



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

Mail Code 401-04Q
DIVISION OF WATER SUPPLY & GEOSCIENCE
NEW JERSEY GEOLOGICAL AND WATER SURVEY ELEMENT
BUREAU OF WATER ALLOCATION & WELL PERMITTING
401 E. STATE STREET - P.O. BOX 420
TRENTON, NEW JERSEY 08625-0420
TELEPHONE (609) 984-6831
FAX (609) 633-1231
www.nj.gov/dep/watersupply

NJ STATE WELL DRILLERS AND PUMP INSTALLERS
EXAMINING AND ADVISORY BOARD

New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for January 15, 2015

Approved by the Board on March 19, 2015

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

Board Members Absent: Joe Yost

Board's Legal Representation: Jill Denyes, Deputy Attorney General (DAG), NJ Division of Law

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

Other NJ DEP Member Present: Bryan Barrett, Water Compliance and Enforcement-Central Region

1. Call to Order –

The meeting was called to order by Chairman A. Becker at 9:38am, with a quorum present.

2. Review and Certification of the Minutes for the November 20, 2014 Meeting-

A motion to approve the meeting minutes without change was made by K. Muessig, seconded G. Craig and approved by all members present, with the exception of G. Poppe, who abstained as he was not present at the November meeting.

3. Review and Certification of Exam Scores for the December 10, 2014 Journeyman, Journeyman B, Monitoring, Soil Borer and Pump Installers Exams –

Master – There were no applicants for the master exam.

Journeyman - A motion to approve all listed exam scores and approve passing candidates was made by G. Poppe, seconded by G. Craig and approved unanimously.

Journeyman B – A motion to approve all listed exam scores and approve passing candidates was made by J. Pepe, seconded by R. Dalton and approved unanimously.

Monitoring – A motion to approve all listed exam scores and approve passing candidates was made by G. Craig, seconded by C. Graff and approved unanimously.

Soil Borer – A motion to approve all listed exam scores and approve passing candidates was made by S. Doughty, seconded by K. Muessig and approved unanimously.

Pump Installer – A motion to approve all listed exam scores and approve passing candidates was made by G. Craig, seconded by G. Poppe and approved unanimously.

4. Discussion of Pump Installer Exam Scores and Exam Survey-

S. Reya pointed out that only one (1) of six (6) applicants passed the exam, however, only one (1) score on either of the two (2) sections of the exam was below 70 percent. Therefore, he felt that despite the low passing rate, the overall scores were respectable and may indicate that applicants are reviewing the appropriate study materials. He also noted that only one score on the regulatory portion was below a 75, which is only one question away from passing that section. The study guide materials are bundled with the exam application online for easy accessibility. For the past few years the guide has been provided to help applicants better prepare for this section of the exam, which has historically been problematic.

5. 2015 NJ State Well Driller & Pump Installers Examining and Advisory Board Meeting

Schedule-The 2015 Board meeting and well driller/pump installer exam schedules were provided to Board members. Board meetings are as follows:

Thursday, January 15, 2015

Thursday, March 19, 2015

Thursday, May 21, 2015

Thursday, July 23, 2015

Thursday, September 17, 2015

Tuesday, November 24, 2015

In addition, two conference calls will be held to certify the April and October exams scores.

These calls will be held at 10:00AM on Thursday, April 23rd and Thursday, October 29th

Exams will be administered on:

April, 2015

June 10, 2015

October 7, 2015

December 9, 2015

Application Deadline is March 1st

Application Deadline is May 15th

Application Deadline is September 1st

Application Deadline is November 15th

6. Discussion on Licensees Who Failed to Renew Licenses-

A list of licensees who failed to renew well driller/pump installer licenses by the end of the licensing cycle on June 30, 2014 deadline and the 6-month grace period on December 31st were provided to the

Board members. There were 126 licenses on the list. A \$50 late fee is imposed on licensees who renew between July and December. S. Reya reported that two license holders had sent a check to the Department of Treasury after the June 30th deadline for the full license fee but have failed to pay the late fee. A discussion ensued as to whether it was reasonable to allow these two individuals (one Master driller and one Pump Installer) a reasonable amount of time to remit the late fee in order to reinstate the license without re-testing, as stipulated in the well regulations.

G. Craig motioned to extend the late payment fee acceptance period to allow for payment to be made within thirty (30) days of a certified letter to be sent by the Department. The motion was seconded by G. Poppe and approved unanimously. S. Reya will draft the letter and send it to the two (2) referenced individuals. The licenses will be reinstated if payment of the late fee is submitted within the thirty (30) days.

7. Reminder to Continue Work on the Module for the Master Well Driller License-

Several Board member volunteers will be assisting P. Bono and S. Reya this afternoon as they finalize the Master Well Driller exam module. This module is intended to be provided to the National Ground Water Association (NGWA) for inclusion in their testing program when the Department's updated well regulation rules become effective. In addition to taking existing well drilling and pump installation technical modules currently utilized by NGWA, applicants seeking NJ Master Well Driller licenses would be required to take the NJ Master exam module through NGWA's testing vendor.

8. Discussion of Exam Application submitted to DEP Staff for April 1, 2015, Exam. –

Brian Buttari, an employee of the Bureau of Water Allocation & Well Permitting, submitted an application to take the Monitoring Well Driller Exam on January 6th. Review of his application raises several issues that must be addressed prior to making a determination of eligibility:

1) proximity and accessibility to the driller exam tests; 2) applicability of Well Permitting Program tasks towards the three-year experience requirement as set forth in the rules; 3) potential conflicts of interest stemming from allowing one licensed driller to take action against another licensed driller. Art Becker brought the meeting into an Executive Session to review the specifics of the application by the Board members with Steve Reya.

10:50am Executive (Closed) Session Meeting began

11:50am Executive session is ended and the Open Meeting is brought back to Order by Art Becker.

Once the meeting was re-opened, Steve Doughty made the following motion:

"I move to reflect that the Board, upon review of the information provided by Bureau of Well Permitting staff regarding the qualifications of Mr. Brian Buttari to sit for the upcoming Monitoring Well license exam, concurs that said applicant does not currently appear to possess the requisite well drilling experience (i.e. 3 years under the direction of a licensed well driller)(Note: 1500 hours has generally been accepted in such cases to represent one year of experience). Accordingly, Mr. Buttari should be given an opportunity to further justify the historic well drilling experience listed on his exam application, specifically to demonstrate/clarify the proportion of time during his college years and professional career at NJDEP dedicated to actual related work (i.e. performing qualified well drilling activities) under the direct supervision of a licensed driller."

The motion was seconded by Gordon Craig. The vote was unanimous in the affirmative, except for Karl Muessig who abstained.

9. Complaint against D&L Well Drilling/ Pump Installer Ed Del Carlo-

Chairman Art Becker presented to the Board members a copy of his letter addressed to the attorney representing Mr. D. Pederson regarding a complaint filed against pump installer E. Del Carlo. This request was reviewed and discussed at the November 20th Board meeting. The letter, dated January 15th will be signed by Chairman A. Becker. A copy of the letter will also be sent to Mr. Del Carlo. The letter summarizes the findings of the Board. The Board concluded there was no violation of N.J.A.C. 7:9D and N.J.S.A. 58:4A-12, therefore the Board finds no basis for taking further action against Mr. Del Carlo's license based upon the information presented in Mr. Pedersen's complaint.

10. Update on Evaluation of GA XTRA Geothermal Grout mix by Geo Energy Alternatives (GEA)-

S. Reya said he is waiting for the time vs. permeability graph generated by the independent lab that conducted the permeability testing for this product. This information along with the data supporting the final permeability value provided in a cover letter by the independent lab is needed before a final decision can be made by the Board. He will reach out to the GEA representative regarding the outstanding documentation.

11. Enforcement and Field Work Activities Update (Julia Altieri)-

- A) A hearing between the Department and licensed well driller, Glenn Slater, originally scheduled for December 15 has been adjourned and rescheduled for June 9 and 10, 2015. Mr. Slater is contesting two fines assessed against him. The Department alleges that he illegally modified a well without filing for a well permit application and failed to comply with a notification provision that was a stipulation of an approved decommissioning plan issued for an industrial well. Mr. Slater has requested to subpoena quite a few people to appear as witnesses and the Department's legal counselor for this case is questioning the basis for this need since some individuals have had no connection to this particular case. The Judge is allowing Mr. Slater additional time to make present his reasons. A conference call is scheduled for February 2, 2015 to resolve the issues of Subpoenas.
- B) Two (2) new enforcement cases pertaining to improper well construction in the southern part of the state have recently been undertaken by the Department. Formal documents have been drafted and forwarded to the Southern Bureau of Water and Compliance Enforcement.
 - 1) One case involves Smith Well Drilling Company. The Department recently received notification that an unpermitted domestic well drilled in 2009 in Middle Twp., was not identified in a routine well search conducted by Cape May County Health department staff when reviewing an application for a neighboring septic system. As a result, the approved septic system for a commercial building was installed closer than the minimum required setback distance. The Department issued a notice of noncompliance (NONC) in September, 2014 to the well driller. The driller has admitted he installed the well without a permit. The Department will continue to mandate that the unpermitted well be decommissioned and be

replaced with a permitted, conforming well. In addition, since the well construction is unknown, the required decommissioning will consist of over drilling the well casing and grouting the open borehole. As a condition of the decommissioning plan approval, the driller is required to notify the Department so that the activity can be witnessed by WP staff.

- 2) The second case involves a double cased domestic well drilled by Hoover Garrison Well Drilling in 2013 in Commercial Twp. Cumberland Co. that is believed to be improperly grouted with insufficient quantity of cement grout for sealing the outer casing within the borehole. The driller was sent a notice of non-compliance (NONC). The Department also insists that this well be decommissioned by over drilling the well casing and grouting the open borehole to correct the problem. Department staff will continue to work with Mr. Hoover Garrison to have the well decommissioned and replaced by a conforming well, with the intent of having WP staff witness this activity.
- C) Field work: Well Permitting Section staff members, Brian Buttari and Michael Schumacher assisted the New Jersey Geologic and Water Survey (NJGWS) with conducting borings in the location of a recently discovered several hundred year old shipwreck in Brick Township. NJGWS was tasked with delineating the location of the shipwreck, discovered during a sea wall construction project. K. Muessig noted that the work was being performed as part of a federally funded Superstorm Sandy shore recovery project.

12. Bureau Updates-

Staff Leaving- T. Pilawski announced that Letitia Jones will be leaving the Bureau of Water Allocation and Well Permitting shortly to pursue other opportunities and complete her geology degree. Bureau staff has been interviewing replacement candidates over the past few weeks.

Other Bureau Updates- P. Bono provided an update on continuing efforts to encourage submission of outstanding well records from delinquent contractors. The Bureau continues to focus efforts on the most egregious companies when it comes to submitting well records within the required timeframe. She also informed Board members that the Department's "Permit Extension Act" has again been signed into effect. This latest extension pushes permit expiration dates out one additional year for permits covered by the Act. She also stated that she will soon be working on a checklist to help the well drilling/pump installation community comply with the USEPA/NJDEP Safe Drinking Water Ground Water Rule. The checklist is designed to assist with developing a corrective action plan for public water systems where Fecal Coliform/E. coli are found.

Information Technology- M. Schumacher discussed website and electronic well permitting system (ePermitting) updates and provided information on some enhancements on which he is currently working. Most are geared towards making the permitting portal (RSP) more user friendly for the well drilling community.

12:30pm-Adjournment- A motion to adjourn was made by Gary Poppe, seconded by Gordon Craig and approved unanimously.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

BOB MARTIN
Commissioner

KIN GUADAGNO
Lt. Governor

DIVISION OF WATER SUPPLY AND GEOSCIENCE
NEW JERSEY GEOLOGICAL AND WATER SURVEY ELEMENT
BUREAU OF WATER ALLOCATION AND WELL PERMITTING
401 E. STATE STREET – P.O. BOX 420
MAIL CODE 401-0Q
TRENTON, NEW JERSEY 08625-0420
TELEPHONE: (609) 984-6831
FAX: (609) 633-1231
www.nj.gov/dep/watersupply

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

New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for Thursday, March 19, 2015

Approved by the Board on May 21, 2015

Board Members Present: Art Becker (Chairman), Gary Poppe (Vice-Chairman), Joe Yost, Carol Graff (arrived 9:55am), Steve Doughty, Richard Dalton, and Dr. Karl Muessig

Board Members Absent: Gordon Craig, Joseph Pepe

Board's Legal Representation: Jill Denyes, Deputy Attorney General (DAG), NJ Division of Law

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

Other NJ DEP Staff Present: Bryan Barrett, Water Compliance and Enforcement-Central Region

1. Call to Order –

The meeting was called to order by Chairman A. Becker at 9:41am, with a quorum present.

2. Introductions-

Mr. Mark Ortega, a Rutgers University Geology graduate, was introduced to Board members. Currently working under the supervision of B. Buttari, he is being trained to review Well Records and Well Decommissioning Reports for compliance with the state well regulations and learning about well installation methods through field inspections.

3. Review and Certification of the Minutes for the January 15, 2015 Meeting-

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

4. Review of the Executive Session Minutes from the January 15, 2015 Meeting-

A motion to approve the executive (closed session) minutes without change was made by G. Poppe, seconded by R. Dalton and approved unanimously.

5. Review and Certification of Exam Applicants for the April 1, 2015 Well Driller, Journeyman, Journeyman B, Monitoring, Soil Borer and Pump Installers Exams –

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

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

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

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

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

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

6. Licensees Who Failed to Renew Licenses (Update)-

S. Reya reported to the Board that he had sent certified letters (dated February 6, 2015) to the two licensed individuals who had paid late for their license renewals during the grace period (July 1-December 31, 2014) but did not pay the required late fee. In accordance with a motion made by Board members at the January 15, 2015 meeting, certified letters were sent to Mike Szuch and Robert Stothoff, granting them additional time to submit the outstanding late fee of \$50.00. The regulations, N.J.A.C. 7:9D require that “a licensee who fails to renew his or her license prior to the June 30 renewal payment deadline may have his or her license renewed by payment of the appropriate renewal fee and late payment fee within six months following the renewal date of the license. A licensee who fails to renew his or her license within six months following the renewal date of the license shall not have the license reinstated until he or she successfully passes the written examination prescribed by the Department for applicants for a new license of the proper class.” S. Reya reported that Mr. Stothoff submitted payment after the letter was sent, but Mr. Szuch did not. Therefore, Mr. Szuch, in accordance with the above referenced regulation, will have to re-test should he wish to again obtain a Pump Installer license.

7. Geothermal Grout Mixture (GA-Xtra) Update-

Geo Energy Alternatives (GEA) representatives continue to work with S. Reya to schedule a field demonstration of their GA-Xtra cement-based geothermal well grout. S. Reya will coordinate the event and reach out to Board volunteers once some dates have been identified, which is anticipated to occur within the next few weeks. The field demo is the remaining item that must be successfully performed before the product can be approved by the Board and NJDEP.

8. Board Business and Correspondence (Complaint Against Licensed Pump Installer)-

T. Pilawski summarized the previous Board meetings during which a complaint made against licensed pump installer, Edward Del Carlo, were discussed. The end result of the discussions was

that the Board and Bureau staff found no violation of the well drilling regulations or the statute. Therefore, the Board members determined that there was no basis for taking sanctions against Mr. Del Carlo's license. Following the Board's review and deliberation at the November 2014 meeting, the complainant and his attorney were notified of this outcome via letter. T. Pilawski reported that the Bureau intended to send a letter to Mr. Del Carlo explaining the nature of the complaint and the outcome regarding the Board and Bureau's findings. This did not happen and Mr. Del Carlo became aware of the situation via his insurance company. He then contacted both A. Becker and T. Pilawski via telephone to determine the status of the Board and Bureau investigation. Board members suggested that licensees should be notified in advance so that they are aware when complaints are being raised against them to the Board. T. Pilawski noted that although no action was being taken against Mr. Del Carlo, similar instances in the future should be handled with greater care so as to notify the individual against whom any complaint has been made.

9. Enforcement Topics-

J. Altieri summarized a number of ongoing enforcement cases as follows:

- 1.) The Smith Well Drilling decommissioning of an unpermitted domestic well that is now too close to a septic system in Middle Twp., Cape May County has been delayed due to poor weather conditions in February. The driller requested a few more weeks to start the decommissioning and construction of the new well. The Bureau anticipates the required work to be completed under DEP supervision in the next few weeks, weather permitting. The well driller has been very cooperative with both the Department and the property owner to rectify the situation, noted J. Altieri.
- 2.) A conference call between the Department's attorney and Judge Monaco was completed on February 11, 2015 to resolve the issues of additional Subpoenas filed by well driller Glenn Slater. The result was that the Judge granted Mr. Slater additional time to respond to the DEP attorney's motion to quash the subpoenas recently issued to DEP staff. Mr. Slater needs to file a written opposition by April 13, 2015 to explain why seemingly unrelated DEP staff should be compelled to appear and testify. The Judge again asked if Mr. Slater and the DEP could settle for the offered \$675.00 penalty. Another letter was sent to Mr. Slater on February 12, 2015. The rescheduled hearing date on the matter is scheduled for June 9, 2015 should Mr. Slater choose not to settle. As of this date, Mr. Slater has not responded to the latest settlement offer.
- 3.) The Administrative Order and Notice of Civil Administrative Penalty Assessment (AONOCAPA) for the double cased domestic well drilled by Hoover Garrison Well Drilling in 2013 in Commercial Twp. Cumberland Co. will be sent this week. Based on a compliance evaluation of the Well Record and supporting documentation, the well is believed to be improperly grouted with an insufficient quantity of cement grout for sealing the outer casing within the borehole. A monetary penalty has been assessed and the Department is requiring this well be decommissioned by over drilling the well casing and grouting the open borehole to correct the problem. Department staff will continue to work with Mr. Garrison to have the well decommissioned and replaced by a conforming well. A Bureau staff person will witness the activity.
- 4.) Well Permitting Section staff performed five (5) field inspections the past eight (8) weeks including a spot check inspection of a monitoring well driller in the process of installing a well. The driller was in compliance with a proper license and permit. Staff also performed well abandonment compliance inspections related to cancelled Water Allocation Permits that are no

longer in effect. The purpose of such inspections is to ensure that these wells, if no longer in use, are properly decommissioned.

- 5.) The Department was recently awarded reimbursement costs of preparing and litigating the case involving well driller Mr. Kavlunas of Quality Well Drilling. Mr. Kavlunas has been ordered to pay a total of \$2,065.00 in twelve (12) installment payments of \$175.00.

10. Development of the Master Exam Module-

Board volunteers, P. Bono and S. Reya met after the January 15th meeting to finalize the Master Exam module that would be provided to the National Ground Water Association (NGWA) for the proposed testing, licensing and continuing education program. S. Reya noted that in addition to completing the bank of questions that they envision submitting to NGWA upon release of the new regulations, the workgroup noticed a number of poorly worded questions and answer choices in the currently used exam. These questions, approximately a five (5) in total, were revised and will be inserted in place of the existing questions first beginning at the exam scheduled for April 1, 2015.

11. Request for Board to Review NJDEP Activities for Consideration as Approved Experience for Well Driller Exams-

P. Bono presented a table that she drafted in response to the discussion held at the January Board meeting at which members reviewed the required experience and qualifications of a Bureau of Water Systems and Well Permitting (Bureau) employee who applied to take a well driller exam. She noted that although Bureau employees are barred from working for a drilling company in NJ, they often gain drilling experience by working unique projects that differ from those of the traditional well driller exam applicant. When asked, T. Pilawski stated that the employees who apply to take drilling exams do so as a matter of personal choice, not as a job requirement related to his/her duties within the Bureau or having been directed to do so by his supervisors. The chart P. Bono provided (see attached draft, dated March 18, 2015), illustrated an itemized comparison of the license exam application review for three (3) different applicant types: 1) for in-state applicants (existing process); 2) for out-of-state applicant (existing process) and 3) BWA&WP Bureau staff applicants (proposed process).

Proposal to establish a method to allow BWA&WP staff to gain and document qualifying drilling experience appropriate driller exams: As proposed, Bureau employees who apply for an exam will be required to identify "approved" drilling activities and provide a documented summary of hours worked while employed at the DEP. For Board approval of certain unsupervised and unpermitted NJDEP-geological work to be considered as appropriate work experience, the Department shall submit a detailed description of the task(s) for Board review and determination. Additionally, Bureau staff will be revising the existing "Reference Questionnaire" for all exam applicants to allow for better itemization of part-time/intermittent experience and/or experience obtained under the supervision of multiple drillers/employers. The current questionnaire makes it very difficult to report and tabulate intermittent experience or work completed with a variety of drilling companies. A revised chart will also be provided to members for review at the next meeting to incorporate comments and suggestions of Board members. In addition, the Board determined that once a Bureau staff person gained the requisite experience, the testing for that individual should be the same as that given to any other license candidate.

Two (2) such special drilling projects were described, with specific details provided by K. Muessig. One New Jersey Geological and Water Survey (NJGWS) project entailed conducting vibracore sampling within NJ's channels to sample approximately six (6) ft. into the bottom sediments to determine the extent of sediment deposited by Superstorm Sandy. It was noted that this project did

not require the supervision of well drillers on each vessel obtaining the samples, as the depths and diameters of the soil core did not meet the criteria at which it would meet NJDEP's definition of a well. However, the project was geological and technical in nature and came under the direction of the NJ State Geologist. The second project presented for Board consideration was one in which NJGWS was tasked with using direct push drilling equipment to drill into the beach sediment in Brick Twp. to delineate the perimeter of an underground ancient shipwreck that had recently been located by a construction crew in the process of installing a seawall in the area. S. Reya expressed concerns with allowing unpermitted and unsupervised experience of activity that is unregulated by the Department to be counted as drilling experience. He felt this sets a precedent for applicants who work for drilling contractors to also attempt to claim such experience as eligible. It was noted, however, that the project itself was approved by the NJ State Geologist and that any applicant would still be required to have at least one NJDEP licensed well driller to sign the reference questionnaire to verify that the employee has the required experience and that the alternative process applies only to Bureau employees due to their unique experience which Board members felt was relevant drilling experience.

C. Graff made a motion to approve, as relevant well driller experience for Bureau employees, the two projects presented by the Department (drilling with direct push equipment to discover a shipwreck and the vibracore soil borings collected in the bays and channels). G. Poppe seconded the motion and all members voted in favor of the motion with the exception of K. Muessig, who abstained.

12. DEP Program Updates-

Data Management-

Well Permitting staff Lynn Stout and Gale Witkowski continue to work on storage and retrieval issues related to historic well permit, record and decommissioning image files that are currently maintained in the Department's database. They are currently addressing data migration issues associated with moving the image from one software program to another.

ePermitting Portal-

In the past, users of the well permitting portal are not automatically notified when a submitted document (well record, decommissioning report, etc.) has been accepted by the Department. Currently, the system only notifies users, via email, when a document is returned as "technically deficient." The system user must manually look up the status for documents to see if they have been approved. M. Schumacher noted that within the past few days they have managed to successfully test the system and make the upgrades to have emails sent out upon approval of the subject document. The emails will be sent to the registered Facility Services Administrator (FSA) upon review and acceptance of the submittal.

M. Schumacher reported that the Department will commence charging users a convenience charge for credit card transactions in the future. Up until now, the Department has paid the credit card surcharge associated with each payment processed through the online portal. Soon this fee will be passed onto the system user (well driller). This is an across the board change for all users of the portal, not simply the well drilling community. It is anticipated that the convenience fee will be roughly 1.5-2% of each permit fee.

New Jersey Ground Water Association (NJGWA) Meetings-

It was mentioned that P. Bono, M. Schumacher and S. Reya will be attending two (2) upcoming NJGWA meetings. At the first meeting staff will present instructions on how to use the Department's online mapping tool, NJGeoWeb. They will focus on the federal ground water rule at the second

meeting and the implications it has on the well drilling and pump installation/maintenance community.

Adjournment- 12:40 pm -

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



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

Mail Code 401-04Q
DIVISION OF WATER SUPPLY & GEOSCIENCE
NEW JERSEY GEOLOGICAL AND WATER SURVEY ELEMENT
BUREAU OF WATER ALLOCATION & WELL PERMITTING
401 E. STATE STREET - P.O. BOX 420
TRENTON, NEW JERSEY 08625-0420
TELEPHONE (609) 984-6831
FAX (609) 633-1231
www.nj.gov/dep/watersupply

NJ STATE WELL DRILLERS AND PUMP INSTALLERS
EXAMINING AND ADVISORY BOARD

New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board April 23, 2015 Conference Call

Approved by the Board on May 21, 2015

Board Members Present at DEP Main Office: Dr. Karl Muessig, Steve Doughty

Board Members Participating Via Telephone: Art Becker (Chairman), Carol Graff, Joe Pepe, Gordon Craig and Richard Dalton

Nonparticipating Board Members: Gary Poppe (Vice-chair), Joe Yost

NJDEP Bureau of Water Allocation and Well Permitting Staff Present: Terry Pilawski, Pat Bono, Steve Reya

1. **Call to Order** – Chairman A. Becker called the meeting to order at 10:09 am with a quorum present.
1. **Certification of Scores for April 1, 2015 Exam Candidates for Master, Journeyman, Journeyman B, Monitoring, Soil Borer and Pump Installers License**–

Master– A motion to certify the applicant scores was made by G. Craig, seconded by K. Muessig and approved unanimously. It was noted that two (2) candidates sat for the exam; both candidates passed.

Journeyman A motion to certify the applicant scores was made by R. Dalton, seconded by S. Doughty and approved unanimously. It was noted that six (6) candidates sat for the exam; one (1) candidate passed.

Journeyman B – A motion to certify the applicant scores was made by C. Graff, seconded by G. Craig and approved unanimously. It was noted than one (1) candidate sat for the exam and he did not pass.

Monitoring – A motion to certify the applicant scores was made by R. Dalton, seconded by C. Graff and approved unanimously. It was noted that thirteen (13) candidates sat for the exam; six (6) candidates passed.

Soil Borer – A motion to certify the applicant scores was made by G. Craig, seconded by R. Dalton and approved unanimously. It was noted that three (3) candidates sat for the exam; two (2) candidates passed.

Pump Installer – A motion to certify the applicant scores was made by G. Craig, seconded by J. Pepe and approved unanimously. It was noted that three (3) candidates sat for the exam; two (2) candidates passed.

3. **Adjournment-** Attendees were reminded that the next Board meeting is scheduled for May 21st. **The call was adjourned at 10:15 am.**



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

Mail Code 401-04Q
DIVISION OF WATER SUPPLY & GEOSCIENCE
NEW JERSEY GEOLOGICAL AND WATER SURVEY ELEMENT
BUREAU OF WATER ALLOCATION & WELL PERMITTING
401 E. STATE STREET - P.O. BOX 420
TRENTON, NEW JERSEY 08625-0420
TELEPHONE (609) 984-6831
FAX (609) 633-1231
www.nj.gov/dep/watersupply

NJ STATE WELL DRILLERS AND PUMP INSTALLERS
EXAMINING AND ADVISORY BOARD

New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for May 21, 2015

Approved by the Board on July 23, 2015

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

Board Members Absent: None

Board's Legal Representation: Jill Denyes, Deputy Attorney General (DAG), NJ Division of Law

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

Other NJ DEP Member Present: Bryan Barrett, Water Compliance and Enforcement-Central Region, Jeff Hoffman and Brian Buttari, New Jersey Geological and Water Survey

1. Call to Order –

The meeting was called to order by Chairman A. Becker at 9:37am, with a quorum present.

2. New Jersey Geologic and Water Survey (NJGWS) Program-

Dr. Karl Muessig, who is also the NJ State Geologist, presented copies of the newly updated NJ Bedrock Geology map. This is the first major revision of the map since it was initially published 100 years ago. Dr. Muessig explained that the revised map represents several decades of work by his staff at NJGS, including R. Dalton, who have worked to drastically improve the accuracy of the map since its original publication date of 1914. The new map includes several cross sections of the geology present throughout the state.

K. Muessig then announced that he would be retiring on June 30, 2015 and introduced his colleague, Jeff Hoffman, to Board members as his potential successor as New Jersey State Geologist.

3. Review and Certification of the Minutes for the March 19, 2015 Meeting

A motion to approve the meeting minutes without change was made by G. Poppe, seconded by C. Graff and approved by all members except for G. Craig, who abstained as he was not present at the meeting.

P. Bono discussed revisions made to the “Summary Chart Comparing Currently Required and Proposed Requirements for Applicants to Apply for a NJ Well Driller License (Draft, May 21, 2015)” which was initially presented to the Board members at the March 19th meeting. The revisions reflect the suggested changes made by the Board members at that time. Board members reviewed and accepted the revised chart without comments or changes.

P. Bono and S. Reya presented a revised “Reference Questionnaire” form that constitutes part of the application to sit for a driller or pump installer exam. They were tasked with developing a new form to allow applicants to more accurately report supervised experience that was obtained intermittently, with multiple employers or under the supervision of multiple licensed drillers at various times. The intent of the reference form is to document the amount of time an applicant has worked in the field. The individual’s experience must still tally a total of three (3) full years for driller exam applicants and one (1) full year of experience for Pump Installer Applicants. The newly revised form, however, is intended to allow the itemization of this time rather than having a form that lists only one start and end date of supervised experience for each of the required references (minimum of two) that currently accompanies each application. Board members noted that the form itself is easy to follow, but that item number 2 on the instructions sheet is confusing and could possibly mislead applicants. S. Reya and P. Bono will revise the deficiency before making the document public.

4. Review of the Conference Call Minutes from April 23, 2015 -

A motion to approve the conference call minutes without change was made by G. Craig, seconded by R. Dalton and approved by all members except G. Poppe and J. Yost, who abstained because they did not participate in the call.

5. Review and Certification of Exam Applicants for the June 10th, 2015 Well Driller, Journeyman, Journeyman B, Monitoring, Soil Borer and Pump Installers Exams –

Master Well Driller– No applicants applied for this license type.

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

Journeyman B – A motion to approve all listed exam applicants was made by K. Muessig, seconded by S. Doughty and approved unanimously.

Monitoring – The review of the applicants for the Monitoring Exam prompted a motion to enter Executive Session (which was held from 10-10:15 am) to discuss the “pending Board Review” status for one applicant, Brian Buttari. The motion to enter Executive Session to discuss Mr. Buttari’s revised application was made by S. Doughty and seconded by A. Becker, with all members in favor (see January 15 and March 19, 2015 meeting minutes for additional information regarding review of

the original application submission). Upon conclusion of the Board members discussion of the matter in the executive session was closed at 10:15 am. Chairman A. Becker resumed the regular open meeting immediately thereafter. Once the non-Board attendees re-entered the room and resumed their seats, a motion was made at 10:18 am to approve all listed applicants to sit for the exam, including Mr. Buttari, was made by J. Yost, seconded by G. Poppe and approved by all members, except for S. Doughty and K. Muessig who abstained from the vote. Mr. Buttari's status will be changed to "approved" and he will be scheduled for the exam along with all other listed applicants.

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

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

6. NJDEP Retirements-

Chairman A. Becker announced that this would be the last meeting for Karl Muessig. Both he and former member Fred Sickles are retiring as of July 1st. After listing the many contributions to the Board and the NJ drilling industry made by both men over the years, A. Becker thanked them for their service and noted that it was a pleasure to have worked with both men and that their expertise and leadership was much appreciated by the entire Board. On behalf of the Board, Chairman Becker expressed appreciation for their leadership and expertise. A number of Board members stated that Mr. Sickles and Dr. Muessig will be greatly missed when they retire on July 1st. A. Becker then presented a plaque to each as a token of the Board's appreciation.

7. Review of the Pump Installer Surveys –

The latest exam results and corresponding pump installer surveys were summarized by S. Reya. Board members discussed whether age of the applicant may play a role in the scores attained by applicants. They questioned whether the survey could ask the age of an exam candidate since the survey is merely voluntary. J. Denyes said that she would report back to the Board at the next scheduled meeting regarding the acceptability of including an age question on a voluntary survey.

8. Geothermal Grout Mixture (GA-Xtra) Update-

S. Reya has been working with Geo Energy Alternatives (GEA) representatives to schedule a field demonstration of their GA-Xtra cement-based geothermal well grout. He anticipates that this will occur next week. Board members A. Becker, G. Craig, R. Dalton and S. Doughty volunteered to attend the event. S. Reya said he would email final details shortly, which will entail the time, location and exact mixture that is to be pumped. The field demo is the only remaining item that must be successfully performed before the product can be approved by the Board and NJDEP.

9. Enforcement and Field Work Activities –

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

- A) **Cape May Co. Well Decommissioning** - Smith Well Drilling successfully decommissioned an unpermitted domestic well in Middle Twp., Cape May County located too close to a recently

constructed septic system. The well decommissioning process, which consisted of removing the entire casing/screen and reaming out the borehole prior to grouting, was completed on April 15, 2015. The driller decommissioned the existing unpermitted well and constructed a new domestic well all according to the regulations. The decommissioning activities and new well installation were completed under DEP supervision.

- B) **Slater Well Drilling Hearing** – The Bureau was notified on May 1, 2015 by the State DAG that the subpoenas issued to Mr. Syed Rizvi of NJDEP and a residential well owner to testify in court for the G. Slater hearing case have been officially quashed by Judge Monaco. This case concerns two (2) wells where penalties were assessed to Mr. Slater in the amount of \$675.00 for altering a well without a permit and decommissioning a well without giving prior notice to the Department. In addition, the scheduled hearing date has now been moved from June 9, 2015 to September 28-29, 2015 in the event Mr. Slater still does not move to settle. As of this date, Mr. Slater has not responded to the latest settlement offer.
- C) **Field Inspections** - Well Permitting Section staff performed three (3) field inspections including a site inspection for deep, community water supply wells drilled at the U.S. Joint Base (Fort Dix, McGuire AFB and Lakehurst) military base that included staff from Water Allocation, Well Permitting and NJGWS staff. The Section is planning to continue to spot check well drillers over the summer months when drilling activity is higher.

10. Bureau Program Updates-

T. Pilawski announced that Brian Buttari has transferred from the Bureau of Water Allocation and Well Permitting to the NJ Geologic and Water Survey program. She also said NJGWS has lent the Bureau a temporary position, which is administered through an approved agency. Current Bureau hourly employee, Jeremy Wick, will be given the opportunity to work in this other title so that he can essentially work full time. In addition to his regular duties, he will be providing assistance to S. Reya with some of the tasks associated with the driller and pump installer exams and licensing program.

11. Adjournment of Open Meeting- 11:15 am -

A motion to adjourn was made by K. Muessig, seconded by R. Dalton and approved unanimously.

Beginning 11:25 am, a quorum of Board members remained after the close of the open meeting to review the current test modules for Journeyman, Journeyman B and remaining portion of the Master Exam. Due to the nature and content of the discussion, this session was conducted as a closed meeting. The session adjourned at 1:30 pm.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

Mail Code 401-04Q
DIVISION OF WATER SUPPLY & GEOSCIENCE
NEW JERSEY GEOLOGICAL AND WATER SURVEY ELEMENT
BUREAU OF WATER ALLOCATION & WELL PERMITTING
401 E. STATE STREET - P.O. BOX 420
TRENTON, NEW JERSEY 08625-0420
TELEPHONE (609) 984-6831
FAX (609) 633-1231
www.nj.gov/dep/watersupply

NJ STATE WELL DRILLERS AND PUMP INSTALLERS
EXAMINING AND ADVISORY BOARD

New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for July 23, 2015

Approved by the Board on September 17, 2015

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

Board Members Absent: Joe Pepe

Board's Legal Representation: Jill Denyes, Deputy Attorney General (DAG), NJ Division of Law

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

New Jersey Geologic & Water Survey (NJGWS) Staff- Jeff L. Hoffman, NJ State Geologist

NJDEP Bureau of Safe Drinking Water- Kristin Tedesco

Other NJ DEP Member Present: Bryan Barrett and Brett Callanan of Water Compliance and Enforcement-Central Region

1. Call to Order –

The meeting was called to order by Chairman A. Becker at 9:37 am, with a quorum present.

- 2. Introductions-** Bryan Barrett from the Department's Water Compliance and Enforcement Program – Central Region introduced his colleague, Brett Callanan, who is currently taking over many of the responsibilities, previously held by Jeff Hoffman (now retired). As such, he will be working with

Bureau of Water Allocation and Well Permitting (Bureau) staff on enforcement case referrals and follow up. He will also continue to work with the Board on enforcement related matters involving well drillers and pump installers.

Acting NJ Geologic & Water Survey (NJGWS), Jeff L. Hoffman, was introduced as the Acting State Geologist. He has assumed the workload of recently retired State Geologist, Dr. Karl Muessig. Mr. Hoffman said he looks forward to working with Board members though he has not yet been appointed to the Board to serve in place of Dr. Muessig.

3. Review and Certification of the Executive Session Minutes for the May 21, 2015 Meeting-

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

4. Review and Certification of the Minutes for the May 21, 2015 Meeting –

The following changes were requested to be made to the Monitoring Well driller exam applicants section under item 5 of the open session minutes:

The third sentence, which begins with “Following the executive session discussion, a motion to approve...” should be revised to make it clear that the Board had returned to open session after the discussion about a specific applicant, Brian Buttari. Therefore, the motion to approve all listed applicants was made in open session. Finally, this sentence contained a typo that should be corrected (the same sentence listed “mad” rather than “made”).

Bureau staff will revise the minutes accordingly.

5. Review and Certification of Exam Scores for the June 10, 2015 Journeyman, Journeyman B, Monitoring, Soil Borer and Pump Installers Exams –

Master Well Driller– No applicants had applied to take this exam.

Journeyman - A motion to approve all listed exam scores was made by J. Yost, seconded by S. Doughty and approved unanimously. No candidates passed the exam.

Journeyman B – A motion to approve all listed exam scores was made by G. Poppe, seconded by C. Graff and approved unanimously. One (1) candidate passed the exam.

Monitoring – A motion to approve all listed exam scores was made by R. Dalton, seconded by G. Craig and approved unanimously. Six (6) candidates passed the exam.

Soil Borer – A motion to approve all listed exam scores was made by G. Poppe, seconded by C. Graff and approved unanimously. No candidates passed the exam.

Pump Installer – A motion to approve all listed exam scores was made by S. Doughty, seconded by J. Yost and approved unanimously. Two (2) candidates passed the exam.

6. Review of the Pump Installer Surveys –

S. Reya presented two (2) completed pump installer exam surveys that were completed by two (2) of the three (3) applicants who sat for the exam. He noted that once again the exam scores were quite

impressive. Specifically, two (2) of the three (3) applicants passed the exam and the one applicant who did not pass, failed only the regulatory section by a couple of questions. One of the passing candidates did so the first time sitting for the exam while the other passed on his second attempt. S. Reya believed that over the past year or so the pump installer exam scores have significantly improved.

In continuing the discussion of a topic raised at the May meeting, Board members discussed whether the age of an applicant likely play a role in the score attained. At the Board's May meeting, members questioned whether the survey could ask the age of an exam candidate since the survey is merely voluntary. J. Denyes reported back to the Board that the acceptability of including an age question on a voluntary survey could potentially be viewed as a discriminatory practice. She recommended that the Bureau (on behalf of the Board) did not ask the age, as she did not see how the answer would assist the Board or Bureau in improving test study material or achieving a higher passing rate among exam applicants. Board members, however, generally felt that by understanding whether a particular age group is struggling with the exams, they may be better able to assist the industry in preparing for the exams. They requested that S. Reya provide the ages of the applicants at the time the exam scores and surveys are reviewed by the Board, as this information is already collected on current application forms (to ascertain that applicants are obtaining required experience in accordance with applicable OSHA requirements).

7. **Final Revised Reference Questionnaire-** It was noted that the reference questionnaire for driller/pump installer exam applicants has been recently revised to allow for itemization of non-consecutive supervised experience. Examples of non-consecutive experience in the industry include time interrupted due to attending school, working for another employer, recording part time/seasonal employment or working under the supervision of multiple licensed drillers at the same company. S. Reya noted that current exam applications will be revised to include the updated questionnaire.

8. **2016 Testing Schedule-**

The 2016 well driller and pump installer exams will be held on the following dates:

April 6	June 8	October 5	December 7
---------	--------	-----------	------------

9. **Geothermal Grout Mixture (GA-Xtra) Update-**

Geo Energy Alternatives (GEA) representatives conducted a field demonstration of their GA-Xtra cement-based geothermal well grout for Board members A. Becker, G. Craig, R. Dalton and S. Doughty on May 29, 2015. Bureau staff members M. Schumacher and S. Reya also attended the demo. All who attended found that the mixture could be mixed and pumped into the borehole when mixed in accordance with Department regulations and product manufacturer recommendations. Therefore, the remaining item to review before the Board could recommend approval of the product to NJDEP is the permeability data of the "field mix" samples that were obtained onsite. Final approval will be dependent on the requisite lab data, which has not yet been submitted for review.

10. **Board Member Appointments-**

P. Bono requested Board Members to update their resumes for reappointment to the Board, as most members are either currently serving on expired terms or are due for reappointment shortly. She

volunteered to send the resumes the Bureau has on file to each member so that he/she may update them as necessary. She requested that members provide the resumes via email.

11. Ethics Training for Board Members-

B. Barrett stated that Boards with which he works have been advised that all members must complete Ethics Training to serve on a state Board. J. Denyes will inform members of requirements applicable to this Board.

12. Enforcement and Field Work Activities –

A summary of Well Permitting Program's recent (past 8 weeks) enforcement and field activities was presented by J. Altieri.

- A) Field work: Well Permitting Section staff have performed approximately 16 field inspections in the last 8 weeks. Site inspections have also included staff from Water Allocation and other Water Supply staff. At more than one site, some of the State's more experienced drillers took the time to educate the Department staff on how to drill a well. This is much appreciated by the Department because it allows new staff and those who don't often work with well drillers to observe the proper way to install a well. Other field work included site inspections to find lost wells, new public supply and test well installations and spot checking of well drilling activity. No serious violations were noted during this time period and the well drillers were in compliance with well construction regulations. T. Pilawski also noted that Bureau staff has responded to two (2) nuisance complaints received from calls from the public in relation to perceived impacts from well drilling operations. In both instances the drilling contractors were found to be appropriately licensed and had obtained drilling permits from the Bureau.
- B) Several meetings were conducted with Water Compliance and Enforcement staff in regards to overhauling the Bureau's enforcement program and procedures. This is the first step in a long process of transforming the well permitting enforcement program into the Department's software system, NJEMS. This will allow enforcement documents to be generated and tracked in the same system used by Water Compliance and Enforcement for other Department enforcement cases. This will enable the Well Permitting Program's compliance and enforcement actions to be much more efficient and interactive within the Department. Coordination with Enforcement and Department computer software specialists will be ongoing in the coming months. M. Schumacher and J. Altieri will be working with Compliance and Enforcement staff on this initiative.

13. Presentation on the USEPA/NJDEP Ground Water Rule-

Kristin Tedesco from the Safe Drinking Water program presented a summary on the lessons learned during implementation of the Ground Water Rule (GWR), which was promulgated by the EPA in November 2006 to provide increased protection against disease causing microorganisms in public water systems using ground water sources. Since the effective date of compliance of December 1, 2009, NJDEP has been working in conjunction with the laboratories, water systems and local health

departments to track and pinpoint systems with deficiencies that make them susceptible to fecal contamination

The overview included examples of systems that were identified as at risk during the first few years of GWR compliance (December 1, 2009 through present). A summary of the steps necessary to achieve compliance and questions that are commonly asked by all systems were provided. K. Tedesco also presented several examples of common problems exhibited by well owners in which their wells had become impacted by fecal coliform bacteria contamination. She stressed the importance of well drillers and pump installers in providing extensive inspections of these systems and provided guidance for what should be included in a corrective action work plan. Of crucial importance, she noted, are the strict timeframes under which the drillers/pump installer and water system owner must operate in order to identify and correct the deficiencies within the federally mandated timeframes. Finally, the presentation discussed current challenges in achieving compliance and potential challenges of implementing corrective actions in the future.

- 13. Guide Book on Inspections of Well Drilling** –P. Bono said that the inspection guide book that was presented to Board members for their suggestions at previous meetings has undergone major revisions. She anticipates that another draft will be presented to Board members later in the Fall.

14. Adjournment-

At 12:12 pm, a motion to adjourn was made by S. Doughty, seconded by B. Craig and approved unanimously.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

Mail Code 401-04Q
DIVISION OF WATER SUPPLY & GEOSCIENCE
NEW JERSEY GEOLOGICAL AND WATER SURVEY ELEMENT
BUREAU OF WATER ALLOCATION & WELL PERMITTING
401 E. STATE STREET - P.O. BOX 420
TRENTON, NEW JERSEY 08625-0420
TELEPHONE (609) 984-6831
FAX (609) 633-1231
www.nj.gov/dep/watersupply

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

NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for Thursday, September 17, 2015

Approved by the Board on November 24, 2015

Board Members Present: Art Becker (Chairman), Gary Poppe (Vice-Chairman), Joe Yost, Carol Graff, Steve Doughty (present until 10:20 am at which point he left to attend another meeting) and Richard Dalton

Board Members Absent: Joe Pepe, Gordon Craig.

Board Legal Representative: Jill Denyes, Deputy Attorney General (DAG), NJ Division of Law

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski, Pat Bono, Steve Reya, Julia Altieri (arrived at 10:29 am), Michael Schumacher, Mark Ortega and Melia Stoop

New Jersey Geologic & Water Survey (NJGWS) Staff- Jeff L. Hoffman, NJ State Geologist (present until 10:20 am at which point he left to attend another meeting)

Other NJ DEP Member Present: Bryan Barrett and Brett Callanan of Water Compliance and Enforcement-Central Region

1. Call to Order –

The meeting was called to order by Chairman A. Becker at 9:37 am, with a quorum present.

- 2. Introductions-** Assistant Commissioner of Water Resources Management, Dan Kennedy, introduced himself to Board members and provided some background on the DEP programs he oversees. In response to a written inquiry Chairman A. Becker sent to the Commissioner's office regarding necessary revisions to the current well regulations (N.J.A.C. 7:9D), Mr. Kennedy provided an update of the current status of the regulatory revisions and reason for the delay in the proposal and adoption

of the rules. Unfortunately the draft rule revisions have been held up due to the prioritization of necessary rule revisions within various Department programs. Many of these regulatory revisions needing immediate action are now completed. Therefore, he anticipates that the much needed updates to the well regulations will soon undergo Department legal review and subsequently sent to the governor's office. At that point, the Board can advocate for the rule proposal. He anticipates that the rule will be submitted by December 2015 and will be proposed in early 2016. Additionally, he noted that he would be willing to provide another update at the Board's November meeting provided his schedule permits.

Assistant Commissioner Kennedy also informed Board members that staff continues to work on Board reappointments. Staff will reach out to the Board members if any additional information needs be submitted.

3. Review and Certification of the Minutes for the July 23rd, 2015 Meeting –

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

4. Review and Certification of Exam Applicants for the October 7, 2015 Master Well Driller, Journeyman, Journeyman B, Monitoring Well Driller, Soil Borer and Pump Installers Exams –

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

Journeyman - A motion to approve all listed exam applicants was made by G. Poppe, seconded by S. Dougherty and approved unanimously.

Journeyman B – A motion to approve a single exam applicant was made by R. Dalton, seconded by J. Yost and approved unanimously.

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

Soil Borer – S. Reya noted that one applicant, Roman Iwaskiw, whose application is listed as “pending,” included a letter describing extenuating circumstances which precluded him from meeting the application requirements. Specifically, Mr. Iwaskiw indicated that he was unable to meet the application requirement of providing information for drilling a borehole greater than 50 feet in depth. His letter stated he is certified by the National Ground Water Association (NGWA) in their monitoring and augering category, but his drilling work in Pennsylvania has never required him to go deeper than 50 feet. He drills using direct push technology and, since bedrock is encountered at relatively shallow depths in eastern Pennsylvania, he does not have the opportunity to exceed that depth. NJ does not require a drilling permit for boreholes less than 50 feet deep. The purpose for requiring a permitted borehole on the application is to allow staff to review the construction of at least one borehole drilled by the applicant. S. Reya also explained that since the applicant has met the minimum experience requirement of three (3) years while drilling out of state and is certified by NGWA in the appropriate category, Mr. Iwaskiw is eligible to sit for the Monitoring Well Driller exam. Unlike other licenses, the soil borer license has no “equivalent” NGWA certification exam to use as a qualifier to sit for the NJ exam. Board members expressed unanimous support to allow Mr. Iwaskiw to sit for the Soil Borer exam since he is deemed qualified to sit for a “higher level” license category. A. Becker also suggested that the Board reexamine the Soil Borer application at a future

meeting to allow for out-of-state soil boring experience to count towards NJ licensure, provided the applicant has passed higher or equivalent NGWA certification(s).

A motion to approve all listed exam applicants, including R. Iwaskiw, was made by S. Doughty, seconded by R. Dalton and approved unanimously.

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

5. Drought Status Update-

A lack of recent precipitation has necessitated regular meetings between S. Doughty and other Department staff to continually assess the drought status. S. Doughty explained that the Department has various levels of drought status at its disposal to attempt to mitigate the adverse effects of drought conditions. Based on current drought indicators (including precipitation, stream flows, ground water and reservoir levels), staff is currently looking into the potential of imposing a drought watch for certain water supply regions. He indicated that a drought watch essentially calls for residents to voluntarily conserve water. A “Drought Conditions Update (9/16/15)” was also provided to Board members, which detailed the precipitation deficit facing New Jersey’s water supply.

G. Poppe raised concerns about the lowering of the static water table in the Englishtown formation, particularly in the southwest portion of Colts Neck where there are a number of golf courses. Mr. Poppe reported that he and another active driller in the area met with Tom Frank from the Colts Neck Health Department regarding their observations and serious concerns while working on wells in that area. Mr. Frank notified the residents via an article in a newsletter, urging water conservation when irrigating.

Many residential property owners in the area have two wells in the Englishtown formation – one for domestic supply and a second for irrigation. G. Poppe described the wells as having significantly higher pump capacities than an average domestic well serving a single home and believes that a number of the property owners have a combined pump capacity of greater than 70 gpm. (70 gpm is the threshold for a NJDEP water allocation permit/water use registration). For several years now, the static water level has been dropping but the drop has become noticeably more dramatic since July of this year. G. Poppe reports that the static water level within a number of wells has dropped as much as 40 – 95 feet. This creates a need for the pumps to run constantly to compensate for the lack of water needed to recharge the well. He reported that he has encountered a number of situations in the region where well pumps became so overheated, the PVC well casing melted, causing the well pump to fuse to the casing and sealed off the well screen. This necessitates the decommissioning of the well and drilling of a new well to replace the failed well. Division staff will look into the issue reported by G. Poppe.

6. Reminders of the 2015 and 2016 well driller and pump installer exam dates were announced as follows:

- 2015 exams: October 7, December 9
- 2016 exams: April 6, June 8, October 5, December 7

7. Geo Energy Alternatives (GEA) GA-Xtra Geothermal Grout Update-

No progress has taken place since the last Board meeting. The outstanding issue is the need to collect another sample to send for lab testing as the original sample could not be used for the required permeability tests. The manufacturer representative had requested that the contractor be able to use this grout for an entire project and not just for one well for the Board demonstration so that the contractor would not need to switch grouts in the middle of the job. Members all agreed that utilizing a grout product that has not yet achieved approval from the Department poses unnecessary risk and that only one well should be grouted with the product for the purpose of demonstrating that the product can be mixed and placed within a borehole in accordance with both manufacturer specifications and NJDEP regulations.

8. Ethics Training for Board Members- Jill Denyes, Deputy Attorney General (DAG) New Jersey Division of Law-

J. Denyes advised that all members are required to complete an online Ethics Training course to serve on a NJ State Board. This training must be retaken every three (3) years. J. Hoffman indicated that state employees are also required to complete ethics training, but that he believes State officials are required to take a different online training module. A link and further information about the required training will be sent to Board members by P. Bono.

9. Enforcement and Field Work Activities –

A summary of Well Permitting Program's recent (past 8 weeks) enforcement and field activities was presented by J. Altieri.

A.) Field work: Well Permitting Section staff performed 14 field inspections the past 8 weeks, mostly in the month of August, again several in one day. Field work included site inspections to find lost wells, new public supply and other potable well construction. For the first time in a long time, DEP staff inspected and field verified a case of an unlicensed person constructing soil borings in the Mercer County with suspected construction violations as well. Follow up inspections to the same site showed the company to be in compliance with Category 5 construction standards and having licensed people of the proper class on-site to finish the job. Notices of violation have been sent to the individual and his company with penalties pending for the unlicensed issue.

B.) Coordination with DEP's Compliance and Enforcement: Work continues with efforts to further the updating and transformation of the well permitting enforcement program into the NJEMS system. Well permitting staff met with Central Region Enforcement staff computer specialists to build the necessary internal computer infrastructure to make to process work. Work is expected to continue in the coming months.

C.) Slater Well Drilling Case: A letter dated September 1, 2015 was sent by the DEP Office of Legal Affairs to the Office of Administrative Law in Newark to formally request that the case involving Slater Well Drilling be returned to the NJDEP. In a letter dated September 9, 2015, the Administrative Law Judge, Margaret Monaco, confirmed that the Slater case is being returned to NJDEP. This is a result from the fact that Mr. Slater passed away on July 10, 2015. Because of

this, the Department will rescind the notice of penalty assessment that was issued to Slater Well Drilling concerning the Handley and Motts wells for \$675.00. Staff had been preparing to attend a Hearing on the matter in Newark later this month.

D.) Decommissioning of Improperly Constructed Well: Well permitting Staff are planning to witness an alternate decommissioning method for an improperly constructed well in Berkeley Twp., Ocean County. The well was constructed in violation of two (2) permit conditions requiring the well to be installed with double casing and salt resistant cement based grouting material. The well was drilled on the waterfront on Barnegat Bay in an area of suspected saltwater intrusion. The DEP approved alternate decommissioning requires the driller to remove the six-inch PVC casing, ream the borehole to a diameter of 12-inches and clear the borehole down to 90 feet, removing the entire casing, screen and gravel pack. The borehole would then be tremie grouted with sufficient amount of cement based grout. Staff has been negotiating over the past few months with the driller to resolve this and other outstanding compliance issues with his company and the Department. Decommissioning of the well is set to begin September 29, 2015 and hopefully will be completed within one or two days.

10. Program Updates (Terry Pilawski, Bureau Chief and Pat Bono, Section Chief, Bureau of Water Allocation and Well permitting) –

Mark Ortega, an hourly employee working for the Well Permitting Section for a little over six (6) months, has been hired full time by the program. T. Pilawski added that she has long been requesting a critical hire, which was finally approved. Mr. Ortega will be starting his full time employment with the Department beginning on Monday, September 21, 2015.

P. Bono reported that Bureau staff is currently in the process of entering all “antique files” (well construction documentation for wells installed pre-1947) It is expected that the project will be completed by the end of the year. When the project is complete, all information for wells that were constructed prior to instituting the well permitting program will be viewable through the online well search tool that well drillers/pump installers will ultimately be able to utilize through the Department’s website. A number of these wells date back to the 1800s. Although the online search tool itself will not be completely built before the end of this year, Department staff will have an easier time locating historical well documentation as it will be available in the Department-wide database, NJEMS.

Next, P. Bono explained the key points of a presentation she gave to the New Jersey Ground Water Association (NJGWA) on September 15. She noted that the purpose of the training was to explain the EPA Groundwater Rule and how the NJ Safe Drinking Water Program administers and enforces the rule. Public non-community wells are the common well-use that falls under the purview of this program. The training stressed the need for licensed well drillers to troubleshoot well problems associated with bacteriological contamination in a timely manner and provide corrective action work plans that address the deficiencies. At the NJGWA meeting, she provided checklists to assist the licensed community in inspecting such water systems, documenting the deficiencies and developing a corrective action plan to address the problems. She provided the checklist and associated information

to Board members and requested feedback from any members who attempt to utilize the form as part of their job. She will also be providing her presentation PowerPoint slides and the driller checklist handout to NJGWA for future reference and anticipates that future training on this topic will be necessary to better educate the community on their role in the process.

12. ePermitting Issue (A. Becker)-

A. Becker raised a billing problem associated with e-permitting that was addressed by M. Schumacher. A recent credit card surcharge that is now being added to credit card payments through the website is not listed on receipts for online payments processed by the system. This is creating accounting problems for drilling contractors because the permit fee shown on the confirmation and payment screens for e-permitting reflects only the permit fee and not the total charge and payment made by the drilling company. A. Becker stated that the fact that the surcharge is not listed as an actual payment creates bookkeeping problems. M. Schumacher said he has heard this complaint from other contractors and has reported the issue to the Department's Office of Information Technology. He believes the issue will be resolved shortly so the total cost incurred will soon be displayed, which will resolve the issue of unaccounted for money.

13. Adjournment- A motion to adjourn was made by G. Poppe at 11:16 am, seconded by J. Yost and approved unanimously.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

Mail Code 401-04Q
DIVISION OF WATER SUPPLY & GEOSCIENCE
NEW JERSEY GEOLOGICAL AND WATER SURVEY ELEMENT
BUREAU OF WATER ALLOCATION & WELL PERMITTING
401 E. STATE STREET - P.O. BOX 420
TRENTON, NEW JERSEY 08625-0420
TELEPHONE (609) 984-6831
FAX (609) 633-1231
www.nj.gov/dep/watersupply

NJ STATE WELL DRILLERS AND PUMP INSTALLERS
EXAMINING AND ADVISORY BOARD

NJ State Well Drillers and Pump Installers Examining and Advisory Board Conference Call Minutes for October 29, 2015

Approved by the Board on November 24, 2015

Board Members Present at DEP Main Office: Steve Doughty

Board Members Participating Via Telephone: Art Becker (Chairman), Gary Poppe (Vice-Chairperson), Joe Yost, Gordon Craig, and Richard Dalton

Nonparticipating Board Members: Carol Graff and Joe Pepe

Participating DEP staff: Jeff Hoffman, Steve Reya and Pat Bono

NJDEP Bureau of Water Allocation and Well Permitting Staff Present: Terry Pilawski, Pat Bono, Steve Reya

1. **Call to Order** – Chairman A. Becker called the meeting to order at 10:04 am with a quorum present.
2. **Certification of Scores for October 7, 2015 Exam Scores of License candidates for Master, Journeyman, Journeyman B, Monitoring, Soil Borer and Pump Installers License–**

Master– A motion to certify the applicant scores was made by J. Yost, seconded by G. Craig and approved unanimously. It was noted that two (2) candidates sat for the exam; both candidates passed.

Journeyman A motion to certify the applicant scores was made by J. Yost, seconded by G. Craig and approved unanimously. It was noted that eight (8) candidates sat for the exam; one (1) candidate passed.

Journeyman B – A motion to certify the applicant scores was made by G. Poppe, seconded by S. Doughty and approved unanimously. It was noted that one (1) candidate sat for the exam and he did not pass.

Monitoring – A motion to certify the applicant scores was made by S. Doughty, seconded by G. Craig and approved unanimously. It was noted that ten (10) candidates sat for the exam; three (3) candidates passed.

Soil Borer – A motion to certify the applicant scores was made by G. Poppe, seconded by J. Yost and approved unanimously. It was noted that ten (10) candidates sat for the exam; two (2) candidates passed.

Pump Installer – A motion to certify the applicant scores was made by G. Craig, seconded by J. Yost and approved unanimously. It was noted that two (2) candidates sat for the exam; both candidates failed.

3. **Adjournment-** Attendees were reminded that the next Board meeting is scheduled for November 24th. A motion to adjourn was made by G. Craig and seconded by J. Yost. **The call was adjourned at 10:12 am.**



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

Mail Code 401-04Q
DIVISION OF WATER SUPPLY & GEOSCIENCE
NEW JERSEY GEOLOGICAL AND WATER SURVEY ELEMENT
BUREAU OF WATER ALLOCATION & WELL PERMITTING
401 E. STATE STREET - P.O. BOX 420
TRENTON, NEW JERSEY 08625-0420
TELEPHONE (609) 984-6831
FAX (609) 633-1231
www.nj.gov/dep/watersupply

NJ STATE WELL DRILLERS AND PUMP INSTALLERS
EXAMINING AND ADVISORY BOARD

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

Approved by the Board on January 14, 2016

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

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

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

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

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

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

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

1. Call to Order –

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

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

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

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

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

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

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

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

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

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

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

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

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

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

April 6 June 8 October 5 December 7

6. Established the 2016 meeting calendar

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

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

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

7. Ethics Training for Board Members-

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

8. Enforcement and Field Work Activities –

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

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

9. Drought Status Update-

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

10. Update on Colts Neck Ground Water Levels-

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

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

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

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

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

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

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

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

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

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

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

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

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

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