Bono and S. Reya from the Bureau of Water Allocation and Well Permitting were also onsite, along with George Stryker, from Yorgey Supply, Wesley Gibson from CETCO and John and Henry Robbins from the drilling contractor, Robbins Water Well Service. Mixes containing 400 lbs. of sand mixed with 50 lbs of sand were pumped through 1.25 inch HDPE tremie pipe into closed loop geothermal well boreholes.

R. Dalton's summary of the demo concluded by stating "pending the results of the permeability test results; the pumpability test indicates the grout is pumpable as long as the manufacturers' recommendations are followed and proper pumping equipment is used." S. Reya said he checked with CETCO representative, Wesley Gibson, regarding the status of the lab permeability tests on the samples from the mixer hopper and the borehole (at discharge from tremie). Unfortunately there are no lab results to review as the samples were lost in transit for over a month. The samples were ultimately located by the shipping contractor and delivered to the certified lab. Mr. Gibson has reportedly been assured they are in good condition and will be tested shortly. He will forward lab results to S. Reya as soon as possible for discussion at an upcoming Board meeting. Finally, S. Reya passed around two samples of the geothermal grout mixture which he had obtained onsite during the demo. Board members noted that the grout samples exhibited extremely minimal shrinkage or cracking.

#### **8. NJDEP Enforcement Activities Update-**

**Recent Bureau Enforcement Activities, as reported by J. Altieri, include the following:**

- a.) **Field Presence** - Staff performed ten (10) site inspections since the last Board meeting (held approximately eight (8) weeks ago) and plans to provide an active field presence by conducting inspections on a frequent basis. The vast majority of drillers that were recently spot checked were in compliance, stated J. Altieri. She

explained that staff investigations included a geothermal well about which a consumer complained and a large public supply well installation.

- b.) **Edward DeSantis**- Mr. Edward DeSantis properly decommissioned three (3) unpermitted wells drilled by his firm several years ago. He has also constructed conforming wells to replace the decommissioned wells that were drilled both without permits and in violation of multiple construction violations. He and his firm were cooperative with Bureau staff in coordinating these activities so staff could be onsite to oversee the drilling and decommissioning activities. Mr. Desantis has also paid all fines associated with these three (3) properties and satisfied all other requirements of the settlement in which he entered into with the Department.
- c.) **Don Creyts and ECR Company** – The Department has reached a settlement in the case concerning an illegal Direct Expansion (DX) geothermal well system that was installed in Princeton Borough. The system installer and geothermal contractor owner, Don Creyts, submitted a settlement offer to the Department through his attorney. In response to this offer, a State Deputy Attorney General (DAG) submitted a counteroffer, which was accepted by Mr. Creyts. The final settlement requires that he remits payment of a \$62,000.00 fine, which must be paid over five (years) in accordance with a payment schedule to which both parties agreed.
- d.) **Kavlunas Case** – Some progress has been made with regard to a deep domestic well (400+ foot) that the Department contends was illegally constructed and never permitted. The case was tried before an Administrative Law Judge (ALJ) on October 3, 2013. The Administrative Law Judge (ALJ) ordered that the well be decommissioned in accordance with DEP regulations and requirements. Secondly, this order required him to pay a fine, but lowered the amount assessed from \$3,900 to \$2,900. The Department DAG working on the case filed exceptions to this, indicating that the well regulations, N.J.A.C. 7:9D, dictate fine amounts. The DAG argued that assessed fines for violations deemed construction-related, therefore, could not be lowered as prescribed in the ALJ's original order (a reduction from \$3,250 to \$2,250 for the construction-related component of the penalty assessment).  
  
The final decision from the DEP Commissioner, Bob Martin, was made on October 3, 2013. This decision both upheld the fact that the well must be properly decommissioned and reinstated the original fine amount of \$3,900. Mr. Kavlunas and his attorney, however, have since filed an appeal (dated November 15, 2013) to the Commissioner's decision. J. Denyes, DAG, discussed the appeals process and how appeals play out through the appellate division.
- e.) **Non-conforming Wells in Saltwater Areas**- A well construction problem developing in areas of known or suspected salt water intrusion was pointed out by J. Altieri. She stated that three (3) drillers recently constructed wells in violation of the "double-casing" and "salt water resistant grout material" conditions stipulated on their permits. The Bureau will soon be taking official enforcement action against these well drillers.

**9. Outstanding Fines and Suspected Non-Conforming Well Construction Practices-**

T. Pilawski requested assistance from the licensed well drillers on the Board to accompany her and other Bureau staff to meet with a well driller who has been making complaints about black steel casing causing bacteriological contamination in well water. She hopes to avoid conducting a lengthy hearing with this driller, who has made repeated claims about willfully violating the well regulations because he believes it yields better wells than if he were to follow the state regulatory requirements. T. Pilawski would like to meet with the driller along with State legal staff and at least one licensed well driller to disprove his claims regarding water quality as it relates to well construction materials; the reason he believes that compliance with the regulations is not warranted. She will contact Board volunteers prior to arranging a meeting.

**10. Update on Enforcement Actions against Journeyman Driller Brian Funkhouser-**

T. Pilawski brought Board members up to date on the whereabouts of Mr. Funkhouser, who was recently located in a nursing home within NJ. Mr. Funkhouser will be served a certified letter and supporting documentation, which detail the reasons the Board seeks to hold a hearing to determine whether to recommend suspension, revocation or any other licensing sanctions to the DEP commissioner. He will be notified immediately to allow him or a legal representative sufficient time to address the reason(s) he has been unresponsive for several years to violations and letters sent by the Department. The Department will notify him that the hearing will be conducted at the January 23, 2014 Board meeting. Board members requested all related documentation several weeks in advance of this meeting to afford them time to review the material in preparation of the hearing. J. Altieri will compile and send this documentation to all members.

**11. Coastal Coring Project Presentation by Dr. Karl Muessing and Helen Rancan-**

K. Muessig and H. Rancan from the Department's NJ Geologic and Water Survey (NJGWS) presented details of a coastal coring project NJGWS recently completed to assess the impacts of Hurricane Sandy on NJ's channels. In order to receive FEMA finances for the dredging of 88 NJ Department of Transportation controlled channels, DEP was asked to conduct a study to ascertain the amount of deposited sediment that is attributed to Hurricane Sandy. H. Rancan presented multiple photos, maps and tables to illustrate what 17 geologists from NJGWS and the Bureau of Water Allocation and Well Permitting were required to accomplish. Working days often totaling 17 to 18 hours, they collected, analyzed and photographed core samples within each channel. Additionally, they collected GPS coordinates and data entered the results of their analyses. The core holes totaled approximately 3,300 and ranged from Sandy Hook to Cape May. Each vibrating

core collection device was typically inserted to a depth of approximately six feet. The research in delineating the pre and post Sandy sediments will prove essential to assessing the scale of the dredging project, securing the necessary funding and ascertaining the areas where the dredging is most crucial as a result of high sediment volumes that would prevent safe navigation of these waterways.

Both K. Muessig and H. Rancan were extremely grateful and impressed with the dedication and professionalism of the geologists from both Bureaus who volunteered for the project. They added that the 30 day deadline they were given seemed like an impossibility but staff accomplished the task within the timeline. Additionally, they were able to work in cooperation with multiple contractors (boat captains, etc), consultants and universities to reach their goal. Brian Buttari and Michael Schumacher from the Well Permitting program were among the geologists who worked on this important task.

#### **12. Coastal Rule Proposal-**

P. Bono is in the process of reviewing a draft rule proposal in conjunction with the Department's Coastal Permit Program ( N.J.A.C. 7:7) and Coastal Zone Management ( N.J.A.C. 7:7E). She has been identifying some areas of concern where these rule proposals should reference the well regulations. Soil borings for geotechnical engineering along bulkheaded/coastal waters and wells lost or destroyed as a result of storm damage or redevelopment activities are all areas where the Bureau of Water Allocation and Well Permitting should be consulted to ensure compliance with permitting, licensing, construction and decommissioning standards. P. Bono noted that she and Kristin Tedesco have provided suggested language for inclusion in this rule proposal.

#### **13. Status of the Revisions to the Well Regulations-**

T. Pilawski said that the status of the draft regulations, N.J.A.C. 7:9D, are still a priority with the Department and a meeting has been scheduled with staff from the Commissioner's office to discuss the rule status and reiterate the importance of proposing the rule as soon as possible.

#### **14. Vented vs. Non-Vented Well Caps for Wells in Flood Prone Areas-**

G. Poppe brought in, demonstrated and passed around a few non-vented well caps for Board members to inspect. This was a follow up to the discussion held at the September 12<sup>th</sup> meeting in which S. Reya questioned members on the merits of installing one of these caps in coastal and other flood prone areas versus installing a vented cap that is installed one foot above the flood plain elevation. Members again agreed that in such instances the sealed cap would likely best protect the well and pumping equipment as well as the aquifer itself from saltwater or other contaminants or debris. S. Reya also noted that P. Bono and he recently suggested some new language for the draft regulations to allow for these types of caps when warranted (the current well regulations require that all wells must be vented).

These well caps are permitted to be installed to control flowing water from wells under artesian pressure that would otherwise overflow the well casing and lead to a nuisance at ground surface.

**15. New Bureau Hire**

T. Pilawski announced that the Bureau has successfully hired one full time employee, Imani McGowan, who has been an hourly employee working with the Well Permitting Program for several years. Ms. McGowan will be introduced to the Board members at a future meeting. Fayard Ali, who was under the supervision of B. Buttari as an hourly employee, was recently hired full time in another DEP program.

**16. Adjournment -1:00 PM**

A motion to adjourn was made by G. Craig, seconded by G. Poppe and approved unanimously.